【Factory video @Youtube】

CZYB-E09-C.01/2022.09

Headquarters

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CHENZHU

SPD

C series Ultra thin

Catalogue (2022)

5 Year WARRANTY

https://en.chenzhu-inst.com/

CHENZHU COMPANY OVERVIEW

CHENZHU' s headquarter is located at Shanghai, China, with an area of 8500m².

Shanghai Chenzhu Instrument Co,Ltd. was founded in April, 2002, who was originated from Shanghai Institute of Process Automation Instrumentation. CHENZHU is a professional company with core expertise of R&D, manufacturing and sale service of high quality safety products, such as isolated barriers, signal conditioners, surge protective devices, safety relays etc.

MANAGEMENT SYSTEMS

ISO9001

ISO14001

ISO45001

IECEx QUALITY ASSESSMENT

R&D Strength

Based on ISO/IEC/GB standards, CHENZHU has established the professional laboratory which is applied up to 70 test capabilities and verification items in CHENZHU's safety electrical products' development process.

R&D Team
28%
Work Force

R&D Investment
11%
of Sale Revenue

Innovation
110+
Patents

Testing Facility
80+
Capabilities

Smart Factory

CHENZHU factory is continually driven by lean management and flexible production. By our strict quality examination, CHENZHU ensures the production meets the design specification and satisfies our customers.

Factory
3500㎡
In total

Max Cap.
2,000,000pcs
Year

Lean Production
10+
Years' experience

Certification

■ CE Certification

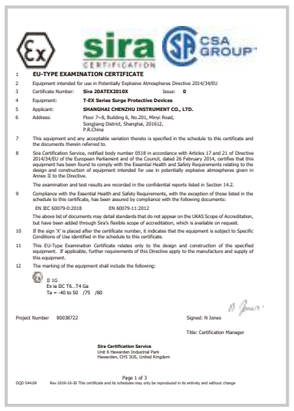
■ SIL Certification

■ IECEx Certification

■ US Patent

■ European Patent

■ Invention Patent



■ ATEX Certification

■ CCC Certification

■ UL Certification

■ Utility Model Patent

■ Utility Model Patent

■ Utility Model Patent

■ Type Test Report

■ Explosion Protection Certificate of Conformity

■ Product Liability Insurance

■ Industrial Design Patent

■ Industrial Design Patent

■ Industrial Design Patent

I C series Ultra thin SPD

Surge Protective Device(abbr. SPD) is applied to surge (inductive thunder) and transient overvoltage(e.g. switching transients, electrostatic discharge) protection on many kinds of signal or power lines, which could lead high power surge to the ground.

It could be a substitute of wiring connection, as their sizes are similar.

- Width：3.5mm(4.5mm with cover)
- 2-wire signal protection
- Push-in connection
- Suitable for explosion proof area
- Multistage protection circuit
- Customized sign

- Width：6 mm(with cover)
- 2-wire signal protection
- Push-in or screw connection
- Suitable for explosion proof area
- Multistage protection circuit
- Customized sign

- Width：6 mm(with cover)
- 3-wire signal protection
- Push-in or screw connection
- Suitable for explosion proof area
- Multistage protection circuit
- Customized sign

- Width：12mm/P
- In：20kA/P
- Single phase power protection
- Status indication& Remote signaling
- Redundant wiring
- Customized sign

- Width：12mm/P
- In：20kA/P
- Three phase power protection
- Status indication& Remote signaling
- Redundant wiring
- Customized sign

Selection Guide

3.5mm Signal SPD (4.5mm with cover)

Model No.	Order No.	Rated current I_L	Protection	Max. Continuous operating voltage U_C	Nominal discharge current In(8/20μs)	Wiring	Impulse discharge current Iimp(10/350μs)	Page
C-5T2-EX.M	7059240	500mA	IS, TC, RS-485, CAN	6V DC	10kA	2	2.5kA	9
C-24B2-EX.M	7060264		IS, AI, AO, DI, DO	32V DC				9
C-5T2.M	7098835	800mA	TC, RS-485, CAN	6V DC				10
C-24B2.M	7074711		AI, AO, DI, DO	32V DC				10

6mm Signal SPD、24VDC Power SPD

Model No.	Order No.	Wiring	Protection	Max. Continuous operating voltage U_C	Rated current I_L	Nominal discharge current In(8/20μs)	Impulse discharge current Iimp(10/350μs)	Page
C-5T2-EX	7031750…	2	IS, TC, RS-485、CAN	6V DC	500mA	10kA	2.5kA	11
C-24B2-EX	7028376…	2	IS, AI, AO, DI, DO	32V DC				11
C-5R3-EX	7092664…	3	IS, RTD	6V DC				12
C-24B3-EX	7061738…	3	IS, AI、AO、DI、DO、RS-232	32V DC				12
C-5T2	7092615…	2	TC, RS-485、CAN	6V DC	800mA			13
C-24B2	7053320…	2	AI、AO、DI、DO	32V DC				13
C-5R3	7036020…	3	RTD	6V DC				14
C-24B3	7031090…	3	AI、AO、DI、DO、RS-232	32V DC				14
C-24P	7065366…	2	24VDC power supply (＜10A)	58VDC/40VAC	10 A			15

12mm Power SPD (Width: 12mm/P)

Model No.	Order No.	Remote signaling	Protection	Max. Continuous operating voltage U_C	Recommended backup fuse	Nominal discharge current In(8/20μs)	Max. discharge current Imax (8/20μs)	Page
C2-20/2P	7012025	–	TN System (Single phase)	320VAC	40A gG	10kA	20kA	17
C2-20/2PF	7039389	√						17
C2-20/3P	7073441	–	IT System (Three phase)、TN-C Systme (Three phase)					17
C2-20/3PF	7011201	√						17
C2-20/4P	7096735	–	TN-S System (Three phase)					17
C2-20/4PF	7057147	√						17
C2-20/1P+1	7071193	–	TT System (Single phase)					18
C2-20/1P+1F	7019940	√						18
C2-20/3P+1	7015727	–	TT System (Three phase)					18
C2-20/3P+1F	7046918	√						18
C2-40/2P	7078245	–	TN System (Single phase)	385VAC	80A gG	20kA	40kA	19
C2-40/2PF	7090181	√						19
C2-40/3P	7056563	–	IT System (Three phase)、TN-C System (Three-phase)					19
C2-40/3PF	7088561	√						19
C2-40/4P	7067406	–	TN-S System (Three-phase)					19
C2-40/4PF	7021880	√						19
C2-40/1P+1	7091735	–	TT System (Single phase)					20
C2-40/1P+1F	7053423	√						20
C2-40/3P+1	7091686	–	TT System (Three-phase)					20
C2-40/3P+1F	7010055	√						20
C2-24	7097742	–	24VDC power supply system	90VDC/60VAC				21
C2-24F	7018876	√						21

C Series Signal SPD

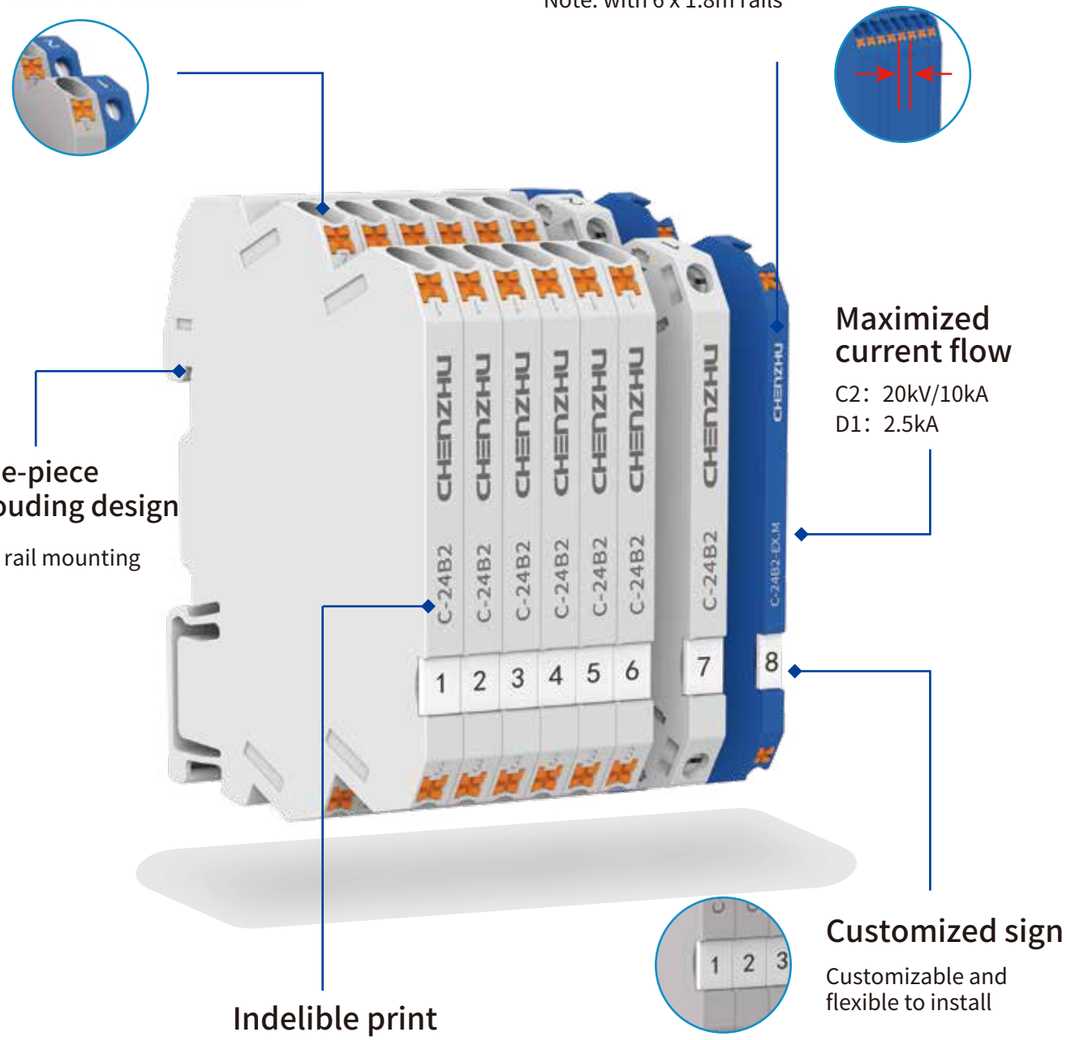
Signal SPD protects signal devices (e.g. PLC, DCS, SCADA, transmitter ,flow meter, solenoid valve) from lightning， which is applied to signals such as AI/ AO/ DI/ DO, RS485/ RS232/ RS422, RTD and TC etc..

Convenient wiring

Push-in or screw connection

Thinner design

3080 units can be installed in one enclosure
Note: with 6 x 1.8m rails



Maximized current flow

C2：20kV/10kA
D1：2.5kA

One-piece grouding design

DIN rail mounting

Customized sign

Customizable and flexible to install

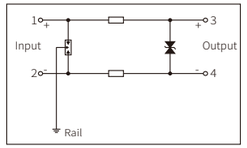
Indelible print

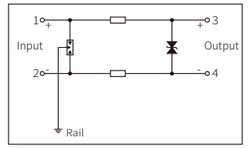
Environmental-friendly laser inscription

3.5mm Signal SPD

Features

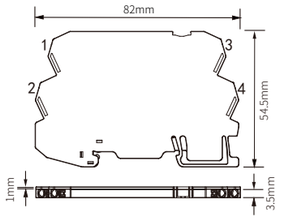
- 3.5mm Width (4.5mm with cover)
- DIN rail grounded
- Push-in connection
- Intrinsically safe explosion-proof
- C2: 20kV/ 10kA
- D1: 2.5kA



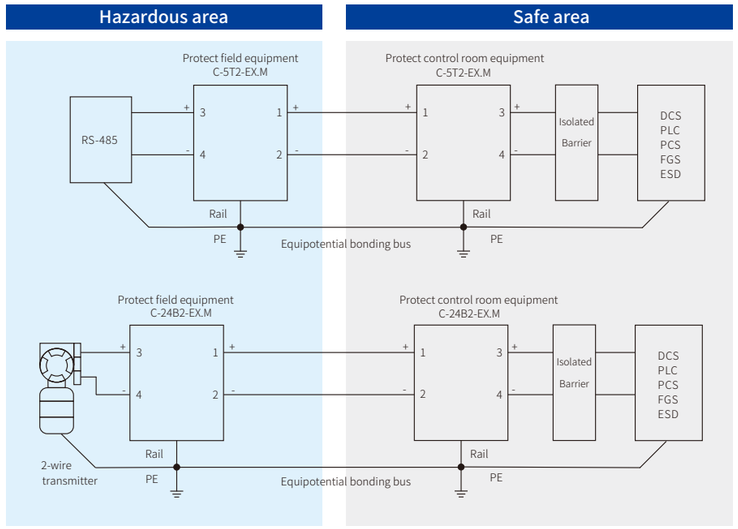


Technical Data	C-5T2-EX.M 2-wire（TC、RS-485、CAN）	C-24B2-EX.M 2-wire（AI、AO、DI、DO）
Max. Continuous operating voltage Uc	6V DC	32V DC
Nominal operating current I_L	500mA	500mA
Resistance(per line)	1.1Ω	1.1Ω
Nominal discharge current In (8/20μs)	10kA	10kA
Max. discharge current Imax (8/20μs)	20kA	20kA
Impulse discharge current Iimp (10/350μs)	2.5kA	2.5kA
Voltage protection level Up (8/20μs)	L-L: 40V/L-G: 600V	L-L: 60V/L-G: 600V
Bandwidth (-0.5dB)	220kHz	220kHz
Response time	L-L: 1ns/L-G: 100ns	L-L: 1ns/L-G: 100ns
Residual current I_{PE}	＜10μA	＜10μA
Degree of protection of enclosure(IEC60529)	IP 20	IP 20
Housing material/ Flammability rating(UL94)	PA66/V0	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
EX Certification	Ex ia II C T6...T4 Ga	Ex ia IIC T6…T4 Ga
	T4:-40 to +80°C；T5:-40 to +75°C；T6:-40 to +50°C	T4:-40 to +80°C；T5:-40 to +75°C；T6:-40 to +50°C
	Ui=6V; Ii=500mA; Pi=5.32W;	Ui=30V; Ii=500mA; Pi=5.32W;
	Ci=0μF; Li=0mH	Ci=0μF; Li=0mH
Functional safety Certification	SIL3	SIL3
Type test	Shanghai lightning protection center	Shanghai lightning protection center
Order number	7059240	7060264

Dimensions



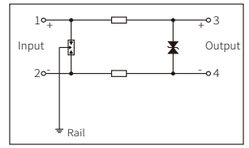
Typical applications

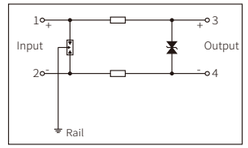


3.5mm Signal SPD

Features

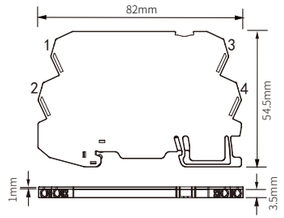
- 3.5mm Width (4.5mm with cover)
- DIN rail grounded
- Push-in connection
- C2: 20kV/ 10kA
- D1: 2.5kA



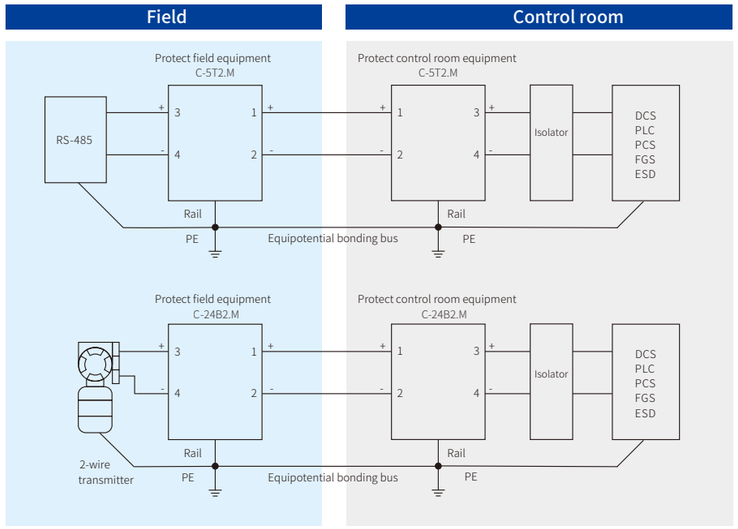


Technical Data	C-5T2.M 2-wire（TC、RS-485、CAN）	C-24B2.M 2-wire（AI、AO、DI、DO）
Max. Continuous operating voltage Uc	6V DC	32V DC
Nominal operating current I_L	800mA	800mA
Resistance(per line)	1.1Ω	1.1Ω
Nominal discharge current In (8/20μs)	10kA	10kA
Max. discharge current Imax (8/20μs)	20kA	20kA
Impulse discharge current Iimp (10/350μs)	2.5kA	2.5kA
Voltage protection level Up (8/20μs)	L-L: 40V/L-G: 600V	L-L: 60V/L-G: 600V
Bandwidth (-0.5dB)	220kHz	220kHz
Response time	L-L: 1ns/L-G: 100ns	L-L: 1ns/L-G: 100ns
Residual current I_{PE}	＜10μA	＜10μA
Degree of protection of enclosure(IEC60529)	IP 20	IP 20
Housing material/ Flammability rating(UL94)	PA66/V0	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification		
Functional safety Certification	SIL3	SIL3
Type test	Shanghai lightning protection center	Shanghai lightning protection center
Order number	7098835	7074711

Dimensions



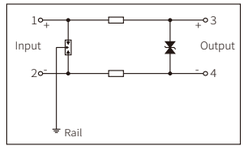
Typical applications

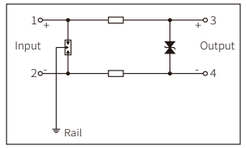


6mm Signal SPD

Features

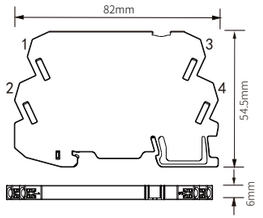
- 6mm Width
- DIN rail grounded
- Push-in or screw connection
- C2: 20kV/ 10kA
- D1: 2.5kA



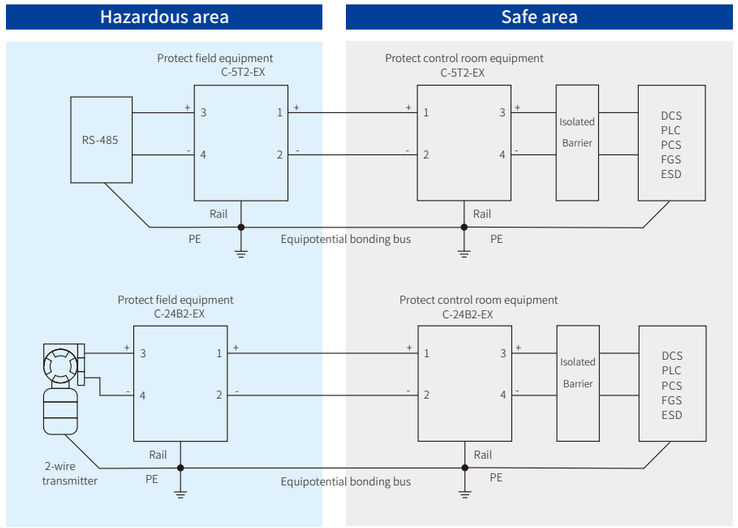


Technical Data	C-5T2-EX 2-wire（TC、RS-485、CAN）	C-24B2-EX 2-wire（AI、AO、DI、DO）
Max. Continuous operating voltage Uc	6V DC	32V DC
Nominal operating current I_L	500mA	500mA
Resistance(per line)	1Ω	1Ω
Nominal discharge current In (8/20μs)	10kA	10kA
Max. discharge current Imax (8/20μs)	20kA	20kA
Impulse discharge current Iimp (10/350μs)	2.5kA	2.5kA
Voltage protection level Up (8/20μs)	L-L: 40V/L-G: 600V	L-L: 60V/L-G: 600V
Bandwidth (-0.5dB)	40MHz	40MHz
Response time	L-L:1ns/L-G: 100ns	L-L:1ns/L-G: 100ns
Residual current I_{PE}	＜10μA	＜1μA
Degree of protection of enclosure(IEC60529)	IP 20	IP 20
Housing material/ Flammability rating(UL94)	PA66/V0	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
EX Certification	Ex ia IIC T6…T4 Ga	Ex ia IIC T6…T4 Ga
	T4:-40 to +80℃；T5:-40 to +75℃；T6:-40 to +50℃	T4:-40 to +80℃；T5:-40 to +75℃；T6:-40 to +50℃
	Ui=6V; Ii=500mA; Pi=5.32W;	Ui=30V; Ii=500mA; Pi=5.32W;
	Ci=0μF; Li=0mH	Ci=0μF; Li=0mH
Functional safety Certification	SIL3	SIL3
Type test	Shanghai lightning protection center	Shanghai lightning protection center
Order number	Push-in：7031750；Screw：7085247	Push-in：7028376；Screw：7022179

Dimensions



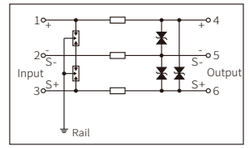
Typical applications

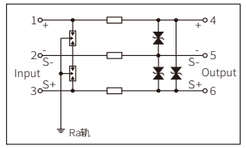


6mm Signal SPD

Features

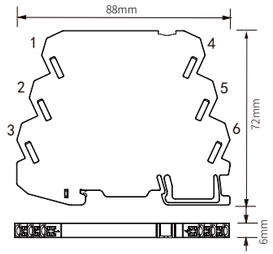
- 6mm Width
- DIN rail grounded
- Push-in or screw connection
- C2: 20kV/ 10kA
- D1: 2.5kA



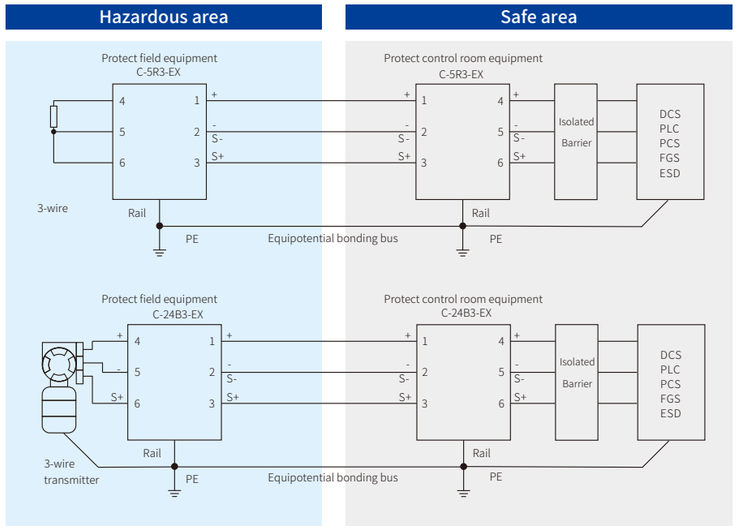


Technical Data	C-5R3-EX 3-wire(RTD)	C-24B3-EX 3-wire（AI、AO、DI、DO、RS-232）
Max. Continuous operating voltage Uc	6V DC	32V DC
Nominal operating current I_L	500mA	500mA
Resistance(per line)	1Ω	1Ω
Nominal discharge current In (8/20μs)	10kA	10kA
Max. discharge current Imax (8/20μs)	20kA	20kA
Impulse discharge current Iimp (10/350μs)	2.5kA	2.5kA
Voltage protection level Up (8/20μs)	L-L: 40V/L-G: 600V	L-L: 60V/L-G: 600V
Bandwidth (-0.5dB)	40MHz	40MHz
Response time	L-L:1ns/L-G: 100ns	L-L:1ns/L-G: 100ns
Residual current I_{PE}	＜10μA	＜1μA
Degree of protection of enclosure(IEC60529)	IP 20	IP 20
Housing material/ Flammability rating(UL94)	PA66/V0	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
EX Certification	Ex ia IIC T6…T4 Ga	Ex ia IIC T6…T4 Ga
	T4:-40 to +80℃；T5:-40 to +75℃；T6:-40 to +50℃	T4:-40 to +80℃；T5:-40 to +75℃；T6:-40 to +50℃
	Ui=6V; Ii=500mA; Pi=5.32W;	Ui=30V; Ii=500mA; Pi=0.32W;
	Ci=0μF; Li=0mH	Ci=0μF; Li=0mH
Functional safety Certification	SIL3	SIL3
Type test	Shanghai lightning protection center	Shanghai lightning protection center
Order number	Push-in：7092664；Screw：7085023	Push-in：7061738；Screw：7075963

Dimensions



Typical applications

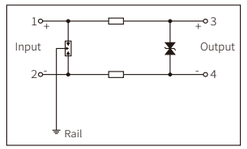


6mm Signal SPD

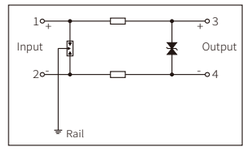
Features

- 6mm Width
- DIN rail grounded
- Push-in or screw connection
- C2: 20kV/ 10kA
- D1: 2.5kA

C-5T2

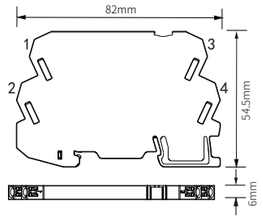


C-24B2

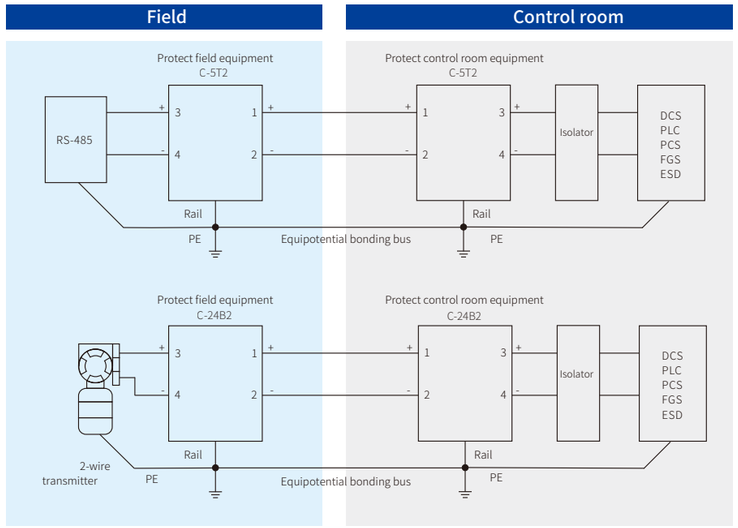


Technical Data	2-wire（TC、RS-485、CAN）	2-wire（AI、AO、DI、DO）
Max. Continuous operating voltage Uc	6V DC	32V DC
Nominal operating current I_L	800mA	800mA
Resistance(per line)	1Ω	1Ω
Nominal discharge current In (8/20μs)	10kA	10kA
Max. discharge current Imax (8/20μs)	20kA	20kA
Impulse discharge current Iimp (10/350μs)	2.5kA	2.5kA
Voltage protection level Up (8/20μs)	L-L: 40V/L-G: 600V	L-L: 60V/L-G: 600V
Bandwidth (-0.5dB)	40MHz	40MHz
Response time	L-L: 1ns/L-G:100ns	L-L: 1ns/L-G:100ns
Residual current I_{PE}	＜10μA	＜1μA
Degree of protection of enclosure(IEC60529)	IP 20	IP 20
Housing material/ Flammability rating(UL94)	PA66/V0	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification		
Functional safety Certification	SIL3	SIL3
Type test	Shanghai lightning protection center	Shanghai lightning protection center
Order number	Push-in：7092615；Screw：7070096	Push-in：7053320；Screw：7063821

Dimensions



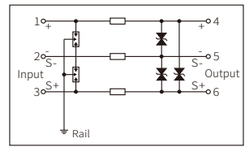
Typical applications



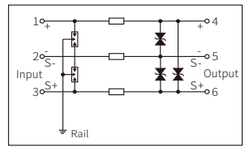
Features

- 6mm Width
- DIN rail grounded
- Push-in or screw connection
- C2: 20kV/ 10kA
- D1: 2.5kA

C-5R3

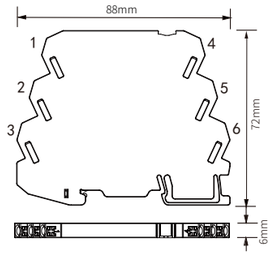


C-24B3

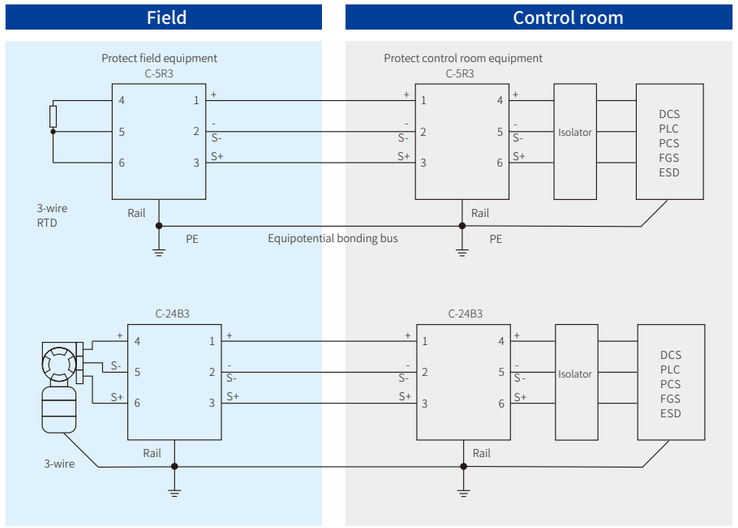


Technical Data	3-wire(RTD)	3-wire（AI、AO、DI、DO、RS-232）
Max. Continuous operating voltage Uc	6V DC	32V DC
Nominal operating current I_L	800mA	800mA
Resistance(per line)	1Ω	1Ω
Nominal discharge current In (8/20μs)	10kA	10kA
Max. discharge current Imax (8/20μs)	20kA	20kA
Impulse discharge current Iimp (10/350μs)	2.5kA	2.5kA
Voltage protection level Up (8/20μs)	L-L: 40V/L-G: 600V	L-L: 60V/L-G: 600V
Bandwidth (-0.5dB)	40MHz	40MHz
Response time	L-L: 1ns/L-G:100ns	L-L: 1ns/L-G:100ns
Residual current I_{PE}	＜10μA	＜1μA
Degree of protection of enclosure(IEC60529)	IP 20	IP 20
Housing material/ Flammability rating(UL94)	PA66/V0	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification		
Functional safety Certification	SIL3	SIL3
Type test	Shanghai lightning protection center	Shanghai lightning protection center
Order number	Push-in：7036020；Screw：7062156	Push-in：7031090；Screw：7043427

Dimensions



Typical applications

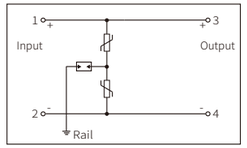


6mm Low-voltage power supply SPD

Features

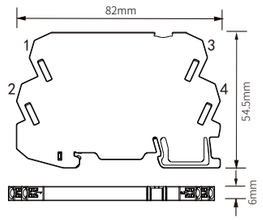
C-24P

- 6mm Width
- DIN rail grounded
- Push-in or screw connection
- Suitable for 24VDC circuit (<10A)
- C2: 20kV/ 10kA
- D1: 2.5kA

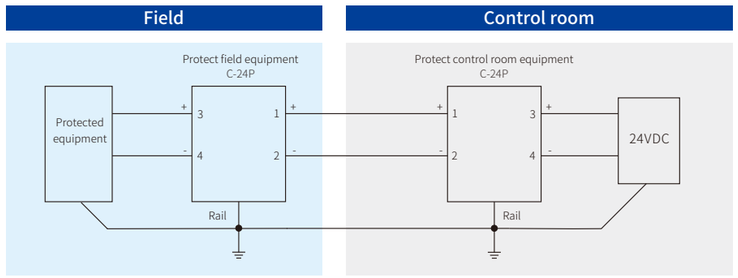


Technical Data	24VDC
Max. Continuous operating voltage Uc	58VDC/40VAC
Nominal operating current I_L	10A
Nominal discharge current In (8/20μs)	10kA
Max. discharge current Imax (8/20μs)	20kA
Impulse discharge current Iimp (10/350μs)	2.5kA
Voltage protection level Up	L-L: 400V/L-G: 600V
Response time	L-L: 25ns/L-G: 100ns
Residual current I_{PE}	<20μA
Degree of protection of enclosure(IEC60529)	IP 20
Housing material/ Flammability rating(UL94)	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21
Certification	
Type test	Shanghai lightning protection center
Order number	Push-in：7065366；Screw：7077701

Dimensions



Typical applications



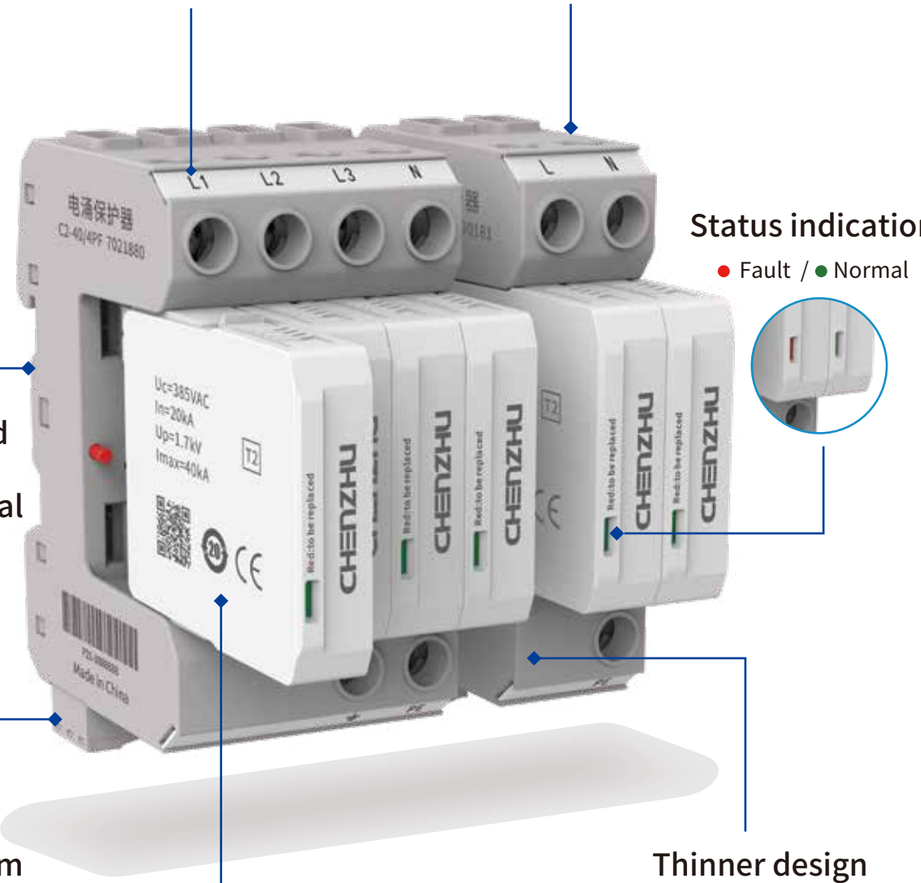
Power SPD protect all electrical devices (e.g. transformer, junction box, inverter, charging pile, wind power generator, UPS, shield tunneling machine, and shore crane)in power supply or distribution system from surge, which is suit for 24VDC , and IT/ TT/ TN-C/ TN-S AC power supply or distribution system.

Customized sign

Customizable and flexible to install

Redundant wiring design

Easy to get V type wiring



Status indication

● Fault / ● Normal

Flameproof and anti-corrosion housing material

V0 flame rating
96H salt mist
2G vibration

Remote alarm

Normally open& close contact
Pluggable connection

Indelible print

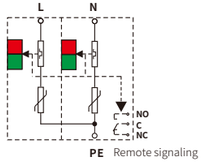
Environmental friendly laser inscription

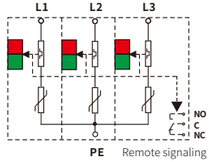
Thinner design

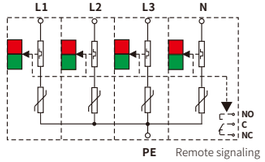
Width 12mm/p
Height 62mm

Features

- Width: 12mm/P
- Status indication:
  Green: Normal
  Red: Fault
- Pluggable protection module
- Remote alarm output is optional (named with F)

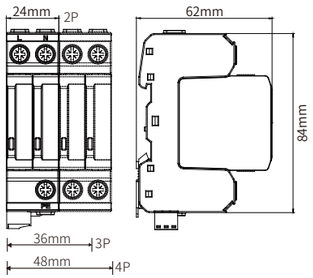






Technical Data	C2-20/2P C2-20/2PF	C2-20/3P C2-20/3PF	C2-20/4P C2-20/4PF
Max. Continuous operating voltage Uc	320VAC	320VAC	320VAC
Nominal discharge current In (8/20μs)	10kA	10kA	10kA
Max. discharge current Imax (8/20μs)	20kA	20kA	20kA
Voltage protection level Up	1.2kV	1.2kV	1.2kV
Recommended backup fuse	40A gG	40A gG	40A gG
Short circuit withstand I_{SCCR} (No external fuse)	1000A	1000A	1000A
Conductor cross section (solid/flexible)	2.5~25mm²/2.5~16mm²	2.5~25mm²/2.5~16mm²	2.5~25mm²/2.5~16mm²
Response time	25ns	25ns	25ns
Residual current I_{PE}	<20μA	<20μA	<20μA
Remote alarm output (with F)	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A
Degree of protection of enclosure(IEC60529)	IP 20	IP 20	IP 20
Housing material/ Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Suitable for power supply System	TN System(Single phase)	TN-C System(Three phase) IT System(Three phase)	TN-S System(Three phase)
Certification			
Type test	Shanghai lightning protection center	Shanghai lightning protection center	Shanghai lightning protection center
Order number	C2-20/2P: 7012025 C2-20/2PF: 7039389	C2-20/3P: 7073441 C2-20/3PF: 7011201	C2-40/4P: 7096735 C2-20/4PF: 7057147

Dimensions

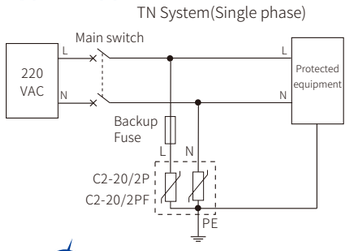


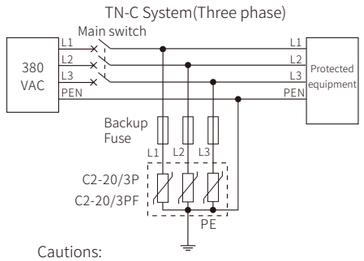
62mm×84mm×24mm

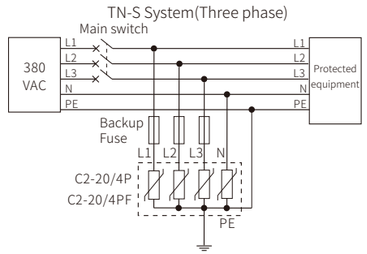
62mm×84mm×36mm

62mm×84mm×48mm

Typical applications



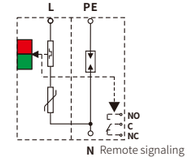


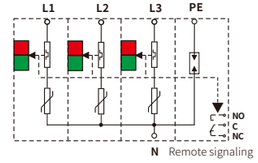


Cautions:
Backup fuses are recommended to be installed in case SPD gets short-circuited.
For connecting to L/N, cables with a cross-sectional area ⩾2.5mm² are recommended.
For connecting to PE, cables with a cross-sectional area⩾4mm² are recommended.

Features

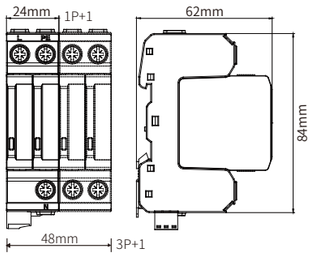
- Width: 12mm/P
- Status indication:
  Green: Normal
  Red: Fault
- Pluggable protection module
- Remote alarm output is optional (named with F)





Technical Data	C2-20/1P+1 C2-20/1P+1F		C2-20/3P+1 C2-20/3P+1F	
	C2-40G	C2-20	C2-40G	C2-20
Max. Continuous operating voltage Uc	255VAC	320VAC	255VAC	320VAC
Nominal discharge current In (8/20μs)	20KA	10kA	20KA	10kA
Max. discharge current Imax (8/20μs)	40kA	20kA	40kA	20kA
Voltage protection level Up	1.5kV	1.2kV	1.5kV	1.2kV
Recommended backup fuse		40A gG		40A gG
Short circuit withstand I_{SCCR} (No external fuse)		1000A		1000A
Conductor cross section (solid/flexible)		2.5~25mm²/2.5~16mm²		2.5~25mm²/2.5~16mm²
Response time		25ns		25ns
Residual current I_{PE}		<20μA		<20μA
Remote alarm output (with F)		250VAC/0.5A; 24VDC/0.5A		250VAC/0.5A; 24VDC/0.5A
Degree of protection of enclosure(IEC60529)		IP 20		IP 20
Housing material/ Flammability rating(UL94)		PA66/V0		PA66/V0
Testing standard		GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11
Suitable for power supply System		TT System(Single phase)		TT System(Three-phase)
Certification				
Type test		Shanghai lightning protection center		Shanghai lightning protection center
Order number		C2-20/1P+1: 7071193 C2-20/1P+1F: 7019940		C2-20/3P+1: 7015727 C2-20/3P+1F: 7046918

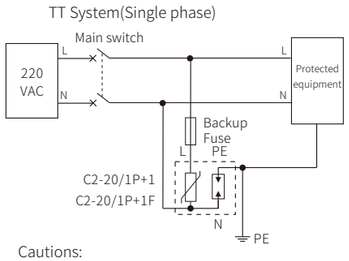
Dimensions

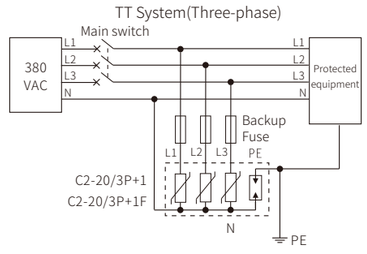


62mm×84mm×24mm

62mm×84mm×48mm

Typical applications

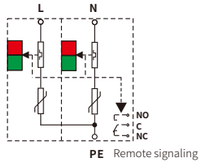


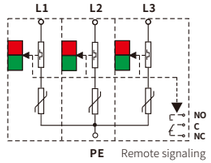


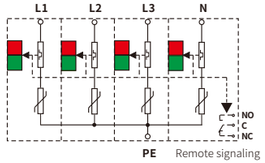
Cautions:
Backup fuses are recommended to be installed in case SPD gets short-circuited.
For connecting to L/N, cables with a cross-sectional area ⩾2.5mm² are recommended.
For connecting to PE, cables with a cross-sectional area⩾4mm² are recommended.

Features

- Width: 12mm/P
- Status indication:
  Green: Normal
  Red: Fault
- Pluggable protection module
- Remote alarm output is optional (named with F)

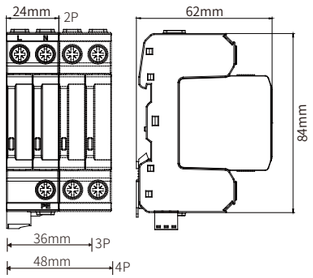






Technical Data	C2-40/2P C2-40/2PF	C2-40/3P C2-40/3PF	C2-40/4P C2-40/4PF
Max. Continuous operating voltage Uc	385VAC	385VAC	385VAC
Nominal discharge current In (8/20μs)	20kA	20kA	20kA
Max. discharge current Imax (8/20μs)	40kA	40kA	40kA
Voltage protection level Up	1.7kV	1.7kV	1.7kV
Recommended backup fuse	80A gG	80A gG	80A gG
Short circuit withstand I_{SCCR} (No external fuse)	1000A	1000A	1000A
Conductor cross section (solid/flexible)	4~25mm²/4~16mm²	4~25mm²/4~16mm²	4~25mm²/4~16mm²
Response time	25ns	25ns	25ns
Residual current I_{PE}	<20μA	<20μA	<20μA
Remote alarm output (with F)	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A
Degree of protection of enclosure(IEC60529)	IP 20	IP 20	IP 20
Housing material/ Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Suitable for power supply System	TN System(Single phase)	TN-C System(Three phase) IT System(Three phase)	TN-S System(Three phase)
Certification			
Type test	Shanghai lightning protection center	Shanghai lightning protection center	Shanghai lightning protection center
Order number	C2-40/2P: 7078245	C2-40/3P: 7056563	C2-40/4P: 7067406
	C2-40/2PF: 7090181	C2-40/3PF: 7088561	C2-40/4PF: 7021880

Dimensions

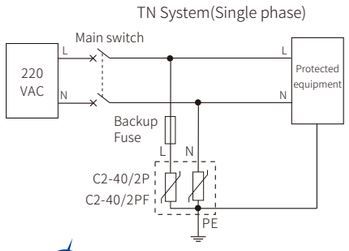


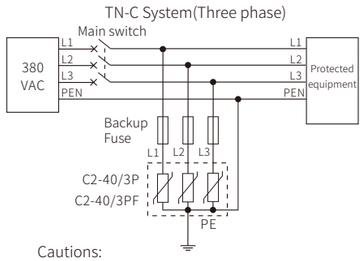
62mm×84mm×24mm

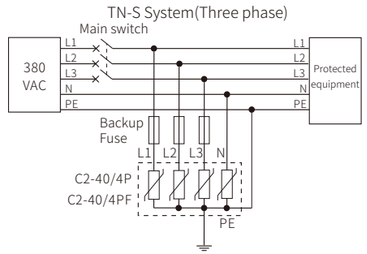
62mm×84mm×36mm

62mm×84mm×48mm

Typical applications



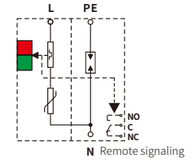


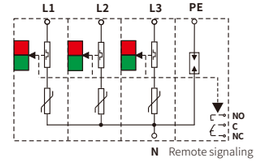


Cautions:
Backup fuses are recommended to be installed in case SPD gets short-circuited.
For connecting to L/N, cables with a cross-sectional area ⩾4mm² are recommended.
For connecting to PE, cables with a cross-sectional area⩾6mm² are recommended.

Features

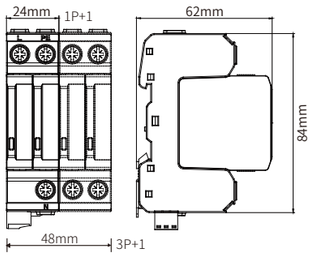
- Width: 12mm/P
- Status indication:
  Green: Normal
  Red: Fault
- Pluggable protection module
- Remote alarm output is optional (named with F)





Technical Data	C2-40/1P+1 C2-40/1P+1F		C2-40/3P+1 C2-40/3P+1F	
	C2-40G	C2-40	C2-40G	C2-40
Max. Continuous operating voltage Uc	255VAC	385VAC	255VAC	385VAC
Nominal discharge current In (8/20μs)	20KA	20kA	20KA	20kA
Max. discharge current Imax (8/20μs)	40kA	40kA	40kA	40kA
Voltage protection level Up	1.5kV	1.7kV	1.5kV	1.7kV
Recommended backup fuse		80A gG		80A gG
Short circuit withstand I_{SCCR} (No external fuse)		1000A		1000A
Conductor cross section (solid/flexible)		4~25mm²/4~16mm²		4~25mm²/4~16mm²
Response time		25ns		25ns
Residual current I_{PE}		<20μA		<20μA
Remote alarm output (with F)		250VAC/0.5A; 24VDC/0.5A		250VAC/0.5A; 24VDC/0.5A
Degree of protection of enclosure(IEC60529)		IP 20		IP 20
Housing material/ Flammability rating(UL94)		PA66/V0		PA66/V0
Testing standard		GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11
Suitable for power supply System		TT System(Single phase)		TT System(Three-phase)
Certification				
Type test		Shanghai lightning protection center		Shanghai lightning protection center
Order number		C2-40/1P+1: 7091735		C2-40/3P+1: 7091686
		C2-40/1P+1F: 7053423		C2-40/3P+1F: 7010055

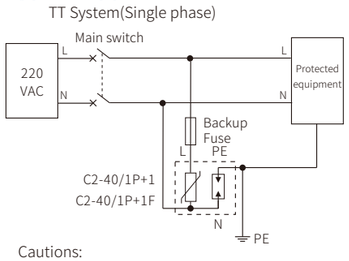
Dimensions

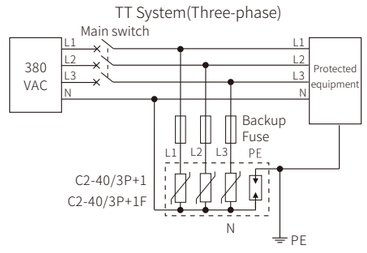


62mm×84mm×24mm

62mm×84mm×48mm

Typical applications





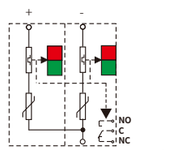
Cautions:
Backup fuses are recommended to be installed in case SPD gets short-circuited.
For connecting to L/N, cables with a cross-sectional area ⩾4mm² are recommended.
For connecting to PE, cables with a cross-sectional area⩾6mm² are recommended.

12mm Power SPD

Features

C2-24
C2-24F

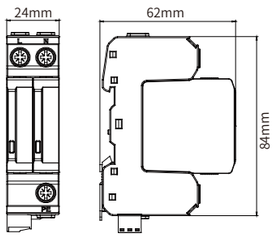
- Width: 12mm/P
- Status indication：
  Green：Normal
  Red：Fault
- Pluggable protection module
- Suitable for high-power circuit
- Remote alarm output is optional (named with F)



PE Remote signaling

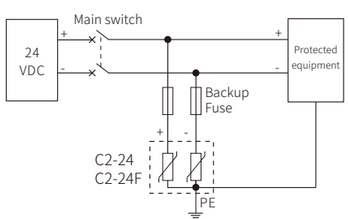
Technical Data	
Max. Continuous operating voltage Uc	90VDC/60VAC
Nominal discharge current In (8/20μs)	20kA
Max. discharge current Imax (8/20μs)	40kA
Voltage protection level Up	0.6kV
Recommended backup fuse	80A gG
Short circuit withstand I_{SCCR} (No external fuse)	1000A
Conductor cross section (solid/flexible)	4~25mm²/4~16mm²
Response time	25ns
Residual current I_{PE}	<20μA
Remote alarm output (with F)	250VAC/0.5A；24VDC/0.5A
Degree of protection of enclosure(IEC60529)	IP 20
Housing material/ Flammability rating(UL94)	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11
Certification	
Type test	Shanghai lightning protection center
Order number	C2-24：7097742 C2-24F：7018876

Dimensions



62mm×84mm×24mm

Typical applications



Cautions:
Backup fuses are recommended to be installed in case SPD gets short-circuited.
For connecting to L/N, cables with a cross-sectional area ⩾4mm² are recommended.
For connecting to PE, cables with a cross-sectional area⩾6mm² are recommended.

【Factory video @Youtube】

CZYB-E15-C.04/2022.10

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Tel: +60-3-80704739
E-mail: sales@chenzhu-asean.com
Web:www.chenzhu-asean.com

CHENZHU

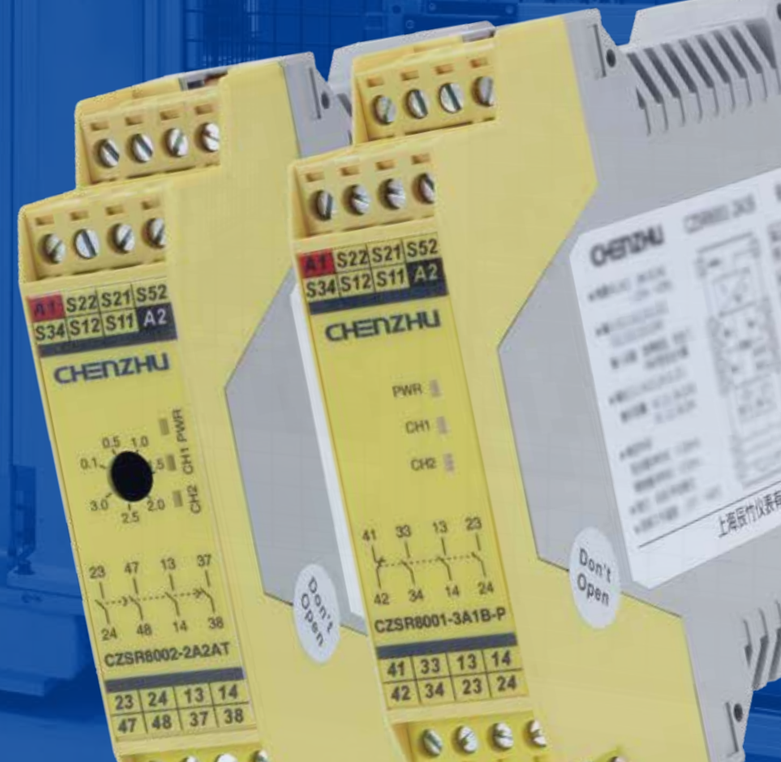
Safety Relay CZSR Classic Series

Support Multiple Input Devices

SIL3 PLe Cat.4 | TÜV Rheinland | G3 anti-corrosion

5 Year WARRANTY

https://en.chenzhu-inst.com



CHENZHU COMPANY OVERVIEW

CHENZHU' s headquarter is located at Shanghai, China, with an area of 8500m².

Shanghai Chenzhu Instrument Co,Ltd. was founded in April, 2002, who was originated from Shanghai Institute of Process Automation Instrumentation. CHENZHU is a professional company with core expertise of R&D, manufacturing and sale service of high quality safety products, such as isolated barriers, signal conditioners, surge protective devices, safety relays etc.

MANAGEMENT SYSTEMS

ISO9001

ISO14001

ISO45001

IECEx QUALITY ASSESSMENT

R&D Strength

Based on ISO/IEC/GB standards, CHENZHU has established the professional laboratory which is applied up to 70 test capabilities and verification items in CHENZHU's safety electrical products' development process.

R&D Team
28%
Work Force

R&D Investment
11%
of Sale Revenue

Innovation
110+
Patents

Testing Facility
80+
Capabilities

Smart Factory

CHENZHU factory is continually driven by lean management and flexible production. By our strict quality examination, CHENZHU ensures the production meets the design specification and satisfies our customers.

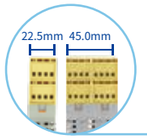
Factory
3500m²
In total

Max Cap.
2,000,000pcs
Year

Lean Production
10+
Years' experience

SIL3 IEC61508 PLe Cat.4

CZSR Classic Serise Safety Relay Overview



Two type housings

Ultra-thin 22.5mm and 45mm

G3 anti-corrosion

Protect the Printed Circuit Board

Easy Wiring

Power, input, and output are distinguished by red&black, yellow and white

Easy plugging

Pluggable terminal blocks make wiring easy

Multiple Input Devices

E-stop buttons | Safety gates
Light beam devices | Safety mats
Two-hand control buttons

Quick Search

Scanning the QR code and check product datasheet

CZSR Classic Series Safety Relay Product List

Input Devices	Model	Power	Reset Mode	Relay Output N/O		Relay Output N/C		Transistor output	Page
	CZSR8001-3A1B	24V DC/AC	Auto / Manual	3	-	1	-	-	5
	CZSR8001-3A1B(M)	24V DC/AC	Monitored Manual	3	-	1	-	-	6
	CZSR8001-2A1B	24V DC/AC	Auto / Manual	2	-	1	-	-	7
	CZSR8001-2A1B3AT1BT	24V DC/AC	Auto / Manual	2	3	1	1	-	8
	CZSR8002-2A2AT	24V DC	Auto / Manual	2	2	-	-	-	9
	CZSR8002-2A2AT(M)	24V DC	Monitored Manual	2	2	-	-	-	10
	CZSR8003-3A1B	230V AC	Auto / Manual	3	-	1	-	-	11
	CZSR8001-3A1B-P	24V DC	Auto / Manual	3	-	1	-	-	12
	CZSR8101-3A1B-N	24V DC	Auto / Manual	3	-	1	-	-	13
	CZSR8201-3A1B	24V DC/AC	-	3	-	1	-	-	14
	CZSR8301-3A1B	24V DC/AC	Auto / Manual	3	-	1	-	-	15
	CZSR8301-3A1B(M)	24V DC/AC	Monitored Manual	3	-	1	-	-	16
	CZSR8302-3A1B	24V DC/AC	Universal	3	-	1	-	-	17
	CZSR8302-2A1B1S	24V DC/AC	Universal	2	-	1	-	1	18
	CZSR8302-2AT1BT1S	24V DC/AC	Universal	-	2	-	1	1	19
	CZSR8303-3A1B	230V AC	Universal	3	-	1	-	-	20
	CZSR8801-4A2B	24V DC	-	4	-	2	-	-	21
	CZSR8801-8A4B	24V DC	-	8	-	4	-	-	22

Model

CZSR8001-3A1B

CZSR8001-3A1B is suitable for the application of E-STOP button and safety gate, with 3 safety output contacts (N/O) and 1 auxiliary output contact (N/C). It can be operated in single or double channel mode, manual or automatic reset, and with the function of monitoring the short circuit between channels.

Dimensions(L×H×W)：114.5mm×99.0mm×22.5mm

Product Features

Single or double channel mode
Manual or automatic reset
Monitoring the short circuit between channels

Specification

Power
- Supply voltage：24V DC / AC
- Voltage tolerance：0.85 ~ 1.1
- AC frequency：50Hz ~ 60Hz
- Current consumption：⩽90mA (24V DC); ⩽240mA (24V AC)

Input
- Input current：⩽50mA (24V DC)
- Cable resistance：⩽15Ω
- Input devices：E-STOP Button, Safety Gate

Output
- Number of contacts：3NO + 1NC
- Contact material：$AgSnO_2$ + 0.2μm Au
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
  6A gL/gG, NEOZED(NC)
- Utilisation category (EN60947-5-1)：AC-15, 5A/230V; DC-13, 5A/24V
- Mechanical endurance：Over 10^7 time

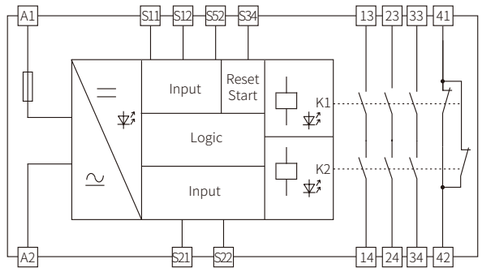
Times
- Switch-on delay：with automatic reset: ⩽300ms;
  with manual reset: ⩽150ms
- Delay-on de-energisation：with E-STOP: ⩽30ms;
  with power failure: ⩽100ms
- Recovery time：after E-STOP: ⩽30ms; after power failure: ⩽100ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：III
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：6000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

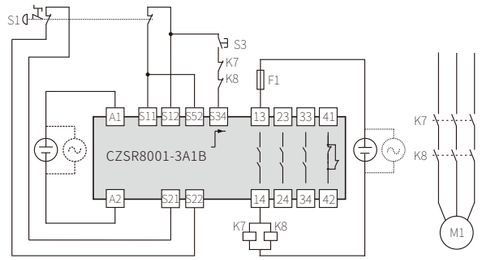
Safety
- Safety integrity level (SIL)：SIL3
- Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8001-3A1B

Typical Application



- Dual channel E-stop buttons input
- Short circuit monitoring
- Manual reset with EDM
- Up to Cat. 4

S1: E-STOP
S3:Reset button
K7,K8:Contactors
F1:External fuse protection
M1:Motor

Model

CZSR8001-3A1B(M)

CZSR8001-3A1B(M) is suitable for the application of E-STOP button and safety gate, with 3 safety output contacts (N/O) and 1 auxiliary output contact (N/C). It can be operated in single or double channel mode,reset button, and with the function of monitoring the short circuit between channels.

Dimensions(L×H×W)：114.5mm×99.0mm×22.5mm

Product Features

Single or double channel mode
Monitored Manual Reset
Monitoring the short circuit between channels

Specification

Power
- Supply voltage：24V DC / AC
- Voltage tolerance：0.85 ~ 1.1
- AC frequency：50Hz ~ 60Hz
- Current consumption：⩽90mA (24V DC); ⩽240mA (24V AC)

Input
- Input current：⩽50mA (24V DC)
- Cable resistance：⩽15Ω
- Input devices：E-STOP Button, Safety Gate

Output
- Number of contacts：3NO + 1NC
- Contact material：$AgSnO_2$ + 0.2μm Au
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
  6A gL/gG, NEOZED(NC)
- Utilisation category (EN60947-5-1)：AC-15, 5A/230V; DC-13, 5A/24V
- Mechanical endurance：Over 10^7 time

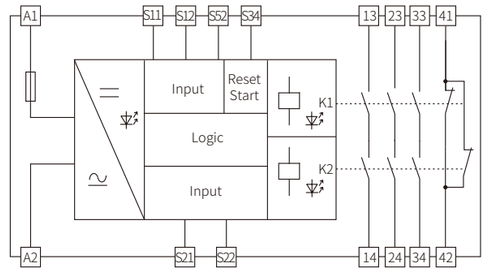
Times
- Switch-on delay：with manual reset: ⩽150ms
- Delay-on de-energisation：with E-STOP: ⩽30ms;
  with power failure: ⩽100ms
- Recovery time：after E-STOP: ⩽30ms;
  after power failure: ⩽100ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：III
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：6000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

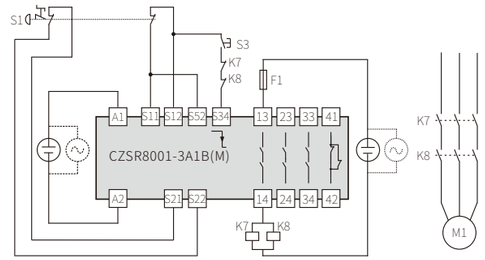
Safety
- Safety integrity level (SIL)：SIL3
- Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8001-3A1B(M)

Typical Application



- Dual channel E-stop buttons input
- Short circuit monitoring
- Manual reset with EDM
- Up to Cat. 4

S1:E-STOP button
S3:Reset button
K7,K8:Contactors
F1:External fuse protection
M1:Motor

Model

CZSR8001-2A1B

CZSR8001-2A1B is suitable for the application of E-STOP button, safety gate and PNP-type light curtain, with 2 safety output contacts (N/O) and 1 auxiliary output contact (N/C). It can be operated in single or double channel mode, manual or automatic reset, and with the function of monitoring the short circuit between channels.

Dimensions(L×H×W)：114.5mm×99.0mm×22.5mm

Product Features

Single or double channel mode
Manual or automatic reset
Monitoring the short circuit between channels

Specification

Power
- Supply voltage：24V DC / AC
- Voltage tolerance：0.85 ~ 1.1
- AC frequency：50Hz ~ 60Hz
- Current consumption：⩽90mA (24V DC); ⩽240mA (24V AC)

Input
- Input current：⩽50mA (24V DC)
- Cable resistance：⩽15Ω
- Input devices：E-STOP Button, Safety Gate、PNP-type light curtain

Output
- Number of contacts：2NO + 1NC
- Contact material：$AgSnO_2$ + 0.2μm Au
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
  6A gL/gG, NEOZED(NC)
- Utilisation category (EN60947-5-1)：AC-15, 5A/230V; DC-13, 5A/24V
- Mechanical endurance：Over 10^7 time

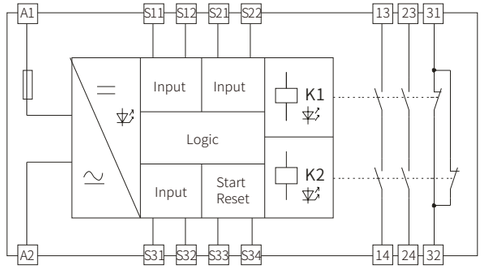
Times
- Switch-on delay：with automatic reset: ⩽300ms;
  with manual reset: ⩽150ms
- Delay-on de-energisation：with E-STOP: ⩽30ms;
  with power failure: ⩽100ms
- Recovery time：after E-STOP: ⩽30ms; after power failure: ⩽100ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：II
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：4000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

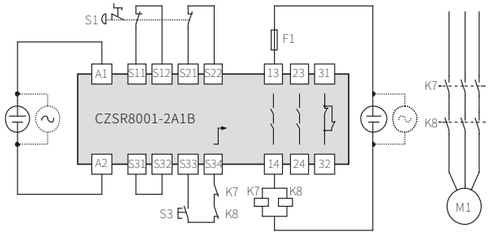
Safety
- Safety integrity level (SIL)：SIL3
- Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8001-2A1B

Typical Application



- Dual channel E-stop buttons input
- Short circuit monitoring
- Manual reset with EDM
- Up to Cat. 4

S1:E-STOP button
S3:Reset button
K7,K8:Contactors
F1:External fuse protection
M1:Motor

Model

CZSR8001-2A1B3AT1BT

CZSR8001-2A1B3AT1BT is suitable for the application of E-STOP button, safety gate and PNP-type light curtain, with 2 safety output contacts (N/O) and 1 auxiliary output contact (N/C). It can be operated in single or double channel mode, manual or automatic reset, and with the function of monitoring the short circuit between channels.

Dimensions(L×H×W)：114.5mm×99.0mm×45.0mm

Product Features

Single or double channel mode
Manual or automatic reset
Monitoring the short circuit between channels

Specification

Power
- Supply voltage：24V DC / AC
- Voltage tolerance：0.85 ~ 1.1
- AC frequency：50Hz ~ 60Hz
- Current consumption：⩽170mA (24V DC); ⩽400mA (24V AC)

Input
- Input current：⩽50mA (24V DC)
- Cable resistance：⩽15Ω
- Input devices：E-STOP Button, Safety Gate、PNP-type light curtain

Output
- Number of contacts：2NO + 1NC + 3NO(t) + 1NC(t)
- Contact material：$AgSnO_2$ + 0.2μm Au
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
  6A gL/gG, NEOZED(NC)
- Utilisation category (EN60947-5-1)：AC-15, 5A/230V; DC-13, 5A/24V
- Mechanical endurance：Over 10^7 time

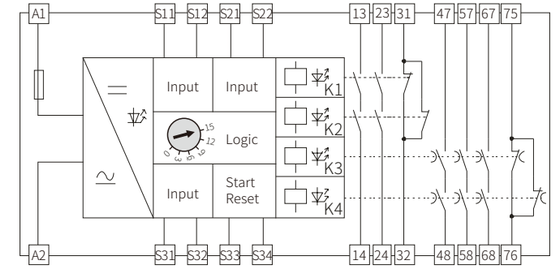
Times
- Switch-on delay：with automatic reset: ⩽300ms;
  with manual reset: ⩽150ms
- Delay-on de-energisation：with E-STOP(instantaneous): ⩽30ms
  with E-STOP(delayed): ⩽30ms (instantaneous)
  delayed time: 0s, 3s, 6s, 9s, 12s, 15s (Delated factory set as 5s)
  with power failure: ⩽100ms
- Recovery time：after E-STOP: ⩽30ms ; after power failure: ⩽100ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：II
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：4000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

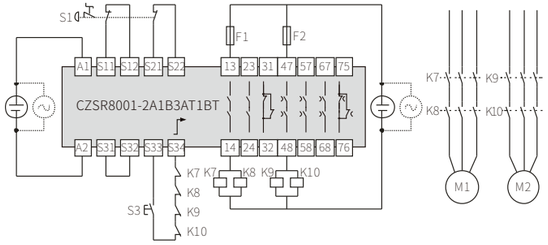
Safety
- Safety integrity level (SIL)：SIL3 Performance level (PL)：PLe
  Category (Cat.)：Cat.4

Block Diagram



CZSR8001-2A1B3AT1BT

Typical Application



- Dual channel E-stop buttons input
- Short circuit monitoring
- Manual reset with EDM
- Up to Cat. 4

S1: E-STOP
S3:Reset button
K7,K8,K9,K10:Contactors
F1,F2:External fuse protection
M1,M2:Motor

Model

CZSR8002-2A2AT

CZSR8002-2A2AT is suitable for the application of E-Stop button and safety gate, with 2 safety output contacts (instantaneous) and 2 safety output contacts (delayed). It can be operated in single or double channel mode, manual or automatic reset, and the function of monitoring the short circuit between channels.

Dimensions(L×H×W)：114.5mm×99.0mm×22.5mm

Product Features

Single or double channel mode
Manual or automatic reset
Monitoring the short circuit between channels

Specification

Power
- Supply voltage：24V DC
- Voltage tolerance：0.85 ~ 1.1
- Current consumption：⩽130mA (24V DC)

Input
- Input current：⩽50mA (24V DC)
- Cable resistance：⩽15Ω
- Input devices：E-STOP Button, Safety Gate

Output
- Number of contacts：2NO + 2NO(t)
- Contact material：$AgSnO_2$
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
- Utilisation category (EN60947-5-1)：AC-15, 3A/230V; DC-13, 3A/24V
- Mechanical endurance：Over 10^7 time

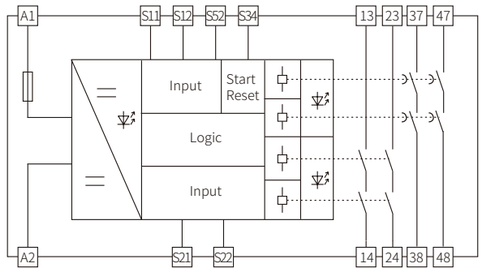
Times
- Switch-on delay：with automatic reset: ⩽300ms;
  with manual reset: ⩽150ms
- Delay-on de-energisation：with E-STOP: ⩽30ms
  with E-STOP(delayed): 0.1s ~ 3s(factory set as 3s)
  with power failure: ⩽100ms
- Recovery time：after E-STOP: ⩽30ms
  after power failure: ⩽100ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：III
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：4000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

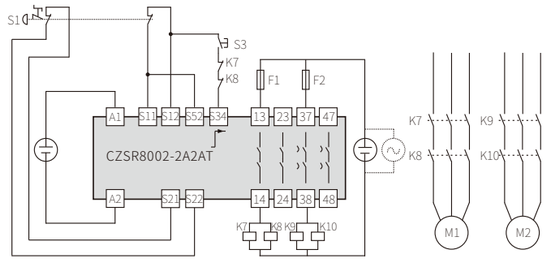
Safety
- Safety integrity level (SIL)：SIL3
- Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8002-2A2AT

Typical Application



- Dual channel E-stop buttons input
- Short circuit monitoring
- Manual reset with EDM
- Up to Cat. 4

S1:E-STOP
S3:Reset button
K7,K8,K9,K10:Contactors
F1,F2:External fuse protection
M1,M2:Motor

Model

CZSR8002-2A2AT(M)

CZSR8002-2A2AT(M) is suitable for the application of E-Stop button and safety gate , with 2 safety output contacts (instantaneous) and 2 safety output contacts (delayed). It can be operated in single or double channel mode, manual or automatic reset, and the function of monitoring the short circuit between channels.

Dimensions(L×H×W)：114.5mm×99.0mm×22.5mm

Product Features

Single or double channel mode
Monitored manual reset
Monitoring the short circuit between channels

Specification

Power
- Supply voltage：24V DC
- Voltage tolerance：0.85 ~ 1.1
- Current consumption：⩽130mA (24V DC)

Input
- Input current：⩽50mA (24V DC)
- Cable resistance：⩽15Ω
- Input devices：E-STOP Button, Safety Gate

Output
- Number of contacts：2NO + 2NO(t)
- Contact material：$AgSnO_2$
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
- Utilisation category (EN60947-5-1)：AC-15, 3A/230V; DC-13, 3A/24V
- Mechanical endurance：Over 10^7 time

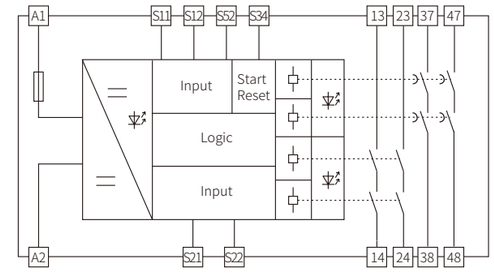
Times
- Switch-on delay：with manual reset: ⩽150ms
- Delay-on de-energisation：with E-STOP: ⩽30ms
  with E-STOP(delayed): 0.1s ~ 3s (factory set as 3s)
  with power failure: ⩽100ms
- Recovery time：after E-STOP: ⩽30ms
  after power failure: ⩽100ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：III
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：4000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

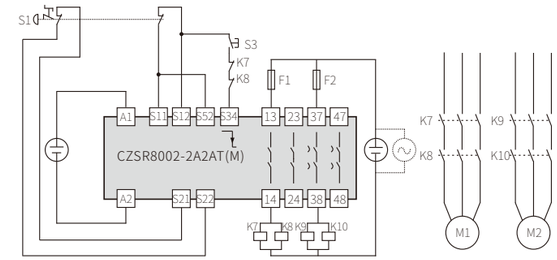
Safety
- Safety integrity level (SIL)：SIL3
- Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8002-2A2AT(M)

Typical Application



- Dual channel E-stop buttons input
- Short circuit monitoring
- Manual reset with EDM
- Up to Cat. 4

S1:E-STOP button
S3:Reset button
K7,K8,K9,K10:Contactors
F1,F2:External fuse protection
M1,M2:Motor

Model

CZSR8003-3A1B

CZSR8003-3A1B is suitable for the application of E-STOP button and safety gate, with power supply of 220V AC and output of 3 safety output contacts (N/O) and 1 auxiliary output contact (N/C). It can be operated in single or dual channel mode, manual or automatic reset, and with the function of monitoring the short circuit between channels.

Dimensions(L×H×W)：114.5mm×99.0mm×22.5mm

Product Features

Single or double channel mode
Manual or automatic reset
Monitoring the short circuit between channels

Specification

Power
- Supply voltage：100V ~ 230V AC
- AC frequency：50Hz ~ 60Hz
- Power consumption：⩽7.0 VA

Input
- Input current：⩽50mA (220 V AC power supply)
- Cable resistance：⩽15Ω
- Input devices：E-STOP Button, Safety Gate

Output
- Number of contacts：3NO + 1NC
- Contact material：$AgSnO_2$ + 0.2μm Au
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
  6A gL/gG, NEOZED(NC)
- Utilisation category (EN60947-5-1)：AC-15, 5A/230V; DC-13, 5A/24V

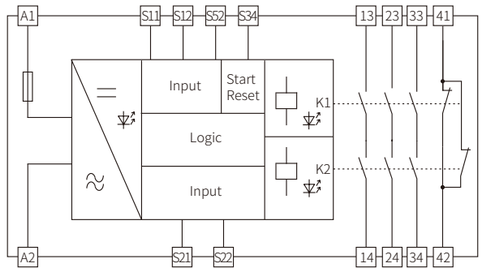
Times
- Switch-on delay：with automatic reset: ⩽300ms;
  with manual reset: ⩽150ms
- Delay-on de-energisation：with E-STOP: ⩽30ms;
  with power failure: ⩽300ms
- Recovery time：after E-STOP: ⩽30ms; after power failure: ⩽500ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：II
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：6000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

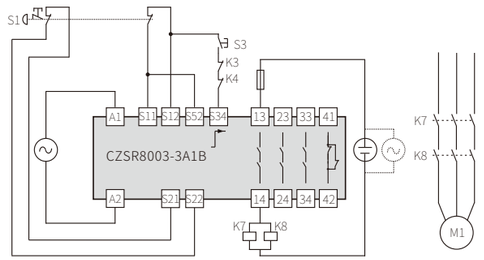
Safety
- Safety integrity level (SIL)：SIL3
- Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8003-3A1B

Typical Application



- Dual channel E-stop buttons input
- Short circuit monitoring
- Manual reset with EDM
- Up to Cat. 4

S1: E-STOP
S3:Reset button
K7,K8:Contactors
F1:External fuse protection
M1:Motor

Model

CZSR8001-3A1B-P

CZSR8001-3A1B-P is suitable for the application of PNP-type light curtain, with output of 3 safety output contacts (N/O) and 1 auxiliary output contact (N/C). It can be operated in single or dual channel mode, manual or automatic reset.

Dimensions(L×H×W)：114.5mm×99.0mm×22.5mm

Product Features

Manual or automatic reset
Monitoring the short circuit between channels

Specification

Power
- Supply voltage：24V DC
- Voltage tolerance：0.85 ~ 1.1
- Current consumption：⩽90mA (24V DC)

Input
- Input current：⩽50mA (24V DC)
- Cable resistance：⩽15Ω
- Input devices：PNP-type light curtain

Output
- Number of contacts：3NO + 1NC
- Contact material：$AgSnO_2$ + 0.2μm Au
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
  6A gL/gG, NEOZED(NC)
- Utilisation category (EN60947-5-1)：AC-15, 5A/230V; DC-13, 5A/24V
- Mechanical endurance：Over 10^7 time

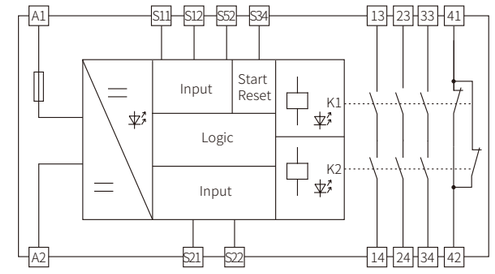
Times
- Switch-on delay：with manual reset: ⩽150ms;
  with automatic reset: ⩽300ms
- Delay-on de-energisation：with E-STOP: ⩽30ms;
  with power failure: ⩽100ms
- Recovery time：after E-STOP: ⩽30ms; after power failure: ⩽100ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：III
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：6000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

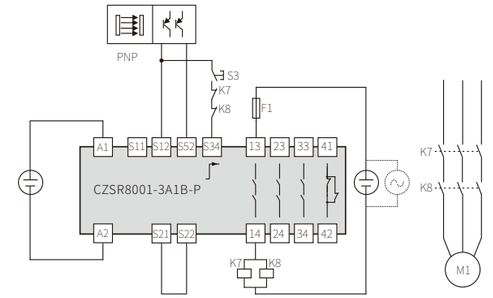
Safety
- Safety integrity level (SIL)：SIL3
- Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8001-3A1B-P

Typical Application



- Dual channel PNP-type light curtain input
- Manual reset with EDM
- Up to Cat. 4

S3:Reset button
K7,K8:Contactors
F1:External fuse protection
M1:Motor

Light Beam Devices Input Safety Relay

Model

CZSR8001-3A1B-N

CZSR8001-3A1B-N is suitable for the application of NPN-type light curtain, with output of 3 safety output contacts (N/O) and 1 auxiliary output contact (N/C). It can be operated in single or dual channel mode, manual or automatic reset.

SIL3 IEC61508

PLe Cat.4 EN/ISO13849

CE

Dimensions(L×H×W)：114.5mm×99.0mm×22.5mm

Product Features

Manual or automatic reset
Monitoring the short circuit between channels

Specification

Power
- Supply voltage：24V DC
- Voltage tolerance：0.85 ~ 1.1
- Current consumption：⩽90mA (24V DC)

Input
- Input current：⩽50mA (24V DC)
- Cable resistance：⩽15Ω
- Input devices：NPN-type light curtain

Output
- Number of contacts：3NO + 1NC
- Contact material：$AgSnO_2$ + 0.2μm Au
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
  6A gL/gG, NEOZED(NC)
- Utilisation category (EN60947-5-1)：AC-15, 5A/230V; DC-13, 5A/24V
- Mechanical endurance：Over 10^7 time

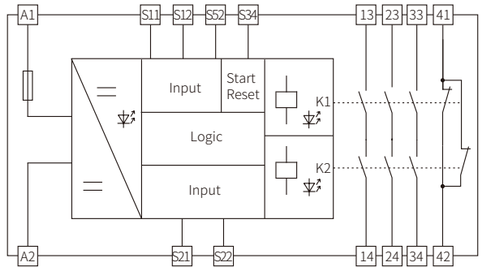
Times
- Switch-on delay：with automatic reset: ⩽300ms;
  with manual reset: ⩽150ms
- Delay-on de-energisation：with E-STOP: ⩽30ms;
  with power failure: ⩽100ms
- Recovery time：after E-STOP: ⩽30ms; after power failure: 100ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：III
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：6000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

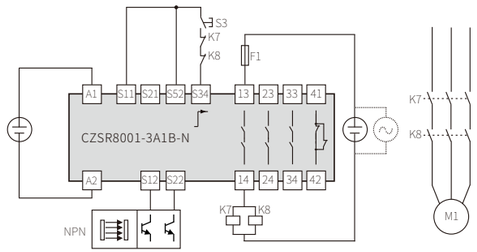
Safety
- Safety integrity level (SIL)：SIL3
- Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8001-3A1B-N

Typical Application



- Dual channel NPN-type light curtain input
- Manual reset with EDM
- Up to Cat. 4

S3:Reset button
K7,K8:Contactors
F1:External fuse protection
M1:Motor

Two-Hand Control Buttons Input Safety Relay

Model

CZSR8201-3A1B

CZSR8201-3A1B is suitable for the application of two-hand push buttons, with 3 safety output contacts (N/O) and 1 auxiliary output contact (N/C). It should be operated in double channel mode, with the simultaneity time of less than 500ms.

SIL3 IEC61508

PLe Cat.4 EN/ISO13849

CE

Dimensions(L×H×W)：114.5mm×99.0mm×22.5mm

Product Features

Double channel mode
In accordance with EN574 Type IIIC

Specification

Power
- Supply voltage：24V DC / AC
- Voltage tolerance：0.85 ~ 1.1
- AC frequency：50Hz ~ 60Hz
- Current consumption：⩽60mA (24V DC); ⩽140mA (24V AC)

Input
- Input current：⩽50mA (24V DC)
- Cable resistance：⩽15Ω
- Input devices：Two-hand push buttons

Output
- Number of contacts：3NO + 1NC
- Contact material：$AgSnO_2$ + 0.2μm Au
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
  6A gL/gG, NEOZED(NC)
- Utilisation category (EN60947-5-1)：AC-15, 5A/230V; DC-13, 5A/24V
- Mechanical endurance：Over 10^7 time

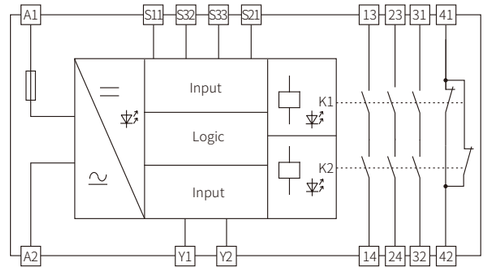
Times
- Switch-on delay：⩽30ms
- Delay-on de-energisation：⩽15ms
- Recovery time：⩽250ms
- Simultaneity time：⩽500 ms (typ. 300 ms)
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：III
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：6000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

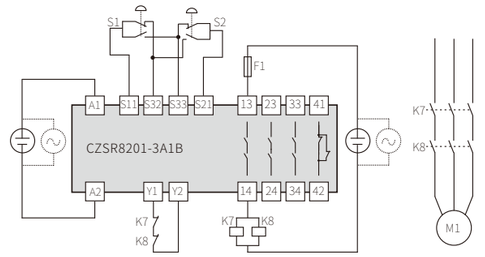
Safety
- Safety integrity level (SIL)：SIL3
- Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8201-3A1B

Typical Application



- Dual channel two-hand push buttons input with EDM
- Short circuit monitoring
- Up to Cat. 4

S1,S2:two-hand push buttons
K7,K8:Contactors
F1:External fuse protection
M1:Motor

Model

CZSR8301-3A1B

CZSR8301-3A1B is suitable for the application of 4-wire safety mats, with 3 safety output contacts (N/O) and 1 auxiliary output contact (N/C). It can be operated in single or dual channel mode, manual or automatic reset.

Dimensions(L×H×W)：114.5mm×99.0mm×22.5mm

Product Features

4-wire safety mats input
Manual or automatic reset

Specification

Power
- Supply voltage：24V DC / AC
- Voltage tolerance：0.85 ~ 1.1
- AC frequency：50Hz ~ 60Hz
- Current consumption：⩽90mA (24V DC); ⩽240mA (24V AC)

Input
- Input current：⩽50mA (24V DC)
- Cable resistance：⩽15Ω
- Input devices：4-wire safety mats

Output
- Number of contacts：3NO + 1NC
- Contact material：$AgSnO_2$ + 0.2μm Au
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
  6A gL/gG, NEOZED(NC)
- Utilisation category (EN60947-5-1)：AC-15, 5A/230V; DC-13, 5A/24V
- Mechanical endurance：Over 10^7 time

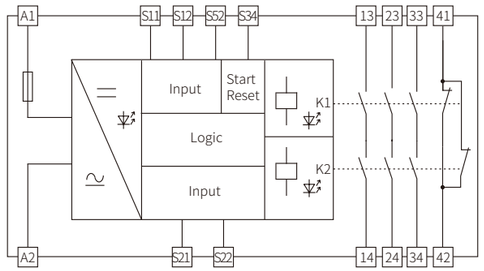
Times
- Switch-on delay：with automatic reset: ⩽300ms;
  with manual reset: ⩽150ms
- Delay-on de-energisation：with E-STOP: ⩽30ms;
  with power failure: ⩽100ms
- Recovery time：⩽300ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：III
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：6000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

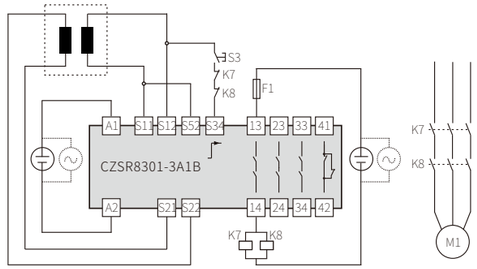
Safety
- Safety integrity level (SIL)：SIL3
- Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8301-3A1B

Typical Application



- 4-wire safety mats input
- Manual reset with EDM
- Up to Cat. 4

S3:Reset button
K7,K8:Contactors
F1:External fuse protection
M1:Motor

Model

CZSR8301-3A1B(M)

CZSR8301-3A1B(M) is suitable for the application of 4-wire safety mats, with 3 safety output contacts (N/O) and 1 auxiliary output contact (N/C). It can be operated in dual channel mode and monitored manual reset.

Dimensions(L×H×W)：114.5mm×99.0mm×22.5mm

Product Features

4-wire safety mats input
Monitored manual reset

Specification

Power
- Supply voltage：24V DC / AC
- Voltage tolerance：0.85 ~ 1.1
- AC frequency：50Hz ~ 60Hz
- Current consumption：⩽90mA (24V DC); ⩽240mA (24V AC)

Input
- Input current：⩽50mA (24V DC)
- Cable resistance：⩽15Ω
- Input devices：4-wire safety mats

Output
- Number of contacts：3NO + 1NC
- Contact material：$AgSnO_2$ + 0.2μm Au
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
  6A gL/gG, NEOZED(NC)
- Utilisation category (EN60947-5-1)：AC-15, 5A/230V; DC-13, 5A/24V
- Mechanical endurance：Over 10^7 time

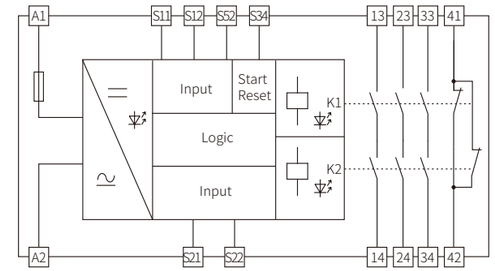
Times
- Switch-on delay：with manual reset: ⩽150ms
- Delay-on de-energisation：with E-STOP: ⩽30ms;
  with power failure: ⩽100ms
- Recovery time：⩽300ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：III
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：6000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

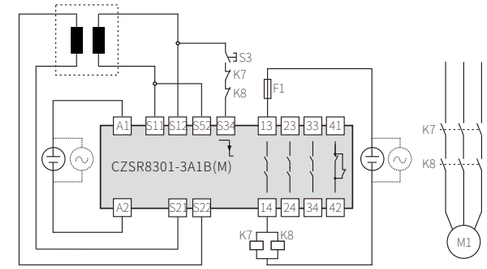
Safety
- Safety integrity level (SIL)：SIL3
- Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8301-3A1B(M)

Typical Application



- 4-wire safety mats input
- Manual reset with EDM
- Up to Cat. 4

S3:Reset button
K7,K8:Contactors
F1:External fuse protection
M1:Motor

Model

CZSR8302-3A1B

CZSR8302-3A1B is suitable for the application of 2-wire safety mats, with 3 safety output contacts (N/O) and 1 auxiliary output contact (N/C). It can be operated in monitored manual or automatic reset.

Dimensions(L×H×W)：114.5mm×99.0mm×22.5mm

Product Features

2-wire safety mats input
Monitored manual reset
Automatic reset

Specification

Power
- Supply voltage：24V DC / AC
- Voltage tolerance：0.85 ~ 1.1
- AC frequency：50Hz ~ 60Hz
- Current consumption：⩽95mA (24V DC); ⩽240mA (24V AC)

Input
- Input current：⩽10mA (24V DC)
- Cable resistance：⩽15Ω
- Input devices：2-wire safety mats

Output
- Number of contacts：3NO + 1NC
- Contact material：$AgSnO_2$ + 0.2μm Au
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
  6A gL/gG, NEOZED(NC)
- Utilisation category (EN60947-5-1)：AC-15, 5A/230V; DC-13, 5A/24V
- Mechanical endurance：Over 10^7 time

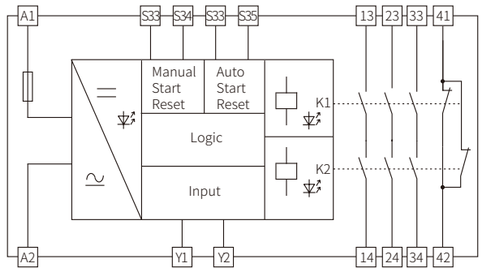
Times
- Switch-on delay：with automatic reset: ⩽300ms;
  with manual reset: ⩽150ms
- Delay-on de-energisation：with E-STOP: ⩽30ms;
  with power failure: ⩽100ms
- Recovery time：with E-STOP: ⩽30ms; with power failure: ⩽100ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：III
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：6000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

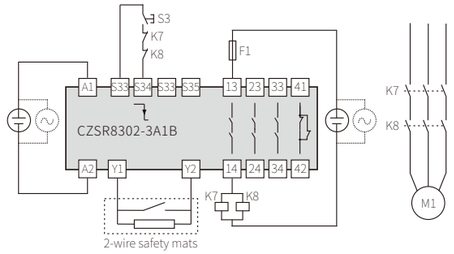
Safety
- Safety integrity level (SIL)：SIL3
- Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8302-3A1B

Typical Application



- 2-wire safety mats input
- Monitored Manual reset with EDM
- Up to Cat. 4

S3:Reset button
K7,K8:Contactors
F1:External fuse protection
M1:Motor

Model

CZSR8302-2A1B1S

CZSR8302-2A1B1S is suitable for the application of 2/4-wire safety mats, with 2 safety output contacts (N/O) , and 1 auxiliary output contact (N/C), and 1 delay-on auxiliary output cntact of semiconductor. It can be operated in monitored manual or automatic reset.

Dimensions(L×H×W)：114.5mm×99.0mm×22.5mm

Product Features

2/4-wire safety mats input
Monitored manual reset
Automatic reset

Specification

Power
- Supply voltage：24V DC / AC
- Voltage tolerance：0.85 ~ 1.1
- AC frequency：50Hz ~ 60Hz
- Current consumption：⩽120mA (24V DC); ⩽300mA (24V AC)

Input
- Input current：⩽10mA (24V DC)
- Cable resistance：⩽15Ω
- Input devices：2/4-wire safety mats(Terminal resistance: 1.0KΩ ~ 10KΩ)

Output
- Number of contacts：2NO + 1NC
- Contact material：$AgSnO_2$ + 0.2μm Au
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
  6A gL/gG, NEOZED(NC)
- Utilisation category (EN60947-5-1)：AC-15, 5A/230V; DC-13, 5A/24V
- Mechanical endurance：Over 10^7 time

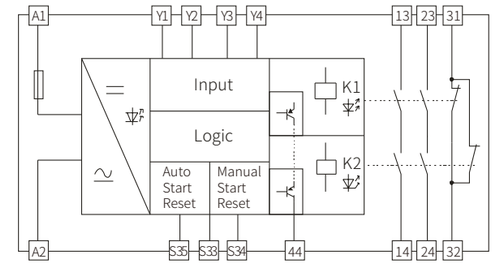
Times
- Switch-on delay：with automatic reset: ⩽300ms;
  with manual reset: ⩽150ms
- Delay-on de-energisation：with E-STOP: ⩽30ms;
  with power failure: ⩽100ms
- Recovery time：with E-STOP: ⩽30ms; with power failure: ⩽100ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：II
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：4000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

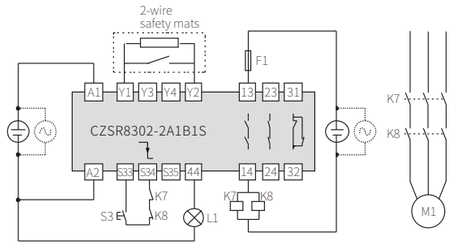
Safety
- Safety integrity level (SIL)：SIL3
- Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8302-2A1B1S

Typical Application



- 2-wire safety mats input
- Monitored Manual reset with EDM
- Up to Cat. 4

S3:Reset button
L1:Light
K7,K8:Contactors
F1:External fuse protection
M1:Motor

Model

CZSR8302-2AT1BT1S

CZSR8302-2AT1BT1S is suitable for the application of 2/4-wire safety mats, with 2 safety output contacts (N/O) (can set the delay to disconnect), and 1 auxiliary output contact (N/C) (can set the delay to closed), and 1 delay-on auxiliary output cntact of semiconductor (momentary disconnect). It can be operated in monitored manual or automatic reset.

Dimensions(L×H×W)：114.5mm×99.0mm×22.5mm

Product Features

2/4-wire safety mats input
Monitored manual reset
Automatic reset

Specification

Power
- Supply voltage：24V DC / AC
- Voltage tolerance：0.85 ~ 1.1
- AC frequency：50Hz ~ 60Hz
- Current consumption：⩽120mA (24V DC); ⩽300mA (24V AC)

Input
- Input current：⩽10mA (24V DC)
- Cable resistance：⩽15Ω
- Input devices：2/4-wire safety mats(Terminal resistance: 1.0KΩ ~ 10KΩ)

Output
- Number of contacts：2NO(t) + 1NC(t)
- Contact material：$AgSnO_2$ + 0.2μm Au
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
  6A gL/gG, NEOZED(NC)
- Utilisation category (EN60947-5-1)：AC-15, 5A/230V; DC-13, 5A/24V
- Mechanical endurance：Over 10^7 time

Semiconductor output data
- Number of semi-output：1SO
- Driving ability：20mA/24V DC

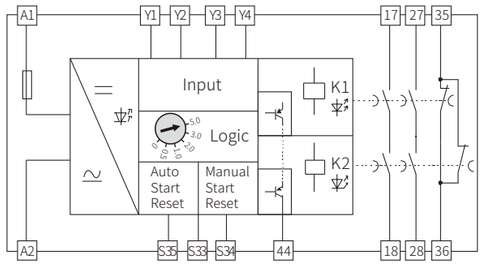
Times
- Switch-on delay：with automatic reset: ⩽300ms;with manual reset: ⩽150ms
- Delay-on de-energisation：with E-STOP: ⩽30ms (instantaneous);
  with power failure: ⩽100ms
  0s, 0.5s, 1s, 2s, 3s, 5s (Delated factory set as 5s)
- Recovery time：with E-STOP: ⩽30ms; with power failure: ⩽100ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：II
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：4000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

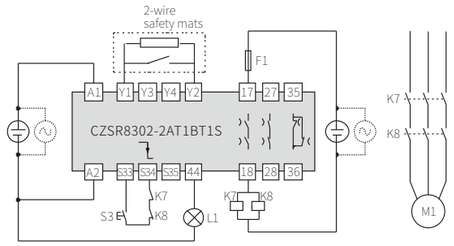
Safety
- Safety integrity level (SIL)：SIL3　　Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8302-2AT1BT1S

Typical Application



- 2/4-wire safety mats input
- Monitored Manual reset with EDM
- Up to Cat. 4

S3:Reset button
L1:Light
K7,K8:Contactors
F1:External fuse protection
M1:Motor

Model

CZSR8303-3A1B

CZSR8303-3A1B is suitable for the application of 2-wire safetymat, with the power supply of 230V AC, and 3 safety output contacts (N/O) and 1 auxiliary output contact (N/C). It can be operated in automatic or monitored manual reset.

Dimensions(L×H×W)：114.5mm×99.0mm×22.5mm

Product Features

2-wire safety mats input
Monitored manual reset
Automatic reset

Specification

Power
- Supply voltage：100V ~ 230V AC
- AC frequency：50Hz ~ 60Hz
- Current consumption：⩽7.0VA (220V AC)

Input
- Input current：⩽10mA (220V AC)
- Cable resistance：⩽15Ω
- Input devices：2-wire safety mats

Output
- Number of contacts：3NO + 1NC
- Contact material：$AgSnO_2$ + 0.2μm Au
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
  6A gL/gG, NEOZED(NC)
- Utilisation category (EN60947-5-1)：AC-15, 5A/230V; DC-13, 5A/24V
- Mechanical endurance：Over 10^7 time

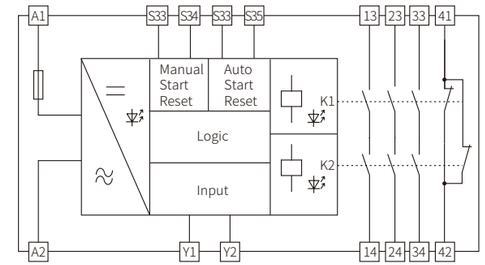
Times
- Switch-on delay：with automatic reset: ⩽300ms;
  with manual reset: ⩽150ms
- Delay-on de-energisation：with E-STOP: ⩽30ms;
  with power failure: ⩽300ms
- Recovery time：with E-STOP: ⩽30ms; with power failure: ⩽300ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：II
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：6000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

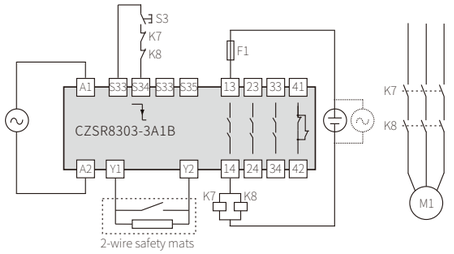
Safety
- Safety integrity level (SIL)：SIL3
- Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8303-3A1B

Typical Application



- 2-wire safety mats input
- Monitored Manual reset with EDM
- Up to Cat. 4

S3:Reset button
K7,K8:Contactors
F1:External fuse protection
M1:Motor

Model

CZSR8801-4A2B

CZSR8801-4A2B is suitable for the application of output expansion, with 4 safety output contacts (N/O) and 2 auxiliary output contacts (N/C). The auxiliary output contacts can be used as output state indicator and failure feedback.

Dimensions(L×H×W)：114.5mm×99.0mm×22.5mm

Product Features

Output expansion
Failure feedback output contacts

Specification

Power
- Supply voltage：24V DC
- Voltage tolerance：20 ~ 30V DC
- Current consumption：⩽70mA (24V DC)

Input
- Input current：⩽70mA (24V DC)
- Cable resistance：⩽15Ω
- Input devices：Safety switch, Contact switch

Output
- Number of contacts：4NO + 2NC
  - Safety output: 13, 14; 23, 24; 33, 34; 43, 44
  - Auxiliary output: 11, 12 (State) Y1, Y2 (Feedback)
- Contact material：$AgSnO_2$ + 0.2μm Au
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
  6A gL/gG, NEOZED(NC)
- Utilisation category (EN60947-5-1)：AC-15, 5A/230V; DC-13, 5A/24V
- Mechanical endurance：Over 10^7 time

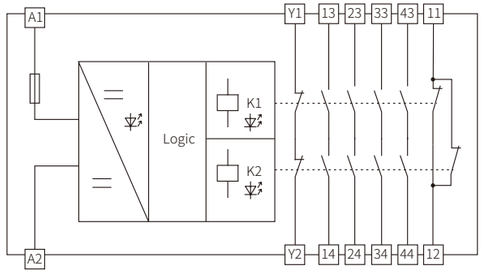
Times
- Switch-on delay：⩽30ms
- Delay-on de-energisation：⩽20ms
- Recovery time：⩽100ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：III
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：6000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

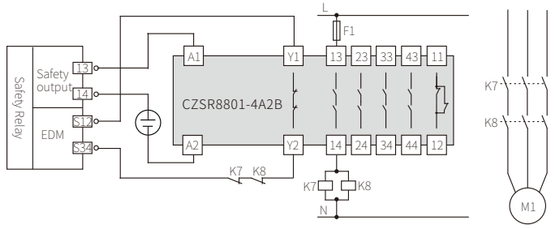
Safety
- Safety integrity level (SIL)：SIL3
- Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8801-4A2B

Typical Application



- Output expansion
- Up to Cat. 4

K7,K8:Contactors
F1:External fuse protection
M1:Motor

Model

CZSR8801-8A4B

CZSR8801-8A4B is suitable for the application of output expansion, with 8 safety output contacts (N/O) and 4 auxiliary output contacts (N/C). The auxiliary output contacts can be used as output state indicator and failure feedback.

Dimensions(L×H×W)：114.5mm×99.0mm×45.0mm

Product Features

Output expansion
Failure feedback output contacts
Independent double channel

Specification

Power
- Supply voltage：24V DC
- Voltage tolerance：20 ~ 30V DC
- Current consumption：⩽70mA (24 V DC, each channel)

Input
- Input current：⩽70mA (24V DC)
- Cable resistance：⩽15Ω
- Input devices：Safety switch, Contact switch

Output
- Number of contacts：8NO + 4NC
  - Safety output: 13, 14; 23, 24; 33, 34; 43, 44;53, 54; 63, 64; 73, 74; 83, 84
  - Auxiliary output: 11, 12; 21, 22 (State); Y1, Y2; Y3, Y4(Feedback)
- Contact material：$AgSnO_2$ + 0.2μm Au
- Contact type：Force guided
- External contact fuse protection：10A gL/gG, NEOZED(NO)
  6A gL/gG, NEOZED(NC)
- Utilisation category (EN60947-5-1)：AC-15, 5A/230V; DC-13, 5A/24V
- Mechanical endurance：Over 10^7 time

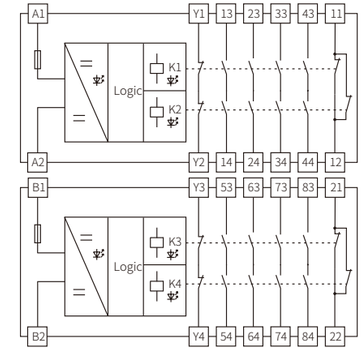
Times
- Switch-on delay：⩽30ms
- Delay-on de-energisation：⩽20ms
- Recovery time：⩽100ms
- Supply interruption before de-energisation：20ms

Environmental Characteristics
- EMC：In accordance with EN60947, EN61000-6-2, EN61000-6-4
- Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm
- Ambient temperature：-20°C~+60°C
- Storage temperature：-40°C~+85°C
- Relative humidity：10%~90%

Insulation characteristic
- Overvoltage category：III
- Pollution degree：2
- Rated insulation voltage：250V AC
- Rated impulse voltage：6000V (1.2/50us)
- Dielectric strength：1500V AC, 1min
- Clearance and creepage：In accordance with EN 60947-1

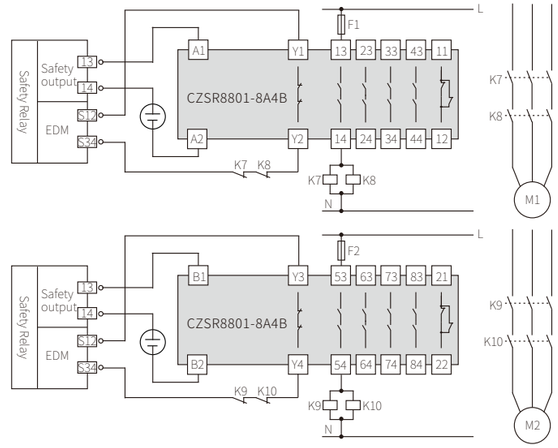
Safety
- Safety integrity level (SIL)：SIL3
- Performance level (PL)：PLe
- Category (Cat.)：Cat.4

Block Diagram



CZSR8801-8A4B

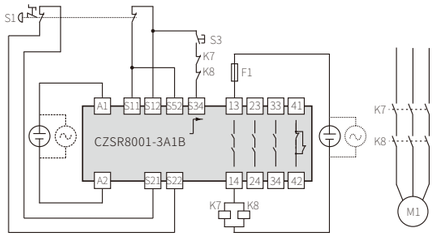
Typical Application



- Output expansion
- Up to Cat. 4

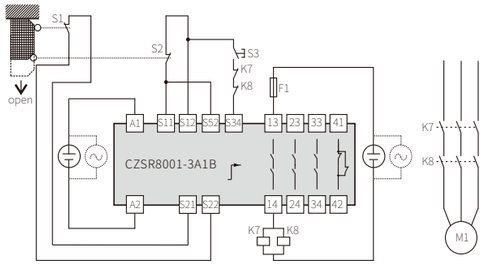
K7,K8, K9,K10:Contactors
F1,F2:External fuse protection
M1,M2:Motor

CZSR8001-3A1B



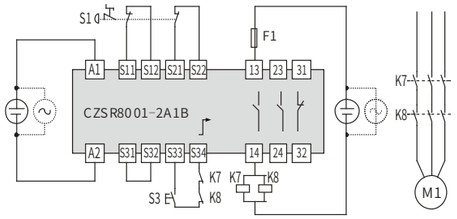
- Dual channel E-stop buttons input
- Short circuit monitoring
- Manual reset
- Output with EDM
- Up to Cat.4

CZSR8001-3A1B



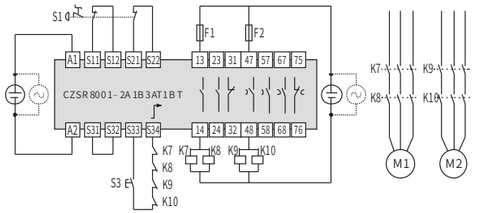
- Dual channel safety gates input
- Short circuit monitoring
- Manual reset
- Output with EDM
- Up to Cat.4

CZSR8001-2A1B



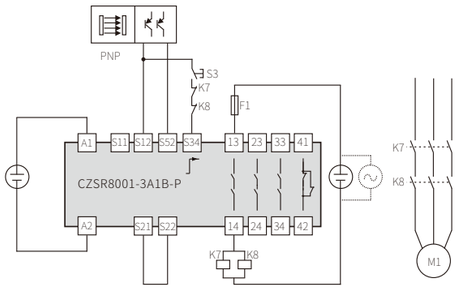
- Dual channel E-stop buttons input
- Short circuit monitoring
- Manual reset
- Output with EDM
- Up to Cat.4

CZSR8001-2A1B3AT1BT



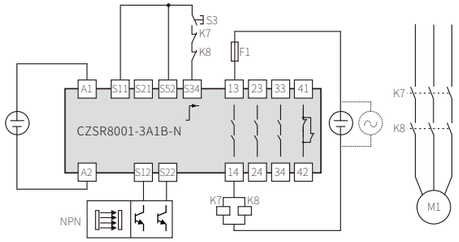
- Dual channel E-stop buttons input
- Short circuit monitoring
- Manual reset
- 4 delay-on contact
- Output with EDM
- Up to Cat.4

CZSR8001-3A1B-P



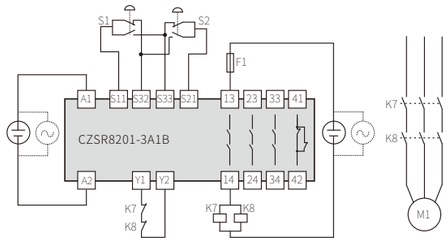
- Dual channel PNP type light beam devices input
- Manual reset
- Output with EDM
- Up to Cat.4

CZSR8101-3A1B-N



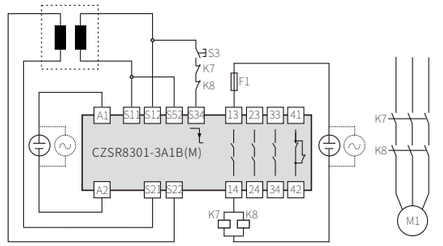
- Dual channel NPN type light beam devices input
- Manual reset
- Output with EDM
- Up to Cat.4

CZSR8201-3A1B



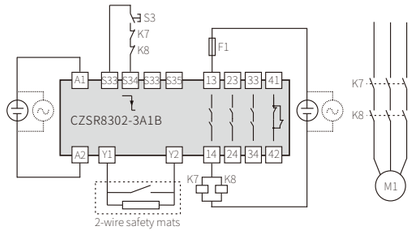
- Two-hand control buttons input
- In accord with EN574 type IIIC
- Output with EDM
- Up to Cat.4

CZSR8301-3A1B(M)



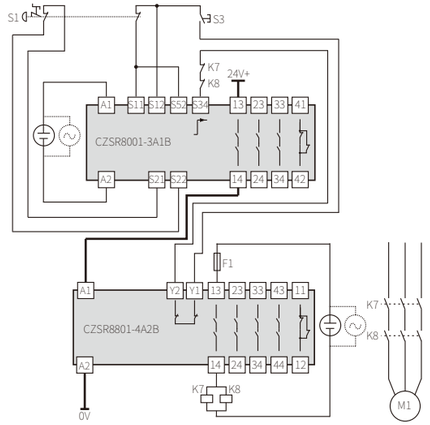
- 4-wire safety mats input
- Monitored manual reset
- Output with EDM
- Up to Cat.4

CZSR8302-3A1B



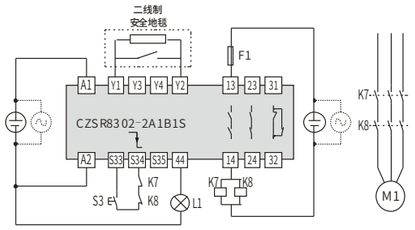
- 2-wire safety mats input
- Monitored manual reset
- Output with EDM
- Up to Cat.4

CZSR8801-4A2B



- Output extension (CZSR8001-3A1B used as main controller)
- Manual reset
- Output with EDM
- Up to Cat.4

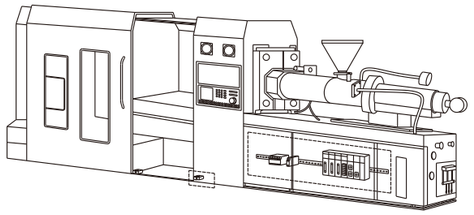
CZSR8302-2A1B1S



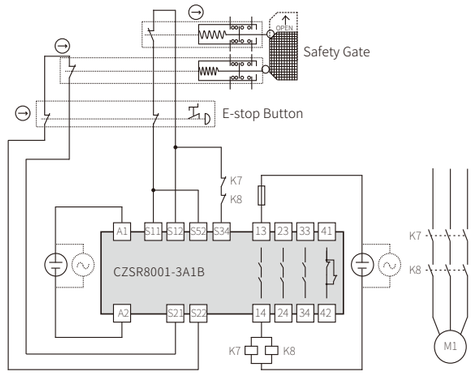
- 2-wire safety mats input
- Monitored manual reset
- Output with EDM
- Up to Cat.4
- 1 delay-on auxiliary output cntact of semiconductor

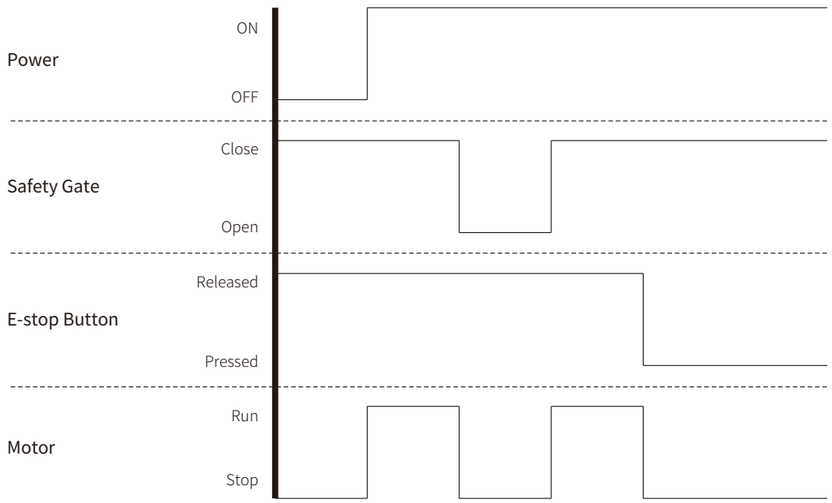
S3: Reset buttons
K7,K8,K9,K10:Contactors
F1,F2:External protective fuse
M1,M2:Motor

Wiring diagram Ⅰ: Injection Moulding Machine



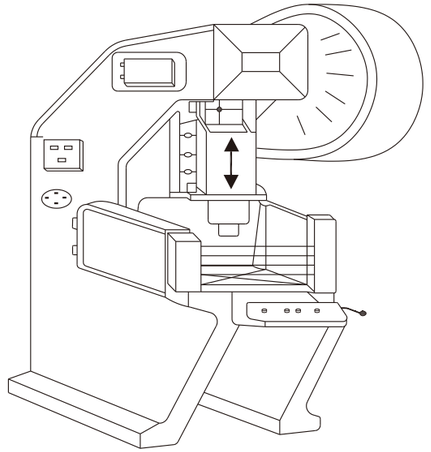
Wiring Instructions



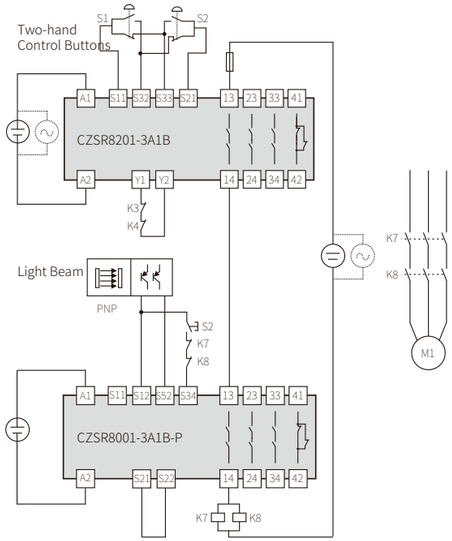


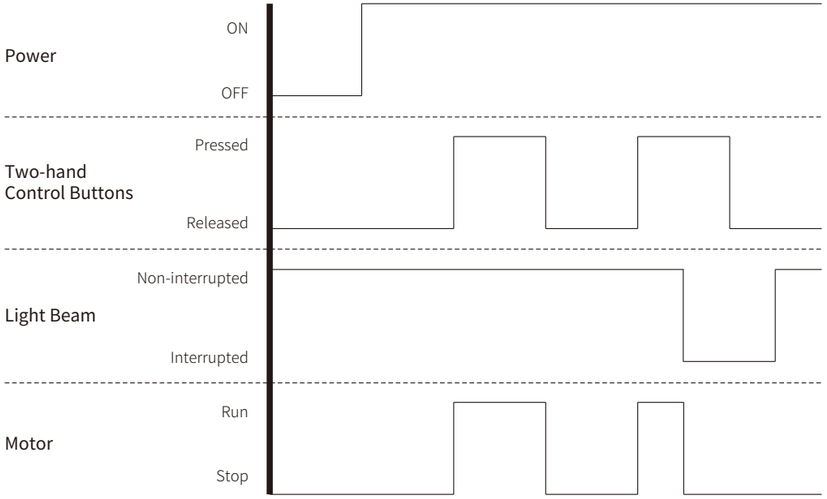
The safety control system of injection moulding machine is consisted of safety gate, E-stop button and safety relay. The hazard is mainly from the squeeze of mould-shutting action. The hazard area is isolated from the operators via safety gate. When the safety gate is closed, the mould-shutting action starts (motor runs). Once the safety gate is opened, the mould-shutting action stops (motor stops).

Application Ⅱ: Punch Machine



Wiring Instructions





The safety control system of punch machine is consisted of two-hand control buttons, light beam and safety relay. The hazard is mainly from the punching action. The operator activate the punching operation via two-hand control buttons. The light beam is used to prevent the human body from entering the action area of the punch machine.

【Factory video @Youtube】

CZYB-E03.03/2022.03

Headquarters

SHANGHAI CHENZHU INSTRUMENT CO.,LTD.

Add: Building 6, 201 Minyi Rd., Shanghai 201612, P.R.China

Tel: +86-21-64360668
E-mail: chenzhu@chenzhu-inst.com
Web: en.chenzhu-inst.com

ASEAN Region

CHENZHU SDN BHD (1314739-P)

Add: 1F-16, IOI Business Park, No. 1, Persiaran Puchong Jaya Selatan, Bandar Puchong Jaya Selatan, 47100 Puchong, Selangor, Malaysia.
Tel: +60-3-80704739
E-mail: sales@chenzhu-asean.com
Web:www.chenzhu-asean.com

CHENZHU

Isolated Barrier

GS8500-EX Series

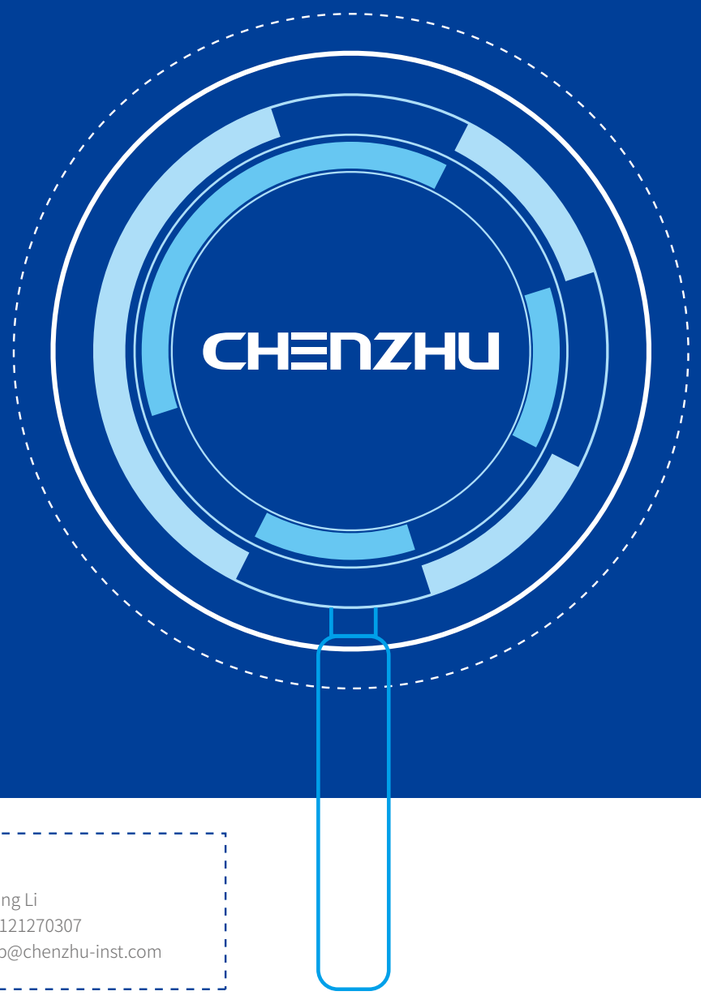
Catalogue (2022)

5 Year WARRANTY

https://en.chenzhu-inst.com

Looking for Agent !

If you are interested to be our agent in your market,
we will be your strong backup.



Contact:

Ms. Danping Li
M: +86-18121270307
Email: lidp@chenzhu-inst.com

Contents

CHENZHU COMPANY OVERVIEW

CHENZHU' s headquarter is located at Shanghai, China, with an area of 8500m².

Shanghai Chenzhu Instrument Co,Ltd. was founded in April, 2002, who was originated from Shanghai Institute of Process Automation Instrumentation. CHENZHU is a professional company with core expertise of R&D, manufacturing and sale service of high quality safety products, such as isolated barriers, signal conditioners, surge protective devices, safety relays etc.

MANAGEMENT SYSTEMS

ISO9001

ISO14001

ISO45001

IECEx QUALITY ASSESSMENT

R&D Strength

Based on ISO/IEC/GB standards, CHENZHU has established the professional laboratory which is applied up to 70 test capabilities and verification items in CHENZHU's safety electrical products' development process.

R&D Team
28%
Work Force

R&D Investment
11%
of Sale Revenue

Innovation
110+
Patents

Testing Facility
80+
Capabilities

Smart Factory

CHENZHU factory is continually driven by lean management and flexible production. By our strict quality examination, CHENZHU ensures the production meets the design specification and satisfies our customers.

Factory
3500㎡
In total

Max Cap.
2,000,000pcs
Year

Sales Volume
1,080,000pcs
In 2021

Lean Production
10+
Years' experience

SIL Certification

Certificate

Product Safety
Functional
Safety

TÜVRheinland CERTIFIED
www.tuv.com
ID 0600000000

No.: 968/EZ 531.03/19

Product tested	Isolated Barriers for safety-related applications	**Certificate holder**	SHANGHAI CHENZHU INSTRUMENT CO., LTD. Floor 7~8, Building 6, No. 201, Minyi Road, Songjiang District, Shanghai, 201612, P.R. China
Type designation	GS8512-EX, GS8523-EX, GS8535-EX, GS8536-EX, GS8547-EX, GS8567-EX, GS8568-EX		
Codes and standards	IEC 61508 Parts 1-7:2010 IEC 61326-3-1:2017	IEC 61298 Parts 1-3:2008	
Intended application	GS8512-EX and GS8523-EX are intended to be used in safety-related applications and have the safety function to de-energize output(s) on demand. The safe state is the de-energized state. GS8535-EX, GS8536-EX, GS8547-EX, GS8567-EX and GS8568-EX are intended to be used in safety-related applications and have the safety function of repeating 4~20 mA current or converting the 4~20mA into 1~5V output voltage within the accuracy of ±2%. In case of a failure the output current is < 3.6 mA or > 21.5 mA. The barriers comply with the requirements of IEC 61508: GS8512-EX, GS8523-EX, GS8547-EX: IEC 61508 SC 3, SIL 3 GS8535-EX, GS8536-EX, GS8567-EX, GS8568-EX: IEC 61508 SC 3, SIL 2		
Specific requirements	The instructions of the associated Safety Manuals shall be considered.		

Valid until 2024-06-13

The issue of this certificate is based upon an examination, whose results are documented in Report No. 968/EZ 531.03/19 dated 2019-06-13.
This certificate is valid only for products which are identical with the product tested.

TÜV Rheinland Industrie Service GmbH
Bereich Automation
Funktionale Sicherheit
Am Grauen Stein, 51105 Köln

Köln, 2019-06-13 — Certification Body Safety & Security for Automation & Grid — Dipl.-Ing. Gebhard Bouwer

www.fs-products.com
www.tuv.com

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TÜV Rheinland Industrie Service GmbH, Am Grauen Stein, 51105 Köln / Germany
Tel.: +49 221 806-1791 Fax: +49 221 806-1539, E-Mail: industrie-service-global@tuv.com

TÜVRheinland CERTIFIED
www.tuv.com
ID 0600000000

Code and standards: IEC61508-2010 Functional safety of electrical/electronic /programmable electronic safety-related systems

Certificate authority: TÜV Rheinland

IECEx Certification

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx SIR 21.0022X**	Page 1 of 3	Certificate history:
Status:	**Current**	Issue No: 0	
Date of Issue:	2021-06-23		
Applicant:	**SHANGHAI CHENZHU INSTRUMENT CO., LTD.** Floor 7~8, Building 6, No. 201, Minyi Road, Songjiang District, Shanghai 201612 **China**		
Equipment:	**GS8500-EX series safety barriers GS8512-EX.11, GS8512-EX.12, GS8512-EX.22, GS8523-EX, GS8523-EX.I, GS8547-EX, GS8567-EX, GS8572-EX, GS8572-EX.RTD, GS8572-EX.R, GS8572-EX.TC.**		
Optional accessory:			
Type of Protection:	**Intrinsically Safe ia**		
Marking:	[Ex ia Ma] I [Ex ia Ga] IIC [Ex ia Da] IIIC		

Approved for issue on behalf of the IECEx Certification Body: **Neil Jones**

Position: **Certification Manager**

Signature: (for printed version) PP McHalliwell

Date: 2021-06-23

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:
SIRA Certification Service
CSA Group
Unit 6, Hawarden Industrial Park
Hawarden, Deeside, CH5 3US
United Kingdom

CSA GROUP™

IECEx

Code and standards: IEC60079-0 Explosive atmospheres
- Part 0: Equipment - General requirements
IEC60079-11 Explosive atmospheres
- Part 11: Equipment protection by intrinsic safety "i"

Certificate authority: Canadian Standards Association (CSA)

ATEX Certification

1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **CSANe 21ATEX2089X** Issue: **0**

4 Equipment: **GS8500-EX series safety barriers which includes model numbers: GS8512-EX.11, GS8512-EX.12, GS8512-EX.22, GS8523-EX, GS8523-EX.I, GS8547-EX, GS8567-EX, GS8572-EX, GS8572-EX.RTD, GS8572-EX.R, GS8572-EX.TC**

5 Applicant: **SHANGHAI CHENZHU INSTRUMENT CO., LTD.**

6 Address: Floor 7~8, Building 6, No.201, Minyi Road, Songjiang District, Shanghai, 201612, P.R. China

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-11:2012

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

I (M1)
[Ex ia Ma] I
Ta = -20°C to 60°C

II (1) GD
[Ex ia Ga] IIC
[Ex ia Da] IIIC
Ta = -20°C to 60°C

Project Number 80033510

Signed: J A May

Title: Director of Operations

CSA Group Netherlands B.V.
Utrechtseweg 310, Building B42,
6812AR Arnhem, The Netherlands

Page 1 of 5
DQD 544.09 Rev 2020-10-23 This certificate and its schedules may only be reproduced in its entirety and without change

Code and standards: EN60079-0 Explosive atmospheres
- Part 0: Equipment - General requirements
EN60079-11 Explosive atmospheres
- Part 11: Equipment protection by intrinsic safety "i"

Certificate authority: Canadian Standards Association (CSA)

China Ex Certification

EXPLOSION PROTECTION
CERTIFICATE OF CONFORMITY

Cert NO.GYB21.4014X

This is to certify that the product

	Isolated barrier
manufactured by	Shanghai Chenzhu Instrument Co.,Ltd (Address:Floor 7~8, Building 6, No. 201, Minyi Road, Songjiang District, Shanghai, P.R. China)
which model is	GS8567-EX、GS8547-EX、GS8523-EX、GS8523-EX.I、GS8512-EX.11、GS8512-EX.12、GS8512-EX.22
Ex marking	[Ex ia Ma] I、Ex nA IIC T4 Gc、Ex nA nC IIC T4 Gc (The corresponding relationship between model and Ex marking is specified in the attachment to this certificate)
product standard	Q31/0117000327C005-2017
drawing number	GS8547-EX.0-6.0、GS8523-EX.0-6.0、GS8523-EX.I.0-6.0、GS8512-EX.11.0-6.0、GS8512-EX.12.0-6.0、GS8512-EX.22.0-6.0、GS8567-EX.0-6.0

has been inspected and certified by NEPSI, and that it conforms to GB 3836.1-2010,GB 3836.4-2010,GB 3836.8-2014.

This Approval shall remain in force until 2026.12.09

Remarks
1.The corresponding relationship between model and Ex marking is specified in the attachment to this certificate.
2.Symbol "X" placed after the certification number denotes specific conditions of use, which are specified in the attachment to this certificate.
3.Conditions for safe use are specified in the attachment to this certificate.
4.Intrinsic safety parameters specified in the attachment to this certificate.

Director

National Supervision and Inspection Centre for Explosion Protection and Safety of Instrumentation

Issued Date 2021.12.10

This Certificate is valid for products compatible with the documents and samples approved by NEPSI.

103 Cao Bao Road
Shanghai 200233, China
http://www.nepsi.org.cn
Email: info@nepsi.org.cn
Tel: +86 21 64368180
Fax: +86 21 64844580

Edition 05

Code and standards:
GB3836.1-2010 Explosive atmospheres - Part 1: Equipment - General requirements
GB3836.4-2010 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
GB 3836.8-2014 Explosive atmospheres - Part 8: Equipment protection by type of protection "n"
GB 3836.20-2010 Explosive atmospheres - Part 20:Equipment with equipment protection level(EPL)Ga
GB12476.1-2013 Electrical apparatus for use in the presence of combustible dust
- Part 1: General requirements
GB12476.4-2010 Electrical apparatus for use in the presence of combustible dust
- Part 4: protection by intrinsic safety "iD"

Certificate authority: NEPSI

CCC Certification

CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

SITIIAS Worldwide Access

CERTIFICATE NO: 2020322316000236

APPLICANT:	**SHANGHAI CHENZHU INSTRUMENT CO., LTD.**
ADDRESS:	Room 702, Building 5, No.518, Xinzhuan Road, Songjiang Hi-tech Park, Caohejing Development Park, Shanghai, P.R. China
MANUFACTURER:	SHANGHAI CHENZHU INSTRUMENT CO., LTD.
ADDRESS:	Room 702, Building 5, No.518, Xinzhuan Road, Songjiang Hi-tech Park, Caohejing Development Park, Shanghai, P.R. China
FACTORY:	SHANGHAI CHENZHU INSTRUMENT CO., LTD.
ADDRESS:	Building 2(26#), No. 301, Minqiang Road, Songjiang District, Shanghai, 201612, P.R. China
PRODUCTNAME:	Isolated Barrier
SERIES,SPECIFICATION,MODEL:	GS8535-EX、GS8536-EX、GS8547-EX、GS8547-EX.L
STANDARDS:	GB 3836.1-2010、GB 3836.4-2010、GB 3836.8-2014、GB 12476.1-2013、GB 12476.4-2010

This is to certify that the above mentioned product(s)complies with the requirements of implementation rules for compulsory certification (REFNO. CNCA-C23-01:2019).

Valid from: December 22, 2021 **Valid until:** June 15, 2025

Date of original certification: June 16, 2020

The validity of this certificate is subject to positive result of the regular follow up inspection by issuing certification body until the expiry date.

This certificate is available through CNCA's website: www.cnca.gov.cn

APPROVAL: Guo AlHua

Shanghai Inspection and Testing Institute of Instruments and Automation Systems Co., Ltd.

http://www.sitias.com.cn Building 9,103 Cao Bao Road, Shanghai 200233,China Tel: +86 21 64510844

S 0005467

Code and standards:

GB3836.1-2010 Explosive atmospheres - Part 1: Equipment - General requirements
GB3836.4-2010 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
GB 3836.8-2014 Explosive atmospheres - Part 8: Equipment protection by type of protection "n"
GB12476.1-2013 Electrical apparatus for use in the presence of combustible dust - Part 1: General requirements
GB12476.4-2010 Electrical apparatus for use in the presence of combustible dust - Part 4: protection by intrinsic safety "iD"

Certificate authority: SITTIAS

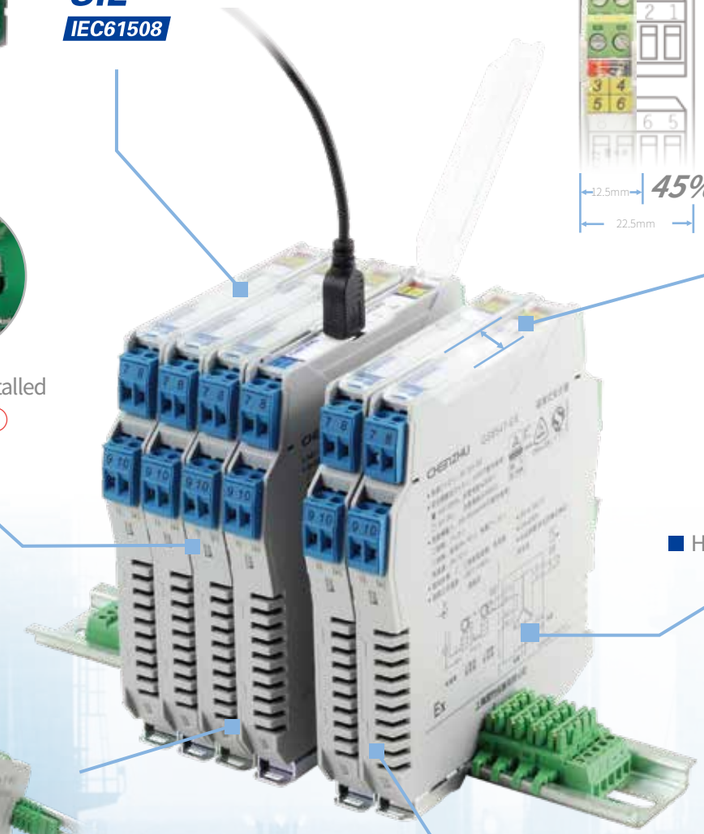
Overview

■ High reliability and strong EMC performace MTBF>2,000,000h

SIL IEC61508

■ Could be installed in Zone 2 ①

■ Ultra-thin structure with low power dissipation design for high packing density



0.05%F.S.

■ High-precision while low drift

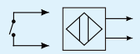
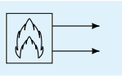
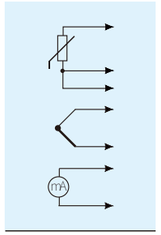
■ Flexible power mode, support DIN bus power and terminal power

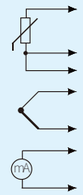
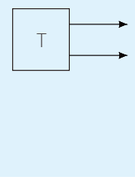
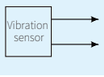
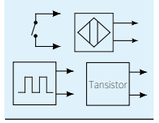
IEC

■ Variety of specifications and models meet the requirement of end user

5 Year WARRANTY

① Note: Please refer to the user manual for the special requirements of the isolated barrier installed in Zone 2.

Field instrument	Application	Module No.	Channels	Hazardous Side Signal	Control Side Signal	Features	Page
	Digital Input	GS8512-EX.11	1/1	Dry contact switch proximity switch input	Relay contact output	Independent powered SIL3	11
		GS8512-EX.12	1/2				
		GS8512-EX.22	2/2				
		GS8512-EX.33	3/3			Independent powered	12
		GS8114-EX	4/4				13
		GS8519-EX.11	1/1		Transistor output	Independent powered	14
		GS8519-EX.12	1/2				
		GS8519-EX.22	2/2				
		GS8519-EX.12A	1/2			Independent powered LFD output	15
	Electrical Level Input	GS8515-EX	1/2	Electrical level sensors Electrode input	Relay contact output	Independent powered LFD	16
	Digital Output	GS8521-EX	1/1	Drive current at 35mA Output voltage⩾12V	Dry contact input	Loop powered	17
		GS8523-EX	1/1	Drive current at 45mA Output voltage⩾12V		Loop powered SIL3	18
		GS8523-EX.I	1/1			Independent powered	19
		GS8525-EX	1/1	Drive current at 60mA Output voltage⩾12V		Loop powered	20
	Analog Input	GS8531-EX	1/1	2-wire transmitter input HART	4~20mA output HART	Loop powered	21
		GS8532-EX	2/2				
		GS8535-EX	1/2	2-wire or 3-wire transmitter Current source input HART	0/4~20mA 0/1~5V output HART	Independent powered SIL2 SIL3	22
		GS8536-EX	2/2				23
		GS8547-EX	1/1			Independent powered	24
		GS8549-EX	1/1			Independent powered	25
		GS8347-EX	1/3		4~20mA Relay contact Output	Configurable Independent powered	26
	Analog Output	GS8567-EX	1/1	0/4~20mA output HART	0/4~20mA output HART	Independent powered SIL2	27
		GS8568-EX	2/2				28
	Pulse Input	GS8552-EX.11	1/1	Voltage pulse, transistor Distribution voltage: 12V	5V/12V Voltage pulse, transistor	Independent powered	29
		GS8552-EX.22	2/2				
		GS8554-EX.11	1/1	Voltage pulse, transistor Distribution voltage: 24V	12V/24V Voltage pulse, transistor		30
		GS8554-EX.22	2/2				
		GS8556-EX	3/3	Encoder input	12V Voltage pulse		31
	Fire and Smoke Detector Input	GS8565-EX	1/1	Fire、smoke detector input	0~40mA output	Loop powered	32
		GS8566-EX	2/2				
	Temperature Converters	GS8572-EX	1/1	2-wire or 3-wire RTD TC input	0~20mA，4~20mA 0~5V，1~5V output	Independent powered Configurable	33
		GS8572-EX.RTD	1/1	2-wire or 3-wire RTD input			
		GS8572-EX.R	1/1	Potentiometer input			
		GS8572-EX.TC	1/1	TC input			34
		GS8572-EX.SIL.RTD	1/1	2-wire or 3-wire RTD input	4~20mA 1~5V output	Independent powered Configurable SIL2	35
		GS8572-EX.SIL.TC	1/1	TC input			

Field instrument	Application	Module No.	Channels	Hazardous Side Signal	Control Side Signal	Features	Page
	Temperature Converters	GS8576-EX	1/2	2-wire or 3-wire RTD TC input	0~20mA, 4~20mA 0~5V, 1~5V Output	Independent powered Configurable	36
		GS8576-EX.RTD	1/2	2-wire or 3-wire RTD input			
		GS8576-EX.TC	1/2	TC input			
		GS8576-EX.R	1/2	Potentiometer input			
		GS8579-EX	2/2	2-wire or 3-wire RTD TC input			
		GS8579-EX.RTD	2/2	2-wire or 3-wire RTD input			
		GS8579-EX.TC	2/2	TC input			
		GS8579-EX.R	2/2	Potentiometer input			
		GS8577-EX	1/1	2-wire or 3-wire RTD TC input	4~20mA output	Loop powered Configurable	37
		GS8577-EX.RTD	1/1	2-wire or 3-wire RTD input			
		GS8577-EX.TC	1/1	TC input			
		GS8578-EX	2/2	2-wire or 3-wire RTD TC input			
		GS8578-EX.RTD	2/2	2-wire or 3-wire RTD input			
		GS8578-EX.TC	2/2	TC input			
		GS8074-EX	1/1	60Ω~4000Ω	60Ω~4000Ω	1:1 input and output	38
		GS8081-EX	1/1	-5mV~+60mV	-5mV~+60mV	Independant powered	39
	Voltage Input	GS8589-EX.11	1/1	0~5V, 1~5V, 0~10V, 2~10V	0~5V, 1~5V, 0~10V, 2~10V	Independant powered	40
		GS8589-EX.22	2/2	Distribution power: 10V/20mA, 15V/20mA, none	0~20mA, 4~20mA		
	Communication Input	GS8592-EX.3	1/1	RS-232	RS-232	Independent powered	41
		GS8595-EX.3	1/1		RS-485 full duplex		42
		GS8599-EX.3	1/1		RS-485 half duplex		43
		GS8591-EX.3	1/1	RS-485 half duplex	RS-485 full duplex		44
		GS8593-EX.3	1/1		RS-485 half duplex		45
		GS8596-EX.3	1/1		RS-232		46
		GS8594-EX.3	1/1	RS-485 full duplex	RS-232		47
		GS8597-EX.3	1/1		RS-485 half duplex		48
		GS8598-EX.3	1/1		RS-485 full duplex		49
		GS8593B-EX	1/1	RS-485 half duplex Distribution power: 9V/140mA	RS-485 half duplex		50
		GS8590-EX.3	1/1	CAN	CAN		51
	Vibration Tansducer Input	GS8557-EX	1/1	-20V~-0.5V	-20V~-0.5V	Independent powered	52
		GS8558-EX	1/1	-10V~+10V	-10V~+10V		53
	Frequency Converter	GS8555-EX	1/1	Dry contact/proximity switch Voltage pulse Transistor input	0~20mA, 4~20mA 0~5V, 1~5V SPST relay	Independent powered Configurable	54
		GS8355-EX	1/3				55

1/1：GS8512-EX.11
1/2：GS8512-EX.12
2/2：GS8512-EX.22

Digital input, relay output isolated barrier, transfers digital signals(dry contact or NAMUR proximity switch) from hazardous area to safe area. Each channel can be provided to select phase reversal and to enable the line fault detection.The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×12.5mm

Specification

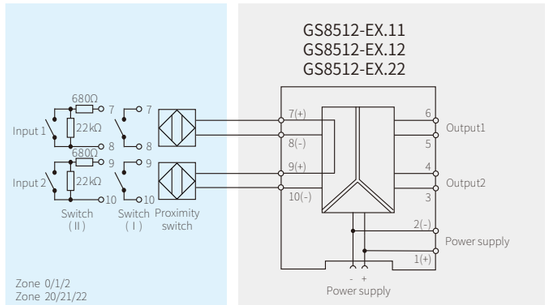
Supply Voltage：20~35V DC
Current Consumption：(Supply voltage: 24V; Output energized)
⩽30mA(GS8512-EX.11)
⩽40mA(GS8512-EX.12 / GS8512-EX.22)
Safe-area Relay Output：
Response Time：⩽10ms
Contact loading：250V AC,2A or 30V DC,2A
Load Type：resistive load
Hazardous-area Input：
Signal：Dry contact or NAMUR proximity switch
Open-circuit Voltage：≈8V
Short-circuit Current：≈8mA
Input and Output Characteristics(Normal phase)
If field switch closes or input loop current＞2.1mA, output relay will be energized, with yellow LED ON.
If field switch closes or input loop current＜1.2mA, output relay will be de-energized, with yellow LED OFF.
Function of the DIP Switch：

Sta.	K1(OUT1), K3(OUT2)	K2(OUT1), K4(OUT2)
ON	Inverted phase	LFD enabled
OFF	Normal phase	LFD disenabled

Note：Switch input (I) needs the K2 and K4 to be set to OFF state, without line fault (breakage, short-circuit) detection. When using line fault (breakage, short-circuit) detection function, resistances must be fitted: 22kΩ in parallel with switch, 680Ω in series with switch. See Switch (II), K2 and K4 are set to ON state.
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268), IEC 61326-3-1
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Between power supply part and output part⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Between power supply part and output part⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 100g
Suitable Location：Mounting in safe area or zone2(for ec protection), and connected to the IS apparatus in hazardous area up to zone 0 IIC and zone 20 IIIC.
Suitable Field Apparatus：Dry contact or DIN19234 standard NAMUR proximity switch input field devices (including the intrinsically safe type pressure switch、temperature switches、liquid level switches, etc.)

Connection

Hazardous-area | Safe-area/Zone 2



Note: a) GS8512-EX.11 only contains input1、output1;
b) GS8512-EX.12 only contains input1、output1、output2;
c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Ex nA nC II C T4 Gc
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8；9、10 terminals)：
U_o=10.5V，I_o=14mA，P_o=37mW
II C：C_o=2.4μF，L_o=165mH
*II B：C_o=16.8μF，L_o=495mH
II A：C_o=75.0μF，L_o=1000mH
I：C_o=95.0μF，L_o=2380mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

3/3：GS8512-EX.33

Digital input, relay output isolated barrier, transfers digital signals(dry contact or NAMUR proximity switch) from hazardous area to safe area. Each channel can be provided to select phase reversal.The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

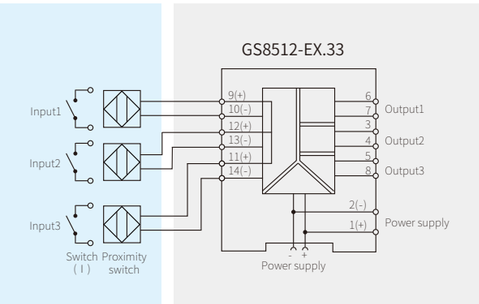
Supply Voltage：20~35V DC
Current Consumption：⩽65mA(Supply voltage: 24V; Output energized)
Safe-area Relay Output：
Response Time：⩽10ms
Contact loading：250V AC,2A or 30V DC,2A
Load Type：resistive load
Hazardous-area Input：
Signal：Dry contact or NAMUR proximity switch
Open-circuit Voltage：≈8V
Short-circuit Current：≈8mA
Input and Output Characteristics(Normal phase)
If field switch closes or input loop current＞2.1mA, output relay will be energized, with yellow LED ON.
If field switch closes or input loop current＜1.2mA, output relay will be de-energized, with yellow LED OFF.
Function of the DIP Switch：

Sta.	K1(OUT1), K2(OUT2), K3(OUT3)
ON	Inverted phase
OFF	Normal phase

Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Between power supply part and output part⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Between power supply part and output part⩾ 100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 100g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Dry contact or DIN19234 standard NAMUR proximity switch input field devices (including the intrinsically safe type pressure switch、temperature switches、liquid level switches, etc.)

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10；12、13；11、14 terminals)：
U_o=10.5V，I_o=14mA，P_o=37mW
II C：C_o=2.4μF，L_o=165mH
*II B：C_o=16.8μF，L_o=495mH
II A：C_o=75.0μF，L_o=1000mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

4/4：GS8114-EX

Digital input, relay output isolated barrier, transfers digital signals(dry contact or NAMUR proximity switch) from hazardous area to safe area. Each channel can be provided to select phase reversal.The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：114.5mm×99.0mm×22.5mm

Specification

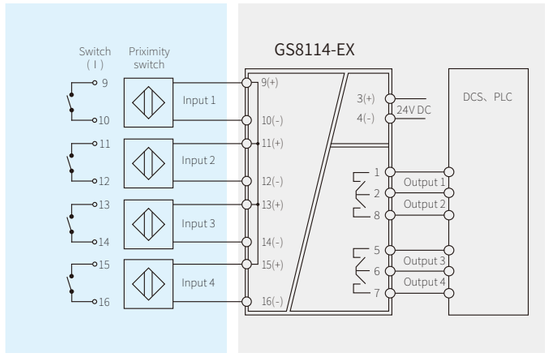
Supply Voltage：20~35V DC
Current Consumption：⩽75mA(Supply voltage: 24V; Output energized)
Safe-area Relay Output：
Response Time：⩽20ms
Contact loading：250V AC,2A or 30V DC,2A
Load Type：resistive load
Hazardous-area Input：
Signal：Dry contact or NAMUR proximity switch
Open-circuit Voltage：≈8V
Short-circuit Current：≈8mA
Input and Output Characteristics(Normal phase)
If field switch closes or input loop current＞2.1mA, output relay will be energized, with yellow LED ON.
If field switch closes or input loop current＜1.2mA, output relay will be de-energized, with yellow LED OFF.
Function of the DIP Switch：

Sta.	K1(OUT1)	K2(OUT2)	K3(OUT3)	K4(OUT4)
ON	Corresponding channel inverted phase			
OFF	Corresponding channel normal phase			

Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Between power supply part and output part⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Between power supply part and output part⩾100MΩ
Weight：Approx. 150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Dry contact or DIN19234 standard NAMUR proximity switch input field devices (including the intrinsically safe type pressure switch、temperature switches、liquid level switches, etc.)

Connection

Hazardous-area | Safe-area



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10；11、12；13、14；15、16 terminals)：
U_o=10.5V，I_o=14mA，P_o=37mW
II C：C_o=2.4μF，L_o=165mH
⋆II B：C_o=16.8μF，L_o=495mH
II A：C_o=75.0μF，L_o=1000mH
⋆II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8519-EX.11
1/2：GS8519-EX.12
2/2：GS8519-EX.22

Digital input, transistor output isolated barriers, transfer digital signals(dry contact or NAMUR proximity switch) from hazardous area to safe area. Each channel can be provided to select phase reversal and to enable the line fault detection. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×12.5mm

Specification

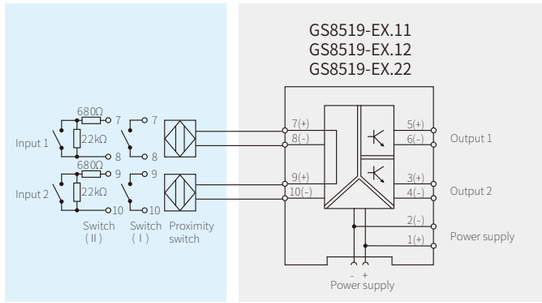
Supply Voltage：20~35V DC
Current Consumption：(Supply voltage：24V, transistor energized)
⩽40mA(GS8519-EX.11)
⩽60mA(GS8519-EX.12 / GS8519-EX.22)
Safe-area Output：
Digital Output：4.5V⩽V_H⩽12V，V_L⩽0.5V
Drive current⩽10mA, Load resistance⩾1kΩ
Transistor Collector Output：
V_H=V_{CC}; V_L⩽2.5V(On-state current=10mA,Vcc=24V)
Max.Rated Current⩽40mA, Load resistance: 2kΩ⩽RL⩽20kΩ
Transistor Emitter Output：
V_H⩾V_{CC}-2.5V; V_L⩽0.5V(On-state current=10mA,Vcc=24V)
Max.Rated Current⩽40mA，Load resistance：2kΩ⩽R_L⩽10kΩ
Note：“V_{CC}”refers to the supply voltage at the output，V_{CC}⩽40V
Hazardous-area Input：
Signal：Dry contact or NAMUR proximity switch input, frequency⩽5kHz
Open-circuit Voltage：≈8V
Short-circuit Current：≈8mA
Input and Output Characteristics(Normal phase)：
If field switch closes or input loop current＞2.1mA, output transistor will be energized, with yellow LED ON.
If field switch closes or input loop current＜1.2mA, output transistor will be de-energized, with yellow LED OFF.

Sta.	K1(OUT1), K3(OUT2)	K2(OUT1), K4(OUT2)
ON	Inverted phase	LFD enabled
OFF	Normal phase	LFD disenabled

Note：Switch input (I) needs the K2 and K4 to be set to OFF state, without line fault (breakage, short-circuit) detection. When using line fault (breakage, short-circuit) detection function, resistances must be fitted：22kΩ in parallel with switch, 680Ω in series with switch. See Switch (II), K2 and K4 are set to ON state.
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Between power supply part and output part⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Between power supply part and output part⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Dry contact or DIN19234 standard NAMUR proximity switch input field devices (including the intrinsically safe type pressure switch、temperature switches、liquid level switches, etc.)

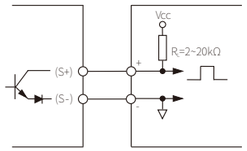
Connection

Hazardous-area | Safe-area

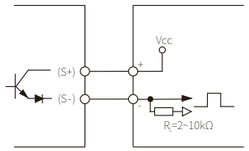


Note: a) GS8519-EX.11 only contains input2 and output2；
b) GS8519-EX.12 only contains input1、output1、output2;
c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Application 1：
Transistor Collector Output



Application 2：
Transistor Emitter Output



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8；9、10 terminals)：
U_o=10.5V，I_o=14mA，P_o=37mW
II C：C_o=2.4μF，L_o=165mH
⋆II B：C_o=16.8μF，L_o=495mH
II A：C_o=75.0μF，L_o=1000mH
⋆II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/2：GS8519-EX.12A
With LFD function

Digital input, transistor output isolated barriers, transfer digital signals (dry contact or NAMUR proximity switch) from hazardous area to safe area. Switches can be provided to select phase reversal and to enable the line fault detection. Line faults are signalled through separated relay. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×12.5mm

Specification

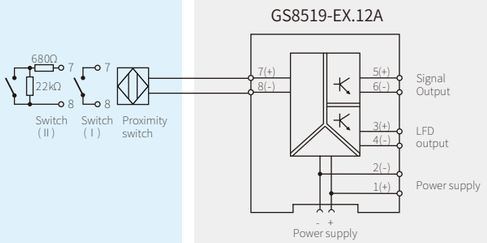
Supply Voltage：20~35V DC
Current Consumption：≤40mA(Supply voltage: 24V, transistor energized)
Safe-area Output：
Digital Output：4.5V≤V_H≤12V, V_L≤0.5V
Drive current≤10mA, Load resistance≥1kΩ
Transistor Collector Output：
V_H=V_{CC}; V_L≤2.5V(On-state current=10mA, V_{CC}=24V)
Max.Rated Current≤40mA, Load resistance: 2kΩ≤R_L≤20kΩ
Transistor Emitter Output：
V_H≥V_{CC}-2.5V; V_L≤0.5V(On-state current=10mA, V_{CC}=24V)
Max.Rated Current≤40mA, Load resistance: 2kΩ≤R_L≤10kΩ
Note： "Vcc" refers to the supply voltage at the output, V_{CC}≤40V
LFD Alarm：
If input loop current ≤50uA(line break) or ≥6.5mA(line short-circuit), LFD output transistor will be energized, with red LED ON.
Hazardous-area Input：
Signal：Dry contact or NAMUR proximity switch input, frequency≤5kHz
Open-circuit Voltage：≈8V; Short-circuit Current：≈8mA
Input and Output Characteristics(Normal phase)：
If field switch closes or input loop current＞2.1mA, signal output transistor will be energized, with yellow LED ON
If field switch closes or input loop current＜1.2mA, signal output transistor will be de-energized, with yellow LED OFF.

Sta.	K1	K2
ON	Inverted phase	LFD enabled
OFF	Normal phase	LFD disenabled

Note： Switch input (I) needs the K2 to be set to OFF state,without line fault (breakage, short-circuit) detection；When using line fault (breakage, short-circuit) detection function, resistances must be fitted： 22kΩ in parallel with switch, 680Ω in series with switch. See Switch (II), K2 are set to ON state.
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20°C~+60°C
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Between power supply part and output part≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Between power supply part and output part≥ 100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 100g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Dry contact or DIN19234 standard NAMUR proximity switch input field devices (including the intrinsically safe type pressure switch、temperature switches、liquid level switches, etc.)

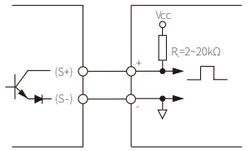
Connection

Hazardous-area | Safe-area

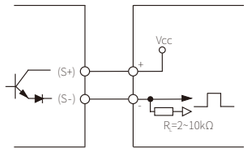


Note： Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Application 1：
Transistor Collector Output



Application 2：
Transistor Emitter Output



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8 terminals)：
U_O=10.5V，I_O=14mA，P_O=37mW
II C：C_O=2.4μF， L_O=165mH
★II B：C_O=16.8μF， L_O=495mH
II A：C_O=75.0μF， L_O=1000mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/2：GS8515-EX

Isolated barriers provide an AC detection voltage to the electrode sensor. When the conductive medium contacts the electrode, an AC will be generated in the input measurement loop. The change of the AC signal detected will be transmitted to the Safe area via the isolated barrier and will output via relay contacts. This product has the Line Fault (breakage) Detection function. If we select the LFD, output2 will output alarm signal. If we do not select LFD, output2 and output1 will output same signal.

Note： Dimensions： 118.9mm×106.0mm×17.5mm

Specification

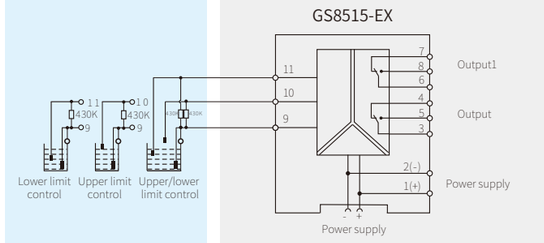
Supply Voltage：20~35V DC
Current Consumption：≤50mA(Supply voltage: 24V, relay energized)
Safe-area Relay Output：
Contact loading：250V AC,2A or 24V DC,2A
Load Type：resistive load
Delay Time： 0.5s or 10s(Adjustable via the switch K3)
Hazardous-area Input：
Control Input：ON/OFF control(9，10)
Upper limit/lower limit control(9，10，11)
Sensitivity：1kΩ~150kΩ(Adjustable via the potentiometer)
Input and Output Characteristics：
If liquid level exceeds limit：
When the DIP switch is set to NO state, the output relay will be energized, with yellow LED on.
When the DIP switch is set to NC state, the output relay will be de-energized, with yellow LED OFF.
When LFD enabled, output relay 1 wille be de-energized, with yellow LED OFF and red LED flashing; output relay 2 will be energized, with yellow LED ON.
Function of the DIP Switch：

Switch	Sta.	Function
K1	OFF	Relay contact(6,8 and 3,5): Nomal open
	ON	Nomal close
K2	OFF	LFD Disenabled
	ON	LFD Enabled
K3	OFF	Delay 0.5s
	ON	Delay 10s

Note：430kΩ resistance should be paralleled between electrodes when using LFD.
Relay contact teminals 6,8 and 3,5 are NO(nomal open)teminals
Relay contact teminals 6,7 and 3,4 are NC(nomal close)teminals
Response Time：≤20ms
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20°C~+60°C
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Between power supply part and output part≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Between power supply part and output part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Electrical level detect instrument

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11 terminals)：
U_O=6.6V，I_O=2.5mA，P_O=4.2mW
II C：C_O=22μF， L_O=100mH
★II B：C_O=500μF， L_O=300mH
II A：C_O=1000μF， L_O=800mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8521-EX

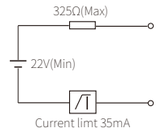
Digital output isolated barriers, control the 12V/35mA power supply to hazardous area. This product is suitable for driving IS devices such as solenoid valves, LED and some other low-power loads located in the hazardous area. The input and output are each galvanically isolated, and allow the control switch to directly connect to the either side of 24V DC power supply loop circuit.

Dimensions：118.9mm×106.0mm×12.5mm

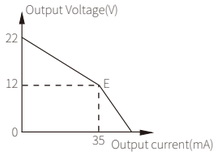
Specification

Loop Supply Voltage（Ue)：20~35V DC
Current Consumption：≤65mA(Supply voltage：24V,output：35mA)
Hazardous-area Output：
Open-circuit Voltage：22V~24V
Output Voltage at 35mA：≥12V

Equivalent Output Circuit：



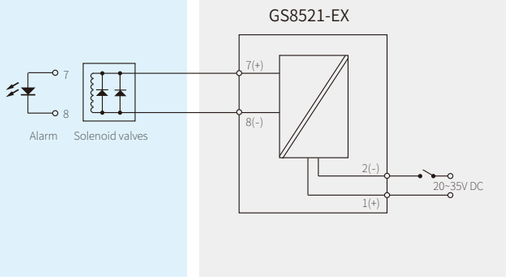
Output Characteristic：



Response Time：≤20ms
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 100g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：solenoid valves, LED.

Connection

Hazardous-area	Safe-area



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8 terminals)：
U_O=28V，I_O=93mA，P_O=651mW
II C：C_O=0.083μF，L_O=4.2mH
★II B：C_O=0.65μF，L_O=12.6mH
II A：C_O=2.15μF，L_O=33.6mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8523-EX

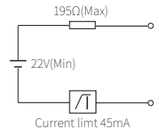
Digital output isolated barriers, control the 12V/45mA power supply to hazardous area. This product is suitable for driving IS devices such as solenoid valves, LED and some other low-power loads located in the hazardous area. The input and output are each galvanically isolated, and this product is loop powered.

Dimensions：118.9mm×106.0mm×12.5mm

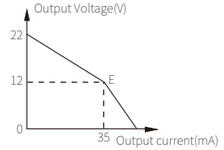
Specification

Loop Supply Voltage(Ue)：20~35V DC
Current Consumption：≤75mA(Supply voltage: 24V; output: 45mA)
Hazardous-area Output：
Open-circuit Voltage：22V~24V
Output voltage at 45mA：≥12V

Equivalent Output Circuit：



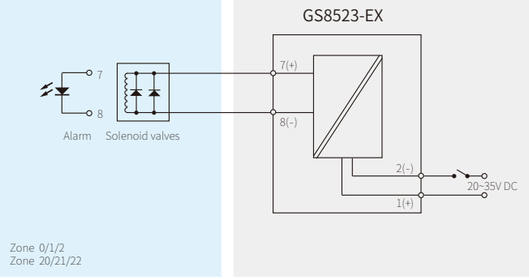
Output Characteristic：



Response Time：≤20ms
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)，IEC 61326-3-1
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 100g
Suitable Location：Mounting in safe area or zone2(for ec protection), and connected to the IS apparatus in hazardous area up to zone 0 IIC and zone 20 IIIC.
Suitable Field Apparatus：solenoid valves, LED.

Connection

Hazardous-area	Safe-area/Zone 2



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Ex nA II C T4 Gc
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8 terminals)：
U_O=25V，I_O=140mA，P_O=875mW
II C：C_O=0.11μF，L_O=1.5mH
★II B：C_O=0.84μF，L_O=4.5mH
II A：C_O=2.97μF，L_O=12.0mH
I：C_O=4.87μF，L_O=23mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

Digital Output

1/1：GS8523-EX.I

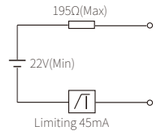
Digital output isolated barrier, with 12V/45mA output to hazardous area, is controlled by switches and logic signal in the safe area. This product is suitable for driving IS devices such as solenoid valves, LED and some other low-power loads located in the hazardous area. This product needs independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×12.5mm

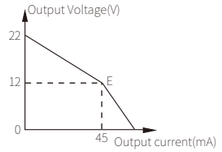
Specification

Supply Voltage：20~35V DC
Current Consumption：≤80mA(Supply voltage: 24V; output: 45mA)
Safe-area Input：
If input switch or transistor is close, power the devices located in hazardous area.
If input switch or transistor is open, stop powering the devices located in hazardous area.
Hazardous-area Output：
Open-circuit Voltage：22V~24V
Output voltage at 45mA：≥12V

Equivalent Output Circuit：

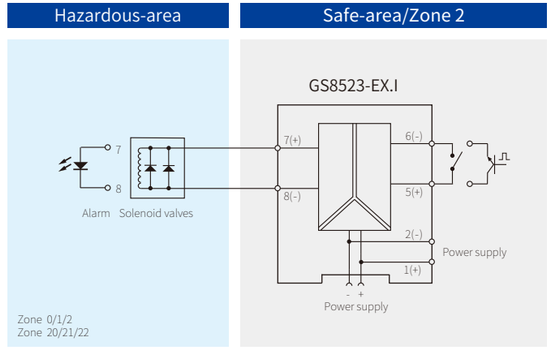


Output Characteristic：



Response Time：≤20ms
Power Supply Protection：Power supply reverse protection
EMC：According to IC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Between power supply part and input part≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Between power supply part and input part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 100g
Suitable Location：Mounting in safe area or zone2(for ec protection), and connected to the IS apparatus in hazardous area up to zone 0 IIC and zone 20 IIIC.
Suitable Field Apparatus：solenoid valves, LED.

Connection



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Ex nA II C T4 Gc
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8 terminals)：
U_O=25V，I_O=140mA，P_O=875mW
II C：C_O=0.11μF，L_O=1.5mH
*II B：C_O=0.84μF，L_O=4.5mH
II A：C_O=2.97μF，L_O=12.0mH
I：C_O=4.87μF，L_O=23mH
* II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

Digital Output(Loop Powered)

1/1：GS8525-EX

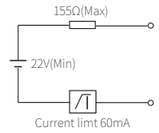
Digital output isolated barriers, control the 12V/60mA power supply to hazardous area. This product is suitable for driving IS devices such as solenoid valves, LED and some other low-power loads located in the hazardous area. The input and output are each galvanically isolated, and allow the control switch to directly connect to the either side of 24V DC power supply loop circuit.

Dimensions：118.9mm×106.0mm×12.5mm

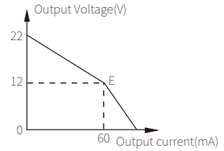
Specification

Loop Supply Voltage（Ue）：20~35V DC
Current Consumption：≤95mA(Supply voltage: 24V; output: 60mA)
Hazardous-area Output：
Open-circuit Voltage：22V~24V
Output Voltage at 60mA：≥12V

Equivalent Output Circuit：

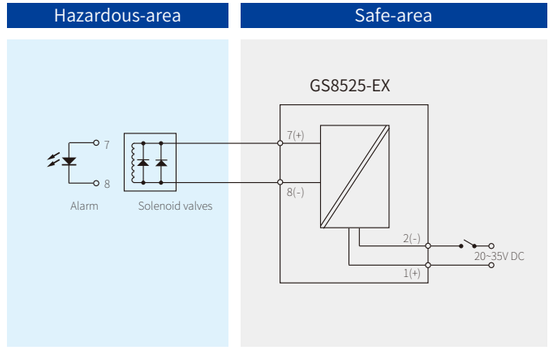


Output Characteristic：



Response Time：≤20ms
Power Supply Protection：Power supply reverse protection
EMC：According to IC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 100g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIB and zone20 IIIC.
Suitable Field Apparatus：solenoid valves, LED.

Connection



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II B
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8 terminals)：
U_O=25V，I_O=185mA，P_O=1157mW
*II B：C_O=0.84μF，L_O=4.5mH
II A：C_O=1.36μF，L_O=10.56mH
* II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

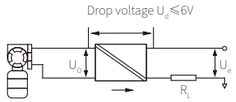
1/1：GS8531-EX
2/2：GS8532-EX

These products can work as an AI isolated barrier to provide a separate power to the transmitter located in the hazardous area and transfer the current from hazardous area to safe area. It can also work as an AO isolated barrier to transfer current signal from the safe area to the hazardous area and drive devices like actuator in field. It allows bi-directional transmission of HART communication signals. The input and output are each galvanically isolated, and these products are loop powered.

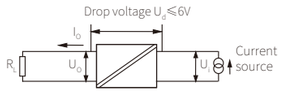
Dimensions：118.9mm×106.0mm×12.5mm

Specification

Loop Supply Voltage（Ue）： 20~30V DC
Application 1(AI)：
Safe-area Output：
Current：4~20mA, HART digital signal
HART Communication Load Resistance R_L ⩾250Ω
Hazardous-area Input：
Current：4~20mA, HART digital signal
Supply Voltage：U_o⩾Ue-R_L×0.02-6

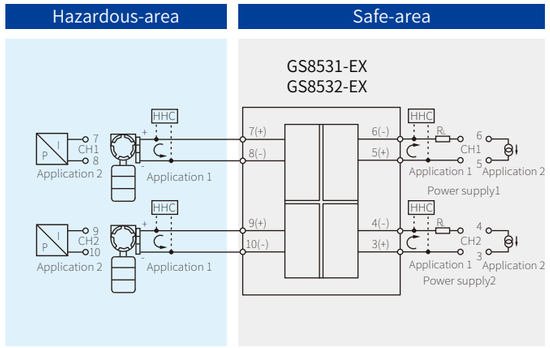


Output Accuracy： 0.4%F.S.
Application 2(AO)：
Safe-area Input：
Current：4~20mA, HART digital signal
Hazardous-area Output：
Current：4~20mA, HART digital signal
Load Resistance：R_L⩽(U_i-6)/0.02
HART Communication Load Resistance R_L⩾250Ω



Output Accuracy： 0.2%F.S.
Temperature Drift： 0.01%F.S./℃
EMC： According to IEC 61326-1(GB/T 18268)
Ambient Temperature： -20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Structure： GS8500 range structure customized by Phoenix Contact.
Weight： Approx. 150g
Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone1 IIC and zone21 IIIC.
Suitable Field Apparatus：
2-wire (HART) transmitter(Application 1)
2-wire valve positioner, electrical converter(Application 2)

Connection



Note: a) GS8531-EX only contains CH1;
b) Can't use HHC (HART Hand Held Communicator) in hazardous area and safe area at the same time;
c) HHC(HART Hand Held Communicator)used in the hazardous area must get the explosion-proof certificate.

Explosion-proof Certificate

Certifying Authority： NEPSI(China)
Ex Marking： [Ex ib Gb] II C
[Ex ibD]
Maximum Voltage： Um=250V
Intrinsic Safety Parameters(7、8；9、10 terminals)：
U_o=23.1V，I_o=29mA，P_o=670mW
II C：C_o=0.096μF，L_o=0.5mH
⋆II B：C_o=0.288μF，L_o=1.5mH
II A：C_o=0.528μF，L_o=4.0mH
⋆II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex ibD]

1/2：GS8535-EX

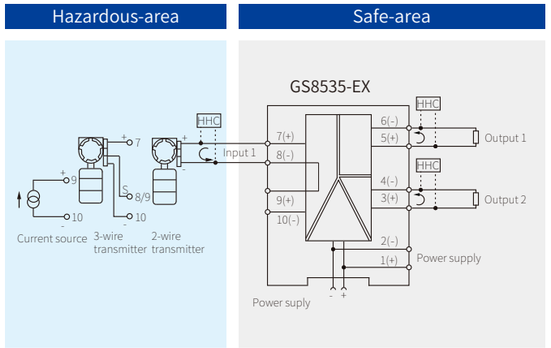
2-wire (HART) transmitter, 3-wire transmitter, current source input isolated barrier, provide isolated power supplies for transmitters which located in hazardous area. Transfer 4~20mA signal from hazardous area to safe area.It also allows bi-directional transmission of HART communication signals.The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×12.5mm

Specification

Supply Voltage： 20~35V DC
Current Consumption： ⩽75mA(Supply voltage: 24V; output: 20mA)
Safe-area Output：
Current：0/4~20mA, HART digital signal
Load Resistance：R_L⩽300Ω
HART Communication Load Resistance：R_L⩾250Ω
Voltage：0/1~5V
Load Resistance：R_L⩾330kΩ
Output loop powered voltage Ue：12~30V DC
Note：Customers need specify current(active or passive) or voltage output when ordering.
Hazardous-area Input：
Current：0/4~20mA, HART digital signal
Distribution：
Open-circuit Voltage：⩽28V
Voltage at 20mA：⩾15.5V
Normal working current：⩽25mA
Output Accuracy： 0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift： 0.005%F.S./℃
Response Time(0~90%)： ⩽2ms
Power Supply Protection： Power supply reverse protection
EMC： According to IEC 61326-1(GB/T 18268)，IEC 61326-3-1
Ambient Temperature： -20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Between power supply part and output part⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Between power supply part and output part⩾100MΩ
Structure： GS8500 range structure customized by Phoenix Contact.
Weight： Approx. 110g
Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus： 2-wire (HART) transmitter, 3-wire transmitter, current source

Connection



Note: a) Can't use HHC (HART Hand Held Communicator) in hazardous area and safe area at the same time;
b) HHC(HART Hand Held Communicator)used in the hazardous area must get the explosion-proof certificate;
c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority： NEPSI(China)
Ex Marking： [Ex ia Ga] II C
[Ex iaD]
Maximum Voltage： Um=250V
Intrinsic Safety Parameters(7、8 / 9、10 terminals)：
U_o=28V，I_o=93mA，P_o=651mW
II C：C_o=0.083μF，L_o=4.2mH
⋆II B：C_o=0.65μF，L_o=12.6mH
II A：C_o=2.15μF，L_o=33.6mH
⋆II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]
(9、10 terminals)：
U_o=3.5V，C_o=100μF
U_i=20V，I_i=110mA

2/2：GS8536-EX

Dimensions：118.9mm×106.0mm×17.5mm

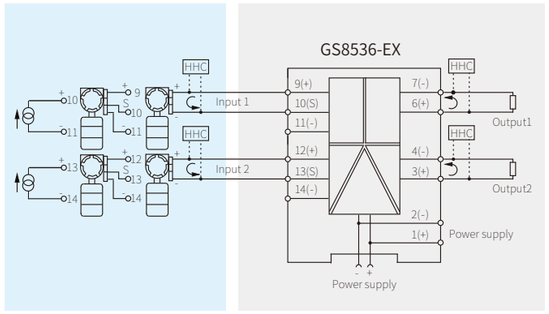
2-wire (HART) transmitter, 3-wire transmitter, current source input isolated barrier, provide isolated power supplies for transmitters which located in hazardous area.Transfer 4~20mA signal from hazardous area to safe area.It also allows bi-directional transmission of HART communication signals.The product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

Supply Voltage：20~35V DC
Current Consumption：≤100mA(Supply voltage: 24V; output: 20mA)
Safe-area Output：
Current：0/4~20mA, HART digital signal
Load Resistance：R_L≤300Ω
HART Communication Load Resistance：R_L≥250Ω
Voltage：0/1~5V
Load Resistance：R_L≥330kΩ
Output loop powered voltage Ue：12~30V DC
Load Resistance：R_L≤(Ue-5)/0.02
Note：Customers need specify current(active or passive) or voltage output when ordering.
Hazardous-area Input：
Current：0/4~20mA, HART digital signal
Distribution：
Open-circuit Voltage：≤28V
Voltage at 20mA：≥15.5V
Normal working current：≤25mA
Output Accuracy：0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift：0.005%F.S./℃
Response Time(0~90%)：≤2ms
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)，IEC 61326-3-1
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Between power supply part and output part≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Between power supply part and output part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 135g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：2-wire (HART) transmitter, 3-wire transmitter, current source.

Connection

Hazardous-area | Safe-area



Note: a) Can't use HHC (HART Hand Held Communicator) in hazardous area and safe area at the same time.;
b) HHC(HART Hand Held Communicator)used in the hazardous area must get the explosion-proof certificate.
c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11；12、13、14 terminals)：
U_O=28V，I_O=93mA，P_O=651mW
II C：C_O=0.083μF，L_O=4.2mH
★II B：C_O=0.65μF，L_O=12.6mH
II A：C_O=2.15μF，L_O=33.6mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]
(10、11；13、14 terminals)：
U_O=1.2V，C_O=100μF
U_i=20V，I_i=110mA

1/1：GS8547-EX

Dimensions：118.9mm×106.0mm×12.5mm

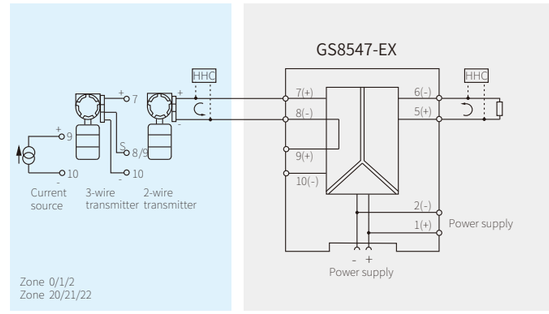
2-wire (HART) transmitter, 3-wire transmitter, current source input isolated barrier, provide isolated power supplies for transmitters which located in hazardous area.Transfer 4~20mA signal from hazardous area to safe area. It also allows bi-directional transmission of HART communication signals. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

Supply Voltage：20~35V DC
Current Consumption：≤65mA(Supply voltage: 24V; output: 20mA)
Safe-area Output：
Current：0/4~20mA, HART digital signal
Load Resistance：R_L≤550Ω
HART Communication Load Resistance：R_L≥250Ω
Voltage：0/1~5V
Load Resistance：R_L≥330kΩ
Note：Customers need specify current output or voltage output when ordering.
Hazardous-area Input：
Current：0/4~20mA, HART digital signal
Distribution：
Open-circuit Voltage：≤28V
Voltage at 20mA：≥15.5V
Normal working current：≤25mA
Output Accuracy：0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift：0.005%F.S./℃
Response Time(0~90%)：≤2ms
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)，IEC 61326-3-1
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Between power supply part and output part≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Between power supply part and output part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 110g
Suitable Location：Mounting in safe area or zone2(for ec protection), and connected to the IS apparatus in hazardous area up to zone 0 IIC and zone 20 IIIC.
Suitable Field Apparatus：2-wire (HART) transmitter, 3-wire transmitter, current source

Connection

Hazardous-area | Safe-area/Zone 2



Note: a) Can't use HHC (HART Hand Held Communicator) in hazardous area and safe area at the same time.;
b) HHC(HART Hand Held Communicator)used in the hazardous area must get the explosion-proof certificate.
c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Ex nA II C T4 Gc
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8 / 9、10 terminals)：
U_O=28V，I_O=93mA，P_O=651mW
II C：C_O=0.083μF，L_O=4.2mH
★II B：C_O=0.65μF，L_O=12.6mH
II A：C_O=2.15μF，L_O=32.8mH
I：C_O=3.76μF，L_O=53.9mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8549-EX

2-wire (HART) transmitter, 3-wire transmitter, current source input isolated barrier, provide isolated power supplies for transmitters which located in hazardous area. Transfer the 4~20mA signal from hazardous area to safe area. It also allows bi-directional transmission of HART communication signals. The product needs an independent power supply and galvanic isolation among power supply, input and output.

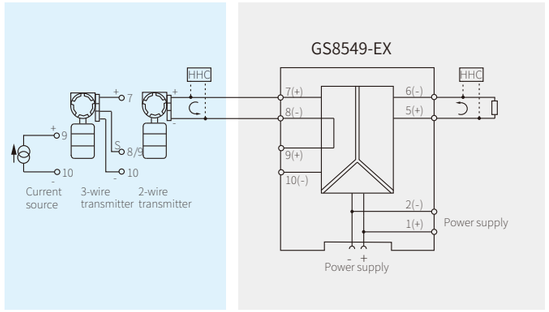
Dimensions：118.9mm×106.0mm×12.5mm

Specification

Supply Voltage：20~35V DC
Current Consumption：⩽70mA(Supply voltage: 24V; output: 20mA)
Safe-area Output：
Current：0/4~20mA, HART digital signal
Load Resistance：R_L⩽550Ω
HART Communication Load Resistance：R_L⩾250Ω
Voltage：0/1~5V
Load Resistance：R_L⩾330kΩ
Note：Customers need specify current output or voltage output when ordering.
Hazardous-area Input：
Current：0/4~20mA, HART digital signal
Distribution：
Open-circuit Voltage：⩽28V
Voltage at 20mA：⩾19V
Normal working current：⩽25mA
Output Accuracy：0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift：0.005%F.S./℃
Response Time(0~90%)：⩽2ms
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Between power supply part and output part⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Between power supply part and output part⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 110g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIB and zone20 IIIC.
Suitable Field Apparatus：2-wire (HART) transmitter, 3-wire transmitter, current source

Connection

Hazardous-area | Safe-area



Note: a) Can't use HHC (HART Hand Held Communicator) in hazardous area and safe area at the same time.;
b) HHC(HART Hand Held Communicator)used in the hazardous area must get the explosion-proof certificate.
c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II B
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8 / 9、10 terminals)：
U_0=28V，I_0=187mA，P_0=1310mW
*II B：C_0=0.65μF，L_0=4.5mH
II A：C_0=2.15μF，L_0=12.0mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/3：GS8347-EX

Analog input isolated barrier provides isolated power supplies for transmitters which located in hazardous area and transfer 4~20mA signal from hazardous area to safe area. This product controls two relay outputs to monitor the input. It also has a 4~20mA current or 1~5V voltage output and a 5-digit LCD display values. The product needs an independent power supply and galvanic isolation among power supply, input and output.

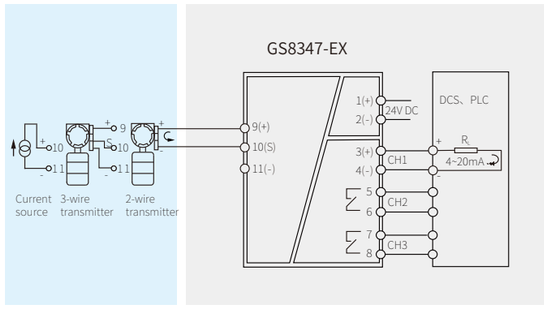
Dimensions：107.5mm×75.0mm×45mm

Specification

Supply Voltage：20~35V DC
Current Consumption：⩽100mA(Supply voltage: 24V; Output: 20mA; Relay: energized)
Safe-area Output：
Current：4~20mA Load resistance：R_L⩽300Ω
Voltage：1~5V Load resistance：R_L⩾35kΩ
(Note：Customers need to specify current output or voltage output when ordering)
Relay characteristics：
Response Time：⩽20ms
Contact loading：250V AC,2A or 30V DC,2A
Load Type：resistive load
Hazardous-area Input：
Current：4~20mA
Distribution：
Open-circuit Voltage：⩽26V
Voltage at 20mA：⩾16V
Transmission Accuracy：0.1%F.S.
Temperature Drift：0.005%F.S./℃
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Between power supply part and output part⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Between power supply part and output part⩾100MΩ
Weight：Approx. 350g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：2-wire or 3-wire transmitter，current source signal

Connection

Hazardous-area | Safe-area



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11 terminals)：
U_0=28V，I_0=93mA，P_0=651mW
II C：C_0=0.083μF，L_0=4.2mH
*II B：C_0=0.65μF，L_0=12.6mH
II A：C_0=2.15μF，L_0=33.6mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8567-EX

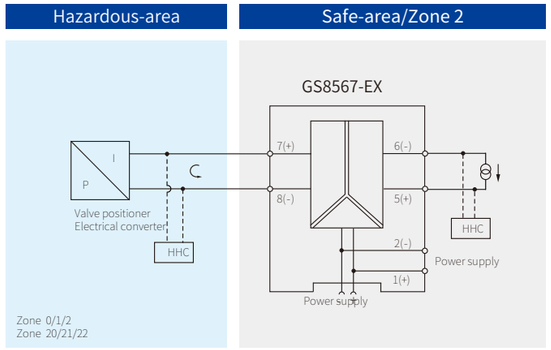
Analog output isolated barrier transfer the 4~20mA signal from safe area to hazardous area to drive excecutive devices. It also allows bi-directional transmission of HART communication signals. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

Supply Voltage：20~35V DC
Current Consumption：≤55mA(Supply voltage: 24V; output: 20mA)
Safe-area Input：
Current：0/4~20mA, HART digital signal
Voltage drop：≤6V
Hazardous-area Output：
Current：0/4~20mA, HART digital signal
Load Resistance：R_L≤800Ω
HART Communication Load Resistance：R_L≥250Ω
Output Accuracy：0.1%F.S.
Temperature Drift：0.005%F.S./℃
Response Time(0~90%)：≤2ms
Power Supply Protection：Power supply reverse protection
Output short-circuit Alarm：
When output load ≤80Ω, short-circuit alarm active, and output 0mA
EMC：According to IEC 61326-1(GB/T 18268)，IEC 61326-3-1
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Between power supply part and input part≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Between power supply part and input part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 100g
Suitable Location：Mounting in safe area or zone2(for ec protection), and connected to the IS apparatus in hazardous area up to zone 0 IIC and zone 20 IIIC.
Suitable Field Apparatus：2-wire valve positioner, electrical converter, etc.

Dimensions：118.9mm×106.0mm×12.5mm

Connection



Note: a) Can't use HHC (HART Hand Held Communicator) in hazardous area and safe area at the same time.;
b) HHC(HART Hand Held Communicator)used in the hazardous area must get the explosion-proof certificate.
c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Ex nA II C T4 Gc
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8 terminals)：
U_O=28V，I_O=93mA，P_O=651mW
II C：C_O=0.083μF，L_O=4.2mH
*II B：C_O=0.65μF，L_O=12.6mH
II A：C_O=2.15μF，L_O=32.8mH
I：C_O=3.76μF，L_O=53.9mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

2/2：GS8568-EX

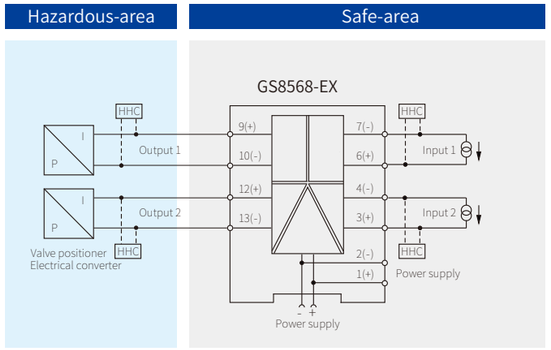
Analog output isolated barrier transfer the 4~20mA signal from safe area to hazardous area to drive excecutive devices. It also allows bi-directional transmission of HART communication signals. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

Supply Voltage：20~35V DC
Current Consumption：≤80mA(Supply voltage: 24V; output: 20mA)
Safe-area Input：
Current：0/4~20mA, HART digital signal
Voltage drop：≤6V
Hazardous-area Output：
Current：0/4~20mA, HART digital signal
Load Resistance：R_L≤800Ω
HART Communication Load Resistance：R_L≥250Ω
Output Accuracy：0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift：0.005%F.S./℃
Response Time(0~90%)：≤2ms
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)，IEC 61326-3-1
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Between power supply part and input part≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Between power supply part and input part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 135g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：2-wire valve positioner, electrical converter, etc.

Dimensions：118.9mm×106.0mm×17.5mm

Connection



Note: a) Can't use HHC (HART Hand Held Communicator) in hazardous area and safe area at the same time.;
b) HHC(HART Hand Held Communicator)used in the hazardous area must get the explosion-proof certificate.
c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10；12、13 terminals)：
U_O=28V，I_O=93mA，P_O=651mW
II C：C_O=0.083μF，L_O=4.2mH
*II B：C_O=0.65μF，L_O=12.6mH
II A：C_O=2.15μF，L_O=33.6mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8552-EX.11
2/2：GS8552-EX.22

Dimensions：118.9mm×106.0mm×17.5mm

Pulse input isolated barriers, provide isolated power supply for field instruments. The isolated barrier transfer the pulse signal generated by the hazardous-area device to the safe area. The input adopts hysteresis comparison circuit and has high anti-interference performance. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

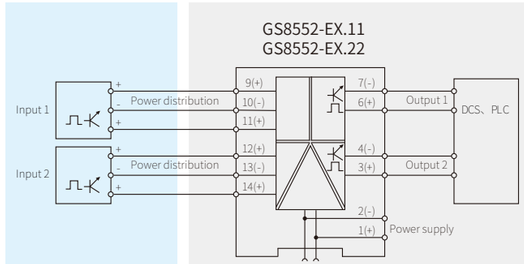
Supply Voltage： 20~35V DC
Current Consumption： (Supply voltage: 24V; output: 12V voltage pulse)
≤80mA(GS8552-EX.22，12V Distribution volatge)
≤45mA(GS8552-EX.11，12V Distribution volatge)
Safe-area Output：
Transistor Output：Supply voltage V_{CC}≤40V, Rated current≤40mA
Transistor Collector Output：
V_H=V_{CC}; V_L≤2.5V(On-state current=10mA, Vcc=24V)
Load Resistance：2kΩ≤R_L≤20kΩ
Transistor Emitter Output：
V_H≥V_{CC}-2.5V; V_L≤0.5V(On-state current=10mA, Vcc=24V)
Load Resistance：2kΩ≤R_L≤20kΩ
Voltage pulse Output：
12V Range PLC/DCS：High Voltage 9V≤V_H≤12V
5V range PLC/DCS：High Voltage 4.5V≤V_H≤5.5V
Low Voltage：V_L≤0.5V
Load Resistance：R_L≥1kΩ，Rated current≤10mA
Hazardous-area Input：
Voltage pulse Input：High Voltage V_H≥4V; Low Voltage V_L≤1V
Frequency at voltage pulse output≤50kHz
Frequency at transistor output≤20kHz
Transistor Input：NPN/PNP
Frequency at voltage pulse output≤20kHz
Frequency at transistor output≤10kHz
(Input signal Vh≤12V，Duty ratio≥30%)
The input signal type can be set by the DIP switches：

Sta.	Input 1		Input 2	
	K4	K3	K2	K1
Voltage pulse Input	OFF	OFF	OFF	OFF
Emitter (PNP) Input	OFF	ON	OFF	ON
Collector (NPN) Input	ON	OFF	ON	OFF

12V distribution power：Open-voltage:≤15V; Rated voltage:≥9V at 20mA
5V distribution power：Open-voltage:≤5.5V; Rated voltage:≥4.5V at 20mA
Note：a) K3 and K4, K1 and K2 cannot be ON at the same time；
b) Customers must specify distribution power voltage when ordering.
Power Supply Protection： Power supply reverse protection
EMC： According to IEC 61326-1(GB/T 18268)
Ambient Temperature： -20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Between power supply part and output part≥1500V AC
Structure： GS8500 range structure customized by Phoenix Contact.
Weight： Approx. 150g
Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus： 2-wire or 3-wire pulse signal source

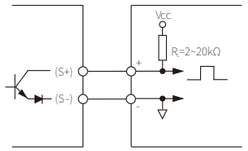
Connection

Hazardous-area | Safe-area

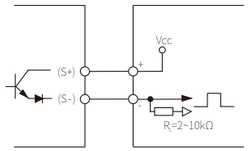


Note: a) GS8522-EX.11 only contains input1, output1;
b) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Application 1:
Transistor Collector Output



Application 2:
Transistor Emitter Output



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11；12、13、14 terminals)：
U_0=15.5V，I_0=110mA，P_0=427mW，C_i=25nF
II C：C_0=0.50μF，L_0=2.0mH
★II B：C_0=3.1μF，L_0=6.0mH
II A：C_0=12.5μF，L_0=16.0mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8554-EX.11
2/2：GS8554-EX.22

Dimensions：118.9mm×106.0mm×17.5mm

Pulse input isolated barriers, provide isolated power supply(24V) for field instruments. The pulse signal generated in the hazardous-area device is transmitted to the safe-area through the isolated barrier to output. The input adopts hysteresis comparison circuit which has high anti-interference performance. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

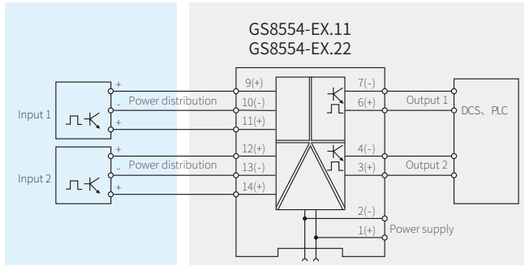
Supply Voltage： 20~35V DC
Current Consumption： (Supply voltage: 24V; output: 12V voltage pulse)
≤160mA(GS8554-EX.22，24V distribution volatge)
≤90mA(GS8554-EX.11，24V distribution volatge)
Safe-area Output：
Transistor Output：Supply voltage V_{CC}≤40V, Rated current≤40mA
Transistor Collector Output：
V_H=V_{CC}; V_L≤2.5V(On-state current=10mA, Vcc=24V)
Load Resistance：2kΩ≤R_L≤20kΩ
Transistor Emitter Output：
V_H≥V_{CC}-2.5V; V_L≤0.5V(On-state current=10mA, Vcc=24V)
Load Resistance：2kΩ≤R_L≤20kΩ
Voltage pulse Output：
24V Range PLC/DCS：High Voltage 16V≤V_H≤24V
12V Range PLC/DCS：High Voltage 9V≤V_H≤12V
Low Voltage：V_L≤0.5V
Load Resistance：R_L≥1kΩ, Rated current≤10mA
Hazardous-area Input：
Voltage pulse Input：High voltage V_H≥4V; Low voltage V_L≤1V
Frequency at oltage pulse output≤50kHz
Frequency at transistor output≤20kHz
Transistor Input：NPN/PNP
Frequency at voltage pulse output≤20kHz
Frequency at transistor output≤10kHz
(Input signal Vh≤12V，Duty ratio≥30%)
The input signal type can be set by the DIP switches：

Sta.	Input 1		Input 2	
	K4	K3	K2	K1
Voltage pulse Input	OFF	OFF	OFF	OFF
Emitter (PNP) Input	OFF	ON	OFF	ON
Collector (NPN) Input	ON	OFF	ON	OFF

Distribution power：Open-voltage: ≤26V ; Rated voltage: ≥16V at 20mA
Note：a) K1 and K2 cannot be ON at the same time；
b) K3 and K4 cannot be ON at the same time。
Power Supply Protection： Power supply reverse protection
EMC： According to IEC 61326-1(GB/T 18268)
Ambient Temperature： -20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Between power supply part and output part≥1500V AC
Structure： GS8500 range structure customized by Phoenix Contact.
Weight： Approx. 150g
Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus： 2-wire or 3-wire pulse signal source

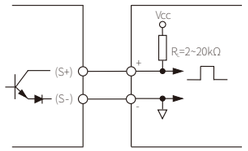
Connection

Hazardous-area | Safe-area

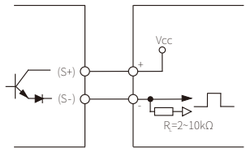


Note: a) GS8554-EX.11 only contains input1、output1;
b) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Application 1:
Transistor Collector Output



Application 2:
Transistor Emitter Output



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11；12、13、14 terminals)：
U_0=28V，I_0=93mA，P_0=651mW
II C：C_0=0.083μF，L_0=4.2mH
★II B：C_0=0.65μF，L_0=12.6mH
II A：C_0=2.15μF，L_0=33.6mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

Pulse Input

3/3：GS8556-EX

Pulse input and output isoltaed barriers transfer the voltage (V type), the complementary (F type) and the open collector (C type) output from the encoder in the hazardous area to safe area. Meanwhile, this product supplies power to the encoder in hazardous area. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

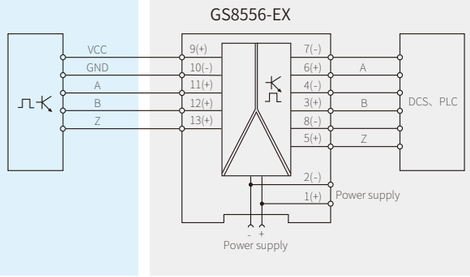
Supply Voltage：20~35V DC
Current Consumption：≤120mA (Supply voltage: 24V; Output: 12V voltage pulse; distribution voltage: 24V)
Safe-area Output：
Transistor Output：Supply voltage V_{CC}≤40V，Rated current≤40mA
Transistor Collector Output：
V_H=V_{CC}; V_L≤2.5V(On-state current=10mA, Vcc=24V)
Load Resistance：2kΩ≤R_L≤20kΩ
Transistor Emitter Output：
V_H≥V_{CC}-2.5V; V_L≤0.5V(On-state current=10mA, Vcc=24V)
Load Resistance：2kΩ≤R_L≤20kΩ
Voltage pulse Output：
High Voltage：9V≤V_H≤12V
Low Voltage：V_L≤0.5V
Load Resistance：R_L≥1kΩ, Rated current≤10mA
Hazardous-area Input：
Voltage pulse Input：High voltage V_H≥4V; Low voltage V_L≤1V
Frequency at voltage pulse output≤50kHz
Frequency at transistor output≤20kHz
Transistor Input：NPN/PNP
Frequency at voltage pulse output≤20kHz
Frequency at transistor output≤10kHz
(Input signal Vh≤12V，Duty ratio≥30%)
The input signal type can be set by the DIP switches：

Sta.	Input 1		Input 2		Input 3	
	K1	K2	K3	K4	K5	K6
Voltage pulse Input	OFF	OFF	OFF	OFF	OFF	OFF
Emitter (PNP) Input	ON	OFF	ON	OFF	ON	OFF
Collector (NPN) Input	OFF	ON	OFF	ON	OFF	ON

Distribution power：Open-voltage: ≤26V; Rated voltage: ≥15.5V at 20mA
Note：a) K1 and K2 cannot be ON at the same time；
b) K3 and K4 cannot be ON at the same time；
c) K5 and K6 cannot be ON at the same time。
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20°C~+60°C
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ≥2500V AC
Between power supply part and output part ≥1500V AC
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：2-wire or 3-wire pulse signal source,encoder

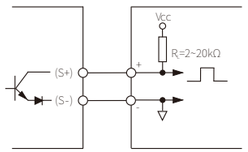
Connection

Hazardous-area | Safe-area

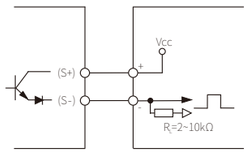


Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Application 1:
Transistor Collector Output



Application 2:
Transistor Emitter Output



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11 terminals)：
U_O=28V，I_O=111mA，P_O=777mW
II C：C_O=0.083μF，L_O=2.5mH
★II B：C_O=0.65μF，L_O=7.5mH
II A：C_O=2.15μF，L_O=20.0mH
(11、10；12、10；13、10 terminals)：
U_O=13.65V，I_O=7.5mA，P_O=26mW
II C：C_O=0.7μF，L_O=100mH
★II B：C_O=5.0μF，L_O=300mH
II A：C_O=18.1μF，L_O=800mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

Fire and Smoke Dectector Input(Loop Powered)

1/1：GS8565-EX
2/2：GS8566-EX

Fire detector input isolated barriers provide the fire and smoke detectors in hazardous area isolated power and transfer 0~40mA signal generated by detectors in the hazardous area to the safe area. This product acts as an smoke alarm and it is suitable for loop-powered DCS/PLC system.

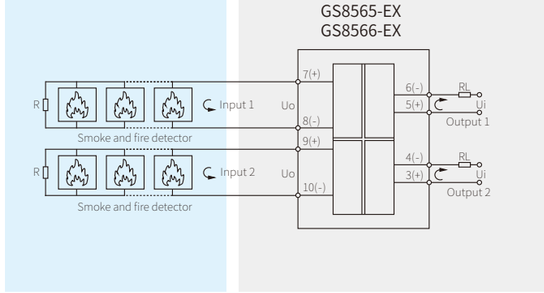
Dimensions：118.9mm×106.0mm×12.5mm

Specification

Loop Supply Voltage（Ui)：20~30V DC
Safe-area output：
Current：0~40mA
Hazardous-area input：
Current：0~40mA
Distribution Voltage：
U_O≥U_i-(280+R_L)I-6(U_i≤24V)
U_O≥18-(280+R_L)I(U_i>24V)
Short-circuit Current：≤65mA(Supply voltage： 24V)
Transmission Accuracy：0.2%F.S.
Temperature Drift：0.01%F.S./°C(0°C~60°C)
0.02%F.S./°C(-20°C~0°C)
Response Time(0~90%)：≤2ms
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20°C~+60°C
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ≥2500V AC
Between channels ≥1500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ≥100MΩ
Between channels ≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.100g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Smoke, fire detector

Connection

Hazardous-area | Safe-area



Note：GS8565-EX only contains input1, output1；

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8；9、10 terminals)：
U_O=25.2V，I_O=93mA，P_O=586mW
II C：C_O=0.107μF，L_O=4.2mH
★II B：C_O=0.82μF，L_O=12.6mH
II A：C_O=2.9μF，L_O=33.6mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8572-EX(RTD, TC input)
GS8572-EX.RTD(RTD input)
GS8572-EX.R(Potentiometer input)

Temperature input isolated barriers, converter potentiometer/RTD/TC signals in hazardous area into current or voltage signals and output to safe area. It can be configured by computer. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：
118.9mm×106.0mm×17.5mm(GS8572-EX)
118.9mm×106.0mm×12.5mm(GS8572-EX.RTD/GS8572-EX.R)

Specification

Supply Voltage：20~35V DC
Current Consumption：⩽40mA(Supply voltage: 24V; Output: 20mA)
Safe-area Output：
Output Current：0~20mA/4~20mA; Load resistance: R_L⩽300Ω
Output Voltage：0~5V/1~5V; Load resistance: R_L⩾35kΩ
(Customers need specify current output or voltage output when ordering)
Hazardous-area Input：
Input Signal：please see the table 'Input Signal and Range'.
Temperature Drift：0.01%F.S./℃
CJC：±1°C(Compensation range：-20°C~+60°C)
Response Time(0~90%)：⩽1s
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20°C~+60°C
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area or zone2(for ec protection), and connected to the IS apparatus in hazardous area up to zone 0 IIC and zone 20 IIIC.
Suitable Field Apparatus：2-wire or 3-wire RTD, TC, Potentiometer

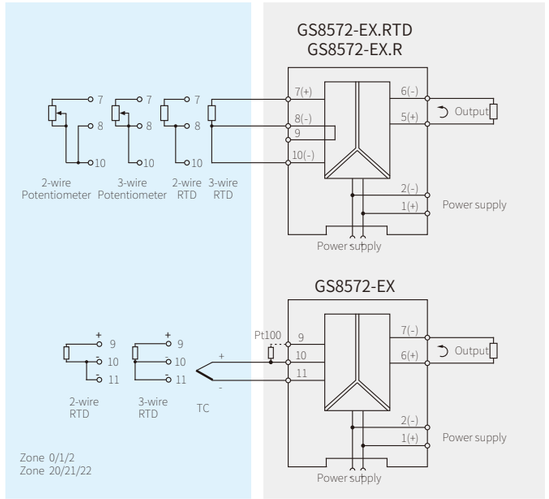
Input Signal and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200°C~+400°C	50°C	0.5°C / 0.1%
	E	-200°C~+900°C	50°C	0.5°C / 0.1%
	J	-200°C~+1200°C	50°C	0.5°C / 0.1%
	K	-200°C~+1372°C	50°C	0.5°C / 0.1%
	N	-200°C~+1300°C	50°C	0.5°C / 0.1%
	R	-40°C~+1768°C	500°C	1.5°C / 0.1%
	S	-40°C~+1768°C	500°C	1.5°C / 0.1%
	B	+320°C~+1820°C	500°C	1.5°C / 0.1%
RTD	Pt100	-200°C~+850°C	20°C	0.2°C / 0.1%
	Cu50	-50°C~+150°C	20°C	0.2°C / 0.1%
	Cu100	-50°C~+150°C	20°C	0.2°C / 0.1%
Potentiometer		0kΩ~5kΩ		0.1%
		0kΩ~10kΩ		0.1%

Note：1、The "%" of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.
2、Allow a maximum wire resistance of 50Ω/line for RTD input(3-wire).
3、When the thermocouple is input, the conversion accuracy does not include the CJC. For every 100Ω increase in the compensation wire, the cold junction error increases by 0.2°C.
4、When the Type B thermocouple is input, the temperature range is required to be greater than 680 °C to ensure the accuracy index.
5、When the Type S thermocouple is input, the temperature measurement accuracy is 0.6% below 10°C.

Connection

Hazardous-area | Safe-area/Zone 2



Note: a) 2-wire connection cannot eliminate conductor resistance and error will increase
b) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Ex nA II C T4 Gc

Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8、9、10 terminals)：
U_o=5.4V，I_o=23mA，P_o=32mW
II C：C_o=65μF，L_o=65mH
★II B：C_o=1000μF，L_o=265mH
II A：C_o=1000μF，L_o=535mH
I：C_o=1000μF，L_o=880mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8572-EX.TC

Temperature input isolated barriers, converter TC/mV signals in hazardous area into current or voltage signals and output to safe area. It can be configured by computer. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：
118.9mm×106.0mm×12.5mm(TC input)
118.9mm×106.0mm×17.5mm(mV input)

Specification

Supply Voltage：20~35V DC
Current Consumption：⩽40mA (Supply voltage: 24V; Output: 20mA)
Safe-area Output：
Output Current：0~20mA/4~20mA; Load resistance: R_L⩽300Ω
Output Voltage：0~5V/1~5V; Load resistance: R_L⩾35kΩ
(Customers need specify current output or voltage output when ordering)
Hazardous-area Input：
Input Signal： please see the table 'Input Signal and Range'.
Temperature Drift：0.01%F.S./℃
CJC：±1°C(Compensation range：-20°C~+60°C)
Response Time(0~90%)：⩽1s
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20°C~+60°C
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area or zone2(for ec protection), and connected to the IS apparatus in hazardous area up to zone 0 IIC and zone 20 IIIC.
Suitable Field Apparatus：TC, mV signal

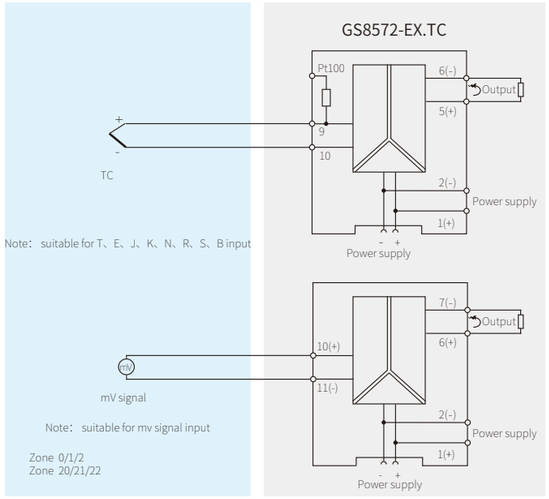
Input Signal and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200°C~+400°C	50°C	0.5°C / 0.1%
	E	-200°C~+900°C	50°C	0.5°C / 0.1%
	J	-200°C~+1200°C	50°C	0.5°C / 0.1%
	K	-200°C~+1372°C	50°C	0.5°C / 0.1%
	N	-200°C~+1300°C	50°C	0.5°C / 0.1%
	R	-40°C~+1768°C	500°C	1.5°C / 0.1%
	S	-40°C~+1768°C	500°C	1.5°C / 0.1%
	B	+320°C~+1820°C	500°C	1.5°C / 0.1%
mV signal		-100mV~+100mV	10mV	20uV / 0.1%

Note：1、The "%" of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.
2、When the thermocouple is input, the conversion accuracy does not include the CJC. For every 100Ω increase in the compensation wire, the cold junction error increases by 0.2°C.
3、When the Type B thermocouple is input, the temperature range is required to be greater than 680 °C to ensure the accuracy index.
4、When the Type S thermocouple is input, the temperature measurement accuracy is 0.6% below 10°C.
5、mV signal input needs to be customized.

Connection

Hazardous-area | Safe-area/Zone 2



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Ex nA II C T4 Gc

Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11 terminals)：
U_o=5.4V，I_o=23mA，P_o=32mW
II C：C_o=65μF，L_o=65mH
★II B：C_o=1000μF，L_o=265mH
II A：C_o=1000μF，L_o=535mH
I：C_o=1000μF，L_o=880mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8572-EX.SIL.RTD(RTD input)
GS8572-EX.SIL.TC(TC input)

Temperature input isolated barriers, converter RTD/TC signals in hazardous area into 4~20mA or 0/1~5V signals and output to safe area. It can be configured by computer. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×12.5mm

Specification

Supply Voltage：20~35V DC
Current Consumption：≤45mA(Supply voltage: 24V; Output: 20mA)
Safe-area Output：
Output Current：4~20mA；Load resistance：R_L≤300Ω
Output Voltage：1~5V；Load resistance：R_L≥35kΩ
(Customers need specify current output or voltage output when ordering)
Hazardous-area Input：
Input Signal： please see the table 'Input Signal and Range'.
Temperature Drift：0.01%F.S./℃
CJC：±1°C(Compensation range：-20°C~+60°C)
Response Time(0~90%)：≤1.2s
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268), IEC 61326-3-1
Ambient Temperature：-20°C~+60°C
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ≥2500V AC
Between power supply part and output part ≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ≥100MΩ
Between power supply part and output part ≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：2-wire or 3-wire RTD, TC

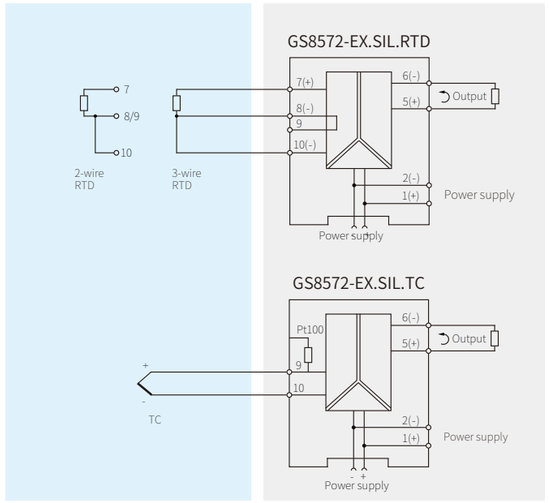
Input Signal and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200°C~+400°C	50°C	0.5°C / 0.1%
	E	-200°C~+900°C	50°C	0.5°C / 0.1%
	J	-200°C~+1200°C	50°C	0.5°C / 0.1%
	K	-200°C~+1372°C	50°C	0.5°C / 0.1%
	N	-200°C~+1300°C	50°C	0.5°C / 0.1%
	R	-40°C~+1768°C	500°C	1.5°C / 0.1%
	S	-40°C~+1768°C	500°C	1.5°C / 0.1%
	B	+320°C~+1820°C	500°C	1.5°C / 0.1%
RTD	Pt100	-200°C~+850°C	20°C	0.2°C / 0.1%
	Cu50	-50°C~+150°C	20°C	0.2°C / 0.1%
	Cu100	-50°C~+150°C	20°C	0.2°C / 0.1%

Note：1、The "%" of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.
2、Allow a maximum wire resistance of 50Ω/line for RTD input(3-wire).
3、When the thermocouple is input, the conversion accuracy does not include the CJC.
4、When the Type B thermocouple is input, the temperature range is required to be greater than 680 °C to ensure the accuracy index.
5、When the Type S thermocouple is input, the temperature measurement accuracy is 0.6% below 10°C.

Connection

Hazardous-area | Safe-area



Note: a) 2-wire connection cannot eliminate conductor resistance and error will increase
b) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8、9、10 terminals)：
U_O=6.6V，I_O=10mA，P_O=16.5mW
II C：C_O=6.5μF， L_O=3.6mH
★II B：C_O=60μF， L_O=10.8mH
II A：C_O=1000μF， L_O=28.8mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/2：GS8576-EX / GS8576-EX.RTD
GS8576-EX.TC / GS8576-EX.R
2/2：GS8579-EX / GS8579-EX.RTD
GS8579-EX.TC / GS8579-EX.R

Temperature input isolated barriers, converter RTD/TC/mV/potentiometer signals in hazardous area into 0/4~20mA or 0/1~5V signals and output to safe area. It can be configured by computer. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

Supply Voltage：20~35V DC
Current Consumption：≤65mA(Supply voltage：24V;Output：20mA)
Safe-area Output：
Output Current：0~20mA/4~20mA；Load resistance：R_L≤300Ω
Output Voltage：0~5V/1~5V；Load resistance：R_L≥35kΩ
(Customers need specify current output or voltage output when ordering.)
Hazardous-area Input：
Input Signal： please see the table 'Input Signal and Range'.
Temperature Drift：0.01%F.S./℃
CJC：±1°C(Compensation range：-20°C~+60°C)
Response Time(0~90%)：≤1s
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20°C~+60°C
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ≥2500V AC
Between power supply part and output part ≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ≥100MΩ
Between power supply part and output part ≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：2-wire or 3-wire RTD、TC, mV signal、Potentiometer

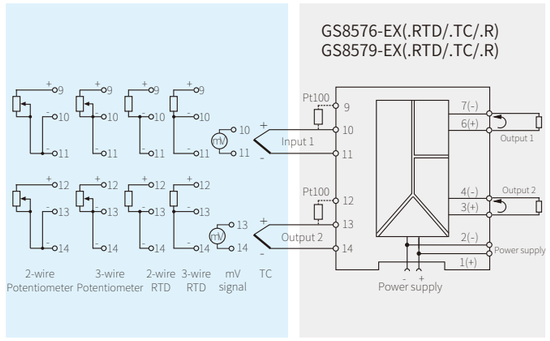
Input Signal and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200°C~+400°C	50°C	0.5°C / 0.1%
	E	-200°C~+900°C	50°C	0.5°C / 0.1%
	J	-200°C~+1200°C	50°C	0.5°C / 0.1%
	K	-200°C~+1372°C	50°C	0.5°C / 0.1%
	N	-200°C~+1300°C	50°C	0.5°C / 0.1%
	R	-40°C~+1768°C	500°C	1.5°C / 0.1%
	S	-40°C~+1768°C	500°C	1.5°C / 0.1%
	B	+320°C~+1820°C	500°C	1.5°C / 0.1%
mV signal		-100mV~+100mV	10mV	20uV / 0.1%
RTD	Pt100	-200°C~+850°C	20°C	0.2°C / 0.1%
	Cu50	-50°C~+150°C	20°C	0.2°C / 0.1%
	Cu100	-50°C~+150°C	20°C	0.2°C / 0.1%
Potentiometer		0kΩ~5kΩ		0.1%
		0kΩ~10kΩ		0.1%

Note：1、The "%" of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.
2、Allow a maximum wire resistance of 50Ω/line for RTD input(3-wire).
3、When the thermocouple is input, the conversion accuracy does not include the CJC. For every 100Ω increase in the compensation wire, the cold junction error increases by 0.2°C.
4、When the Type B thermocouple is input, the temperature range is required to be greater than 680 °C to ensure the accuracy index.
5、When the Type S thermocouple is input, the temperature measurement accuracy is 0.6% below 10°C.
6、mV signal input needs to be customized.

Connection

Hazardous-area | Safe-area



Note: a) GS8576-EX only contains input1, output1, output2;
b) GS8576-EX/GS8579-EX：RTD, TC input;
c) GS8576-EX.RTD/GS8579-EX.RTD：RTD input;
d) GS8576-EX.TC/GS8579-EX.TC：TC, mV input;
e) GS8576-EX.R/GS8579-EX.R：Potentiometer input;
f) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11；12、13、14 terminals)：
U_O=8.5V，I_O=20mA，P_O=43mW
II C：C_O=6.5μF， L_O=3.6mH
★II B：C_O=60μF， L_O=10.8mH
II A：C_O=1000μF， L_O=28.8mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

Temperature Input(Loop Powered)

1/1：GS8577-EX
GS8577-EX.RTD / GS8577-EX.TC
2/2：GS8578-EX
GS8578-EX.RTD / GS8578-EX.TC

Temperature input isolated barriers, converter RTD/TC/mV signals in hazardous area into 0/4~20mA or 0/1~5V signals and output to safe area. It can be configured by computer. The input and output are each galvanically isolated, and this product is loop powered.

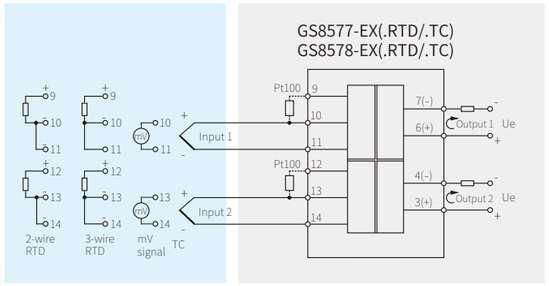
Dimensions：118.9mm×106.0mm×17.5mm

Specification

Loop Supply Voltage（Ue）： 12~30V DC
Safe-area Output：
Output Current：4~20mA
Load Resistance：$R_L \leqslant (Ue-12)/0.021\Omega$
Hazardous-area Input：
Input Signal：please see the table 'Input Signal and Range'.
Temperature Drift： 0.01%F.S./℃
CJC： ±1℃(Compensation range：-20℃~+60℃)
Response Time(0~90%)： ⩽1s
Power Supply Protection： Power supply reverse protection
EMC： According to IEC 61326-1(GB/T 18268)
Ambient Temperature： -20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Structure： GS8500 range structure customized by Phoenix Contact
Weight： Approx.150g
Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus： 2-wire or 3-wire RTD, TC, mV signal

Connection

Hazardous-area | Safe-area



Note: a) GS8577-EX only contains input1, output1.;
b) GS8577-EX/GS8578-EX：RTD, TC input;
c) GS8577-EX.RTD/GS8578-EX.RTD：RTD input;
d) GS8577-EX.TC/GS8578-EX.TC：TC, mV input.

Input Signal and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200℃~+400℃	50℃	0.5℃ / 0.1%
	E	-200℃~+900℃	50℃	0.5℃ / 0.1%
	J	-200℃~+1200℃	50℃	0.5℃ / 0.1%
	K	-200℃~+1372℃	50℃	0.5℃ / 0.1%
	N	-200℃~+1300℃	50℃	0.5℃ / 0.1%
	R	-40℃~+1768℃	500℃	1.5℃ / 0.1%
	S	-40℃~+1768℃	500℃	1.5℃ / 0.1%
	B	+320℃~+1820℃	500℃	1.5℃ / 0.1%
mV signal		-100mV~+100mV	10mV	20uV / 0.1%
RTD	Pt100	-200℃~+850℃	20℃	0.2℃ / 0.1%
	Cu50	-50℃~+150℃	20℃	0.2℃ / 0.1%
	Cu100	-50℃~+150℃	20℃	0.2℃ / 0.1%

Note：1、The "%" of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.
2、Allow a maximum wire resistance of 50Ω/line for RTD input(3-wire).
3、When the thermocouple is input, the conversion accuracy does not include the CJC. For every 100Ω increase in the compensation wire, the cold junction error increases by 0.2℃.
4、When the Type B thermocouple is input, the temperature range is required to be greater than 680 ℃ to ensure the accuracy index.
5、When the Type S thermocouple is input, the temperature measurement accuracy is 0.6% below 10℃.
6、mV signal input needs to be customized.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11；12、13、14 terminals)：
U_O=8.5V，I_O=20mA，P_O=43mW
II C：C_O=6.5μF，L_O=3.6mH
⋆II B：C_O=60μF，L_O=10.8mH
II A：C_O=1000μF，L_O=28.8mH
⋆II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

Resistance Input

1/1：GS8074-EX

Resistance input and output isolated barriers, transfer 2-wire, 3-wire resistance signal to the safe-area output. The product needs an independent power supply and galvanic isolation among power supply, input and output.

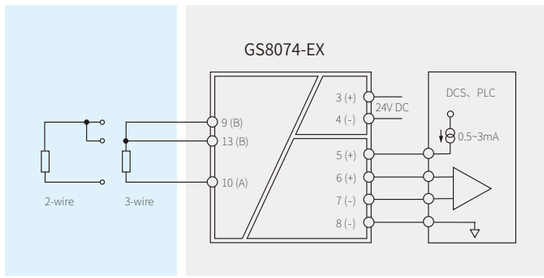
Dimensions：114.5mm×99.0mm×22.5mm

Specification

Supply Voltage： 20~35V DC
Current Consumption： ⩽25mA(Supply voltage: 24V)
Safe-area Output：
Output signal：60Ω~4kΩ(With input 1: 1)
Current range：0.5mA~3mA(Input resistance at 2kΩ~4kΩ, current＜1mA)
Hazardous-area Input：
Input Signal：2-wire, 3-wire resistance signal
Signal range：60Ω~4kΩ
Transmissiton accuracy： 0.1%F.S. or 0.2Ω(Take larger value)
Temperature Drift： 0.01%F.S./℃
Response Time(0~90%)： ⩽5ms
Power Supply Protection： Power supply reverse protection
EMC： According to IEC 61326-1(GB/T 18268)
Ambient Temperature： -20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Weight： Approx.100g
Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus： 2-wire or 3-wire RTD, resistance signal

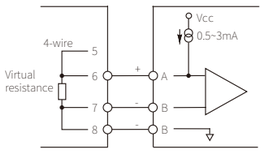
Connection

Hazardous-area | Safe-area

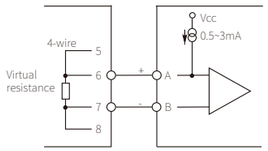


Output connection

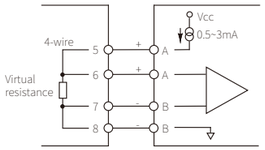
Application 1：3-wire output



Application 2：2-wire output



Application 3：4-wire output



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、13、14、15 terminals)：
U_O=11.7V，I_O=60mA，P_O=176mW
II C：C_O=1.54μF，L_O=9mH
⋆II B：C_O=10.3μF，L_O=27mH
II A：C_O=41.0μF，L_O=72mH
⋆II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

mV Input

1/1：GS8081-EX

mV signals input and output isolated barriers, transfer mV signals to the safe-area. The product needs an independent power supply and galvanic isolation among power supply, input and output. It is suitable for I/O cards with external CJC.

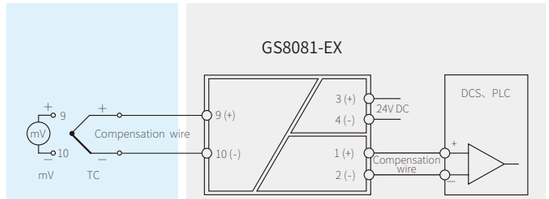
Dimensions：114.5mm×99.0mm×22.5mm

Specification

Supply Voltage：20~35V DC
Current Consumption：⩽15mA(Supply voltage: 24V)
Safe-area Output：
Signal：-5mV~+60mV(Same with input 1: 1)
Internal impedance：＜10Ω
Hazardous-area Input：
Signal：-5mV~+60mV
Internal impedance：＞20MΩ
Transmission Accuracy：0.03%F.S. or 18uV(Take larger value)
Temperature Drift：0.01%F.S./℃
Response Time(0~90%)：⩽5ms
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Weight：Approx.100g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
uitable field apparatus：T, E, J, K, S, B, mV signal

Connection

Hazardous-area	Safe-area



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10 terminals)：
U_O=8.5V，I_O=4mA，P_O=8.5mW
II C：C_O=6.5μF，L_O=1000mH
*II B：C_O=60μF，L_O=1000mH
II A：C_O=1000μF，L_O=1000mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

Voltage Input

1/1：GS8589-EX.11
2/2：GS8589-EX.22

Voltage signal input isolated barriers; provide the isolated power to the field instrument, and transfer DC voltage in hazardous area to safe-area. The product needs an independent power supply and galvanic isolation among power supply, input and output.

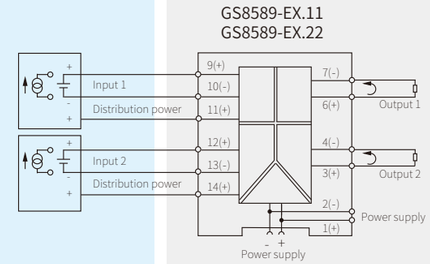
Dimensions：118.9mm×106.0mm×17.5mm

Specification

Supply Voltage：20~35V DC
Current Consumption：(Supply voltage: 24V; Distribution power: 15V/20mA)
⩽100mA(GS8589-EX.11)
⩽130mA(GS8589-EX.22)
Safe-area Output：
Current：0~20mA, 4~20mA
Load Resistance: R_L⩽300Ω
Voltage：0~5V, 1~5V, 0~10V, 2~10V
Load resistance: R_L⩾35kΩ
Hazardous-area Input：
Voltage：0~5V, 1~5V, 0~10V, 2~10V
Load Resistance：⩾300kΩ
Distribution power：10V/20mA or 15V/20mA or none
Note：When the output of GS8589-EX.22 is current, the module do not support distribution power.
Transmission Accuracy：0.1%F.S.
Temperature Drift：0.01%F.S./℃
Response Time(0~90%)：⩽0.1s
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structre customized by Phoenix contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Voltage. current source output device

Connection

Hazardous-area	Safe-area



Note: a) GS8589-EX.11 only contains input1 and output1
b) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10；12、13 terminals)：
U_O=13.7V，I_O=8mA，P_O=28mW
II C：C_O=0.79μF，L_O=250mH
*II B：C_O=5.0μF，L_O=750mH
II A：C_O=18.1μF，L_O=1000mH
(10、11；13、14 terminals)：
U_O=24.2V，I_O=143.8mA，P_O=870mW
II C：C_O=0.09μF，L_O=1.5mH
*II B：C_O=0.70μF，L_O=4.5mH
II A：C_O=2.33μF，L_O=12mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8592-EX.3

Communication signals input isolated barriers, realize the bi-direction communication of RS-232 digital signals between hazardous area and safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

Supply Voltage：20~35V DC
Current Consumption：
⩽175mA(Supply voltage: 24V, distribution current: 100mA)
⩽120mA(Supply voltage: 24V, distribution current: 50mA)
Safe-area：
Signal：RS-232
Transmission delay：⩽10μs
Transmission rate：⩽56kbps
Hazardous-area：
Signal：RS-232
Distribution Power：5V/100mA, 6V/100mA, 8V/50mA, 9V/50mA, 12V/50mA
Distribution Voltage Deviation：±10%
Function of the DIP Switches：

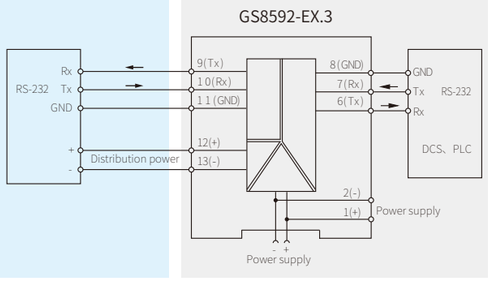
Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-25℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：With RS-232 communication interface device

Dimensions：118.9mm×106.0mm×17.5mm

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、11；10、11 terminals)：
U_O=11.7V，I_O=4.0mA，P_O=12mW
(9、10、11 terminals)：
U_O=23.5V，I_O=8.5mA，P_O=50mW
II C：C_O=0.12μF，L_O=100mH
*II B：C_O=0.97μF，L_O=300mH
II A：C_O=3.52μF，L_O=800mH
(12、13 terminals)：
U_O=23.1V，I_O=187mA，P_O=1.08W
II C：C_O=0.1μF，L_O=0.8mH
*II B：C_O=1.0μF，L_O=2.4mH
II A：C_O=3.6μF，L_O=6.4mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8595-EX.3

Communication signals input isolated barriers, realize the bi-direction communication between the RS-232 digital signals generated by the field instrument and the RS-485(full duplex) / RS-422 digital signals in the safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

Supply Voltage：20~35V DC
Current Consumption：
⩽160mA(Supply voltage: 24V, distribution current: 100mA)
⩽120mA(Supply voltage: 24V, distribution current: 50mA)
Safe-area：
Signal：RS-485(full duplex) / RS-422 digital signals
Transmission delay：⩽10μs
Signal transmission rate：⩽56kbps
Drive ability：up to 32 transceivers
Hazardous-area：
Signal：RS-232
Distribution power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA
Distribution Voltage Deviation：±10%
Function of the DIP Switches：

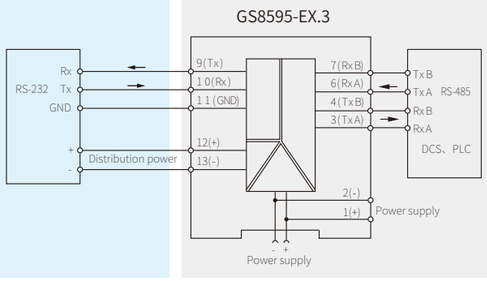
Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-25℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：With RS-232 communication interface device

Dimensions：118.9mm×106.0mm×17.5mm

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、11；10、11 terminals)：
U_O=11.7V，I_O=4.0mA，P_O=12mW
(9、10、11 terminals)：
U_O=23.5V，I_O=8.5mA，P_O=50mW
II C：C_O=0.12μF，L_O=100mH
*II B：C_O=0.97μF，L_O=300mH
II A：C_O=3.52μF，L_O=800mH
(12、13 terminals)：
U_O=23.1V，I_O=187mA，P_O=1.08W
II C：C_O=0.1μF，L_O=0.8mH
*II B：C_O=1.0μF，L_O=2.4mH
II A：C_O=3.6μF，L_O=6.4mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8599-EX.3

Communication signals input isolated barriers, realize the bi-direction communication between the RS-232 digital signals generated by the field instrument and the RS-485(half duplex) digital signals in the safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

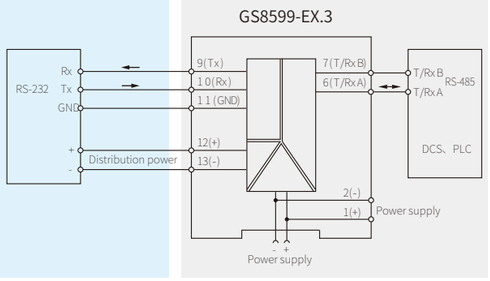
Supply Voltage： 20~35V DC
Current Consumption：
⩽180mA(Supply voltage: 24V, distribution current: 100mA)
⩽120mA(Supply voltage: 24V, distribution current: 50mA)
Safe-area：
Signal：RS-485(half duplex)
Transmission delay：⩽10μs
Signal transmission rate：⩽56kbps
Drive ability：up to 32 transceivers
Hazardous-area：
Signal：RS-232
Distribution Power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA
Distribution Voltage Deviation：±10%
Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection： Power supply reverse protection
EMC： According to IEC 61326-1(GB/T 18268)
Ambient Temperature： -25℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure： GS8500 range structure customized by Phoenix Contact
Weight： Approx.150g
Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus： With RS-232 communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority： NEPSI(China)
Ex Marking： [Ex ia Ga] II C
[Ex iaD]
Maximum Voltage： Um=250V
Intrinsic Safety Parameters(9、11；10、11 terminals)：
U_O=11.7V，I_O=4.0mA，P_O=12mW
(9、10、11 terminals)：
U_O=23.5V，I_O=8.5mA，P_O=50mW
II C：C_O=0.12μF，L_O=100mH
*II B：C_O=0.97μF，L_O=300mH
II A：C_O=3.52μF，L_O=800mH
(12、13 terminals)：
U_O=23.1V，I_O=187mA，P_O=1.08W
II C：C_O=0.1μF，L_O=0.8mH
*II B：C_O=1.0μF，L_O=2.4mH
II A：C_O=3.6μF，L_O=6.4mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8591-EX.3

Communication signals input isolated barriers, realize the bi-direction communication between the RS-485(half duplex) digital signals generated by the field instrument and the RS-485(half duplex) /RS-422 digital signals in the safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

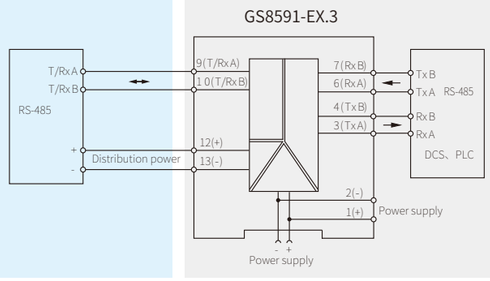
Supply Voltage： 20~35V DC
Current Consumption：
⩽175mA(Supply voltage: 24V, Distribution current: 100mA)
⩽120mA(Supply voltage: 24V, distribution current: 50mA)
Safe-area：
Signal：RS-485(full duplex) /RS-422 digital signals
Transmission delay：⩽10μs
Signal transmission rate：⩽56kbps
Drive Ability：up to 32 transceivers
Hazardous-area：
Signal：RS-485(half duplex)
Distribution Power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA
Distribution Voltage Deviation：±10%
Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection： Power supply reverse protection
EMC： According to IEC 61326-1(GB/T 18268)
Ambient Temperature： -25℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance： Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure： GS8500 range structure customized by Phoenix Contact
Weight： Approx.150g
Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus： With RS-485 half duplex communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority： NEPSI(China)
Ex Marking： [Ex ia Ga] II C
[Ex iaD]
Maximum Voltage： Um=250V
Intrinsic Safety Parameters(9、10 terminals)：
U_O=6.6V，I_O=65mA，P_O=110mW
II C：C_O=22μF，L_O=8mH
*II B：C_O=500μF，L_O=24mH
II A：C_O=1000μF，L_O=64mH
(12、13 terminals)：
U_O=23.1V，I_O=187mA，P_O=1.08W
II C：C_O=0.1μF，L_O=0.8mH
*II B：C_O=1.0μF，L_O=2.4mH
II A：C_O=3.6μF，L_O=6.4mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8593-EX.3

Communication signals input isolated barriers, realize the bi-direction communication of RS-485(half duplex) digital signals between hazardous area and safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

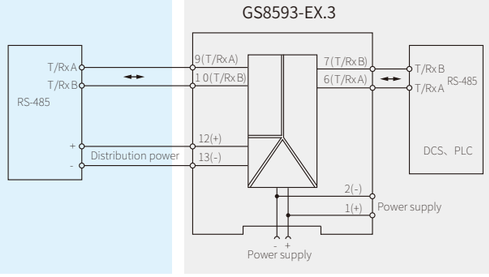
Supply Voltage：20~35V DC
Current Consumption：
⩽160mA(Supply voltage: 24V, Distribution current: 100mA)
⩽120mA(Supply voltage: 24V, Distribution current: 50mA)
Safe-area：
Signal：RS-485(half duplex)
Transmission delay：⩽10μs
Signal transmission rate：⩽56kbps
Drive Ability：up to 32 transceivers
Hazardous-area：
Signal：RS-485(half duplex)
Distribution Power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA
Distribution Voltage Deviation：±10%
Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-25℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：With RS-485 half duplex communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10 terminals)：
U_o=6.6V，I_o=65mA，P_o=110mW
II C：C_o=22μF，L_o=8mH
*II B：C_o=500μF，L_o=24mH
II A：C_o=1000μF，L_o=64mH
(12、13 terminals)：
U_o=23.1V，I_o=187mA，P_o=1.08W
II C：C_o=0.1μF，L_o=0.8mH
*II B：C_o=1.0μF，L_o=2.4mH
II A：C_o=3.6μF，L_o=6.4mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8596-EX.3

Communication signals input isolated barriers, realize the bi-direction communication between the RS-485(half duplex) digital signals generated by the field instrument and the RS-232 digital signals in the safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

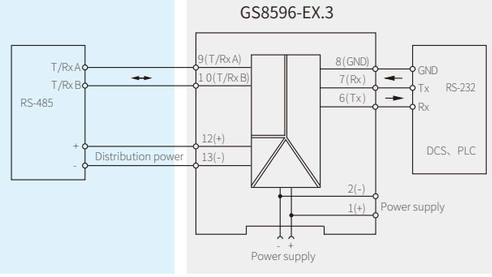
Supply Voltage：20~35V DC
Current Consumption：
⩽160mA(Supply voltage: 24V, Distribution current: 100mA)
⩽120mA(Supply voltage: 24V, Distribution current: 50mA)
Safe-area：
Signal：RS-232
Transmission delay：⩽10μs
Signal transmission rate：⩽56kbps
Hazardous-area：
Signal：RS-485(half duplex)
Distribution Power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA
Distribution Voltage Deviation：±10%
Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-25℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：With RS-485 half duplex communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10 terminals)：
U_o=6.6V，I_o=65mA，P_o=110mW
II C：C_o=22μF，L_o=8mH
*II B：C_o=500μF，L_o=24mH
II A：C_o=1000μF，L_o=64mH
(12、13 terminals)：
U_o=23.1V，I_o=187mA，P_o=1.08W
II C：C_o=0.1μF，L_o=0.8mH
*II B：C_o=1.0μF，L_o=2.4mH
II A：C_o=3.6μF，L_o=6.4mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8594-EX.3

Communication signals input isolated barriers, realize the bi-direction communication between the RS-485(full duplex) / RS-422 digital signals generated by the field instrument and the RS-232 digital signals in the safe area. It also provides isolated power supply for field instruments.The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

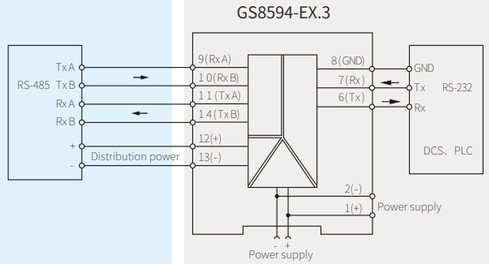
Supply Voltage： 20~35V DC
Current Consumption：
⩽160mA(Supply voltage: 24V, Distribution current: 100mA)
⩽120mA(Supply voltage: 24V, Distribution current: 50mA)
Safe-area：
Signal：RS-232
Transmission delay：⩽10μs
Signal transmission rate：⩽56kbps
Hazardous-area：
Signal：RS-485(full duplex) / RS-422 digtial signals
Distribution Power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA
Distribution Voltage Deviation：±10%
Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection： Power supply reverse protection
EMC： According to IEC 61326-1(GB/T 18268)
Ambient Temperature： -25℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure： GS8500 range structure customized by Phoenix Contact
Weight： Approx.150g
Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus： With RS-485 full duplex/RS-422 communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority： NEPSI(China)
Ex Marking： [Ex ia Ga] II C
[Ex iaD]
Maximum Voltage： Um=250V
Intrinsic Safety Parameters(9、10；11、14 terminals)：
U_O=6.6V，I_O=65mA，P_O=110mW
II C：C_O=22μF，L_O=8mH
*II B：C_O=500μF，L_O=24mH
II A：C_O=1000μF，L_O=64mH
(12、13 terminals)：
U_O=23.1V，I_O=187mA，P_O=1.08W
II C：C_O=0.1μF，L_O=0.8mH
*II B：C_O=1.0μF，L_O=2.4mH
II A：C_O=3.6μF，L_O=6.4mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8597-EX.3

Communication signals input isolated barriers, realize the bi-direction communication between the RS-485(full duplex) / RS-422 digital signals generated by the field instrument and the RS-485(half duplex) digital signals in the safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

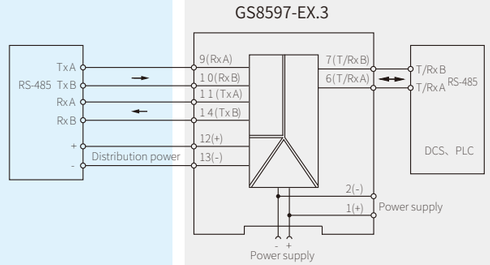
Supply Voltage： 20~35V DC
Current Consumption：
⩽160mA(Supply voltage: 24V, Distribution current: 100mA)
⩽120mA(Supply voltage: 24V, Distribution current: 50mA)
Safe-area：
Signal：RS-485(half duplex)
Transmission delay：⩽10μs
Signal transmission rate：⩽56kbps
Drive Ability：up to 32 transceivers
Hazardous-area：
Signal：RS-485(full duplex) / RS-422 digtial signals
Distribution Power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA
Distribution Voltage Deviation：±10%
Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection： Power supply reverse protection
EMC： According to IEC 61326-1(GB/T 18268)
Ambient Temperature： -25℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure： GS8500 range structure customized by Phoenix Contact
Weight： Approx.150g
Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus： With RS-485 full duplex/RS-422 communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority： NEPSI(China)
Ex Marking： [Ex ia Ga] II C
[Ex iaD]
Maximum Voltage： Um=250V
Intrinsic Safety Parameters(9、10；11、14 terminals)：
U_O=6.6V，I_O=65mA，P_O=110mW
II C：C_O=22μF，L_O=8mH
*II B：C_O=500μF，L_O=24mH
II A：C_O=1000μF，L_O=64mH
(12、13 terminals)：
U_O=23.1V，I_O=187mA，P_O=1.08W
II C：C_O=0.1μF，L_O=0.8mH
*II B：C_O=1.0μF，L_O=2.4mH
II A：C_O=3.6μF，L_O=6.4mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8598-EX.3

Communication signals input isolated barriers, realize the bi-direction communication of RS-485(full duplex) / RS-422 digital signals between hazardous area and safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

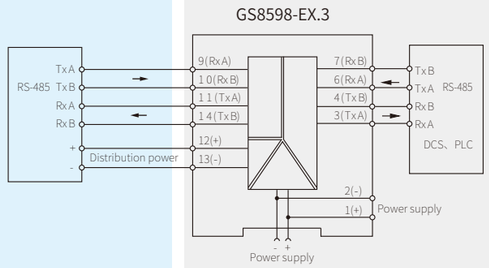
Supply Voltage：20~35V DC
Current Consumption：
⩽160mA(Supply voltage: 24V, Distribution current: 100mA)
⩽120mA(Supply voltage: 24V, Distribution current: 50mA)
Safe-area：
Signal：RS-485(full duplex) / RS-422 digital signals
Transmission delay：⩽10μs
Signal transmission rate：⩽56kbps
Drive Ability：up to 32 transceivers
Hazardous-area：
Signal：RS-485(full duplex) / RS-422 digital signals
Distribution Power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA
Distribution Voltage Deviation：±10%
Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：With RS-485 full duplex/RS-422 communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10；11，14 terminals)：
U_o=6.6V，I_o=65mA，P_o=110mW
II C：C_o=22μF，L_o=8mH
*II B：C_o=500μF，L_o=24mH
II A：C_o=1000μF，L_o=64mH
(12、13 terminals)：
U_o=23.1V，I_o=187mA，P_o=1.08mW
II C：C_o=0.1μF，L_o=0.8mH
*II B：C_o=1.0μF，L_o=2.4mH
II A：C_o=3.6μF，L_o=6.4mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/1：GS8593B-EX

Communication signals input isolated barriers, realize the bi-direction communication of RS-485(half duplex) digital signals between hazardous area and safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

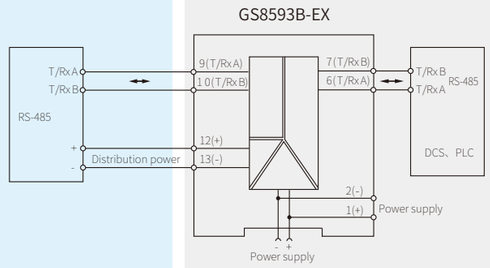
Dimensions：118.9mm×106.0mm×17.5mm

Specification

Supply Voltage：20~35V DC
Current Consumption：
⩽160mA(Supply voltage: 24V, Distribution power: 9V/140mA)
Safe-area：
Signal：RS-485(half duplex)
Transmission delay：⩽10μs
Signal transmission rate：⩽56kbps
Drive Ability：up to 32 transceivers
Hazardous-area：
Signal：RS-485(half duplex)
Distribution Power：Open- circuit voltage⩽17V
Distribution voltage：9V±10% at 140mA
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-25℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：With RS-485 half duplex communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10 terminals)：
U_o=6.6V，I_o=65mA，P_o=110mW
II C：C_o=22μF，L_o=8mH
*II B：C_o=500μF，L_o=24mH
II A：C_o=1000μF，L_o=64mH
(12、13 terminals)：
U_o=17.22V，I_o=430mA，P_o=2.1mW
II C：C_o=0.333μF，L_o=151.7μH
*II B：C_o=1.93μF，L_o=455.1μH
II A：C_o=8.1μF，L_o=1213.6μH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

Communication Input

1/1：GS8590-EX.3

Communication signals input isolated barriers, realize the bi-direction communication of CAN digital signals between hazardous area and safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

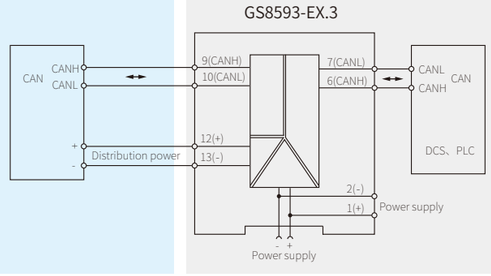
Supply Voltage：20~35V DC
Current Consumption：
⩽100mA(Supply voltage: 24V, Distribution power: 50mA)
⩽140mA(Supply voltage: 24V, Distribution power: 5V/100mA or 6V/90mA)
Safe-area：
Signal：CAN digital signal
Transmission delay：⩽10μs
Signal transmission rate：⩽250kbps
Drive Ability：up to 8 transceivers
Hazardous-area：
Signal：CAN digital signal
Distribution Power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA
Distribution Voltage Deviation：±10%
Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20°C~+60°C
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：With CAN communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10 terminals)：
U_o=6.6V，I_o=334mA，P_o=551mW
II C：C_o=22μF，L_o=0.25mH
*II B：C_o=500μF，L_o=0.75mH
II A：C_o=1000μF，L_o=2.0mH
(12、13 terminals)：
U_o=23.1V，I_o=187mA，P_o=1.08W
II C：C_o=0.1μF，L_o=0.8mH
*II B：C_o=1.0μF，L_o=2.4mH
II A：C_o=3.6μF，L_o=6.4mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

Vibration Transducer

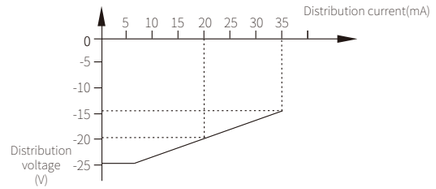
1/1：GS8557-EX

Vibration transducer input isolated barriers, provide isolated power supply for the transmitters in hazardous area and transfer the 1: 1 negative voltage signals, which vibration transducer outputs in hazardous area, to safe area. It can transmit AC and DC signals. This product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

Supply Voltage：20~35V DC
Current Consumption：
⩽65mA(Supply voltage: 24V, distribution current: 20mA)
Safe-area Output：
Signal：-20V~-0.5V
Load Resistance：RL⩾20kΩ
Hazardous-area Input：
Signal：-20V~-0.5V
Input impedance：10kΩ
Distribution Power：Open- circuit voltage＞-25V
Distribution Voltage：⩽-19.5V at 20mA



DC Transmissiton accuracy：＜±50mV
AC Transmissiton accuracy：

0Hz~1kHz	±1%
1kHz~10kHz	-2%~＋1%
10kHz~20kHz	-5%~＋1%

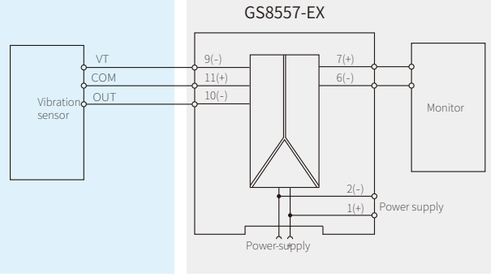
Phase response： Less than 1us is equals to

-0.72°	200Hz
-2°	600Hz
-3.6°	1kHz
-36°	10kHz
-72°	20kHz

Bandwidth(-3dB)：⩾50kHz
Temperature Drift：0.01%/°C(-20°C~+60°C)
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20°C~+60°C
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.100g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Vibration transducer、Negative voltage generator

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11 terminals)：
U_o=26.5V，I_o=93mA，P_o=687mW
II C：C_o=0.095μF，L_o=4.2mH
*II B：C_o=0.73μF，L_o=12.6mH
II A：C_o=2.45μF，L_o=33.6mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

Vibration Transducer

1/1：GS8558-EX

Vibration transducer input isolated barriers, transfer the 1: 1 voltage signals, which vibration transducer outputs in hazardous area, to safe area. It can transmit AC and DC signals. This product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×12.5mm

Specification

Supply Voltage：20~35V DC
Current Consumption：≤40mA
Safe-area Output：
Signal：-10V~+10V
Load Resistance：R_L≥20kΩ
Hazardous-area Input：
Signal：-10V~+10V
Internal impedance：10kΩ
DC Transmissiton accuracy：＜±0.2%F.S.
AC Transmissiton accuracy：

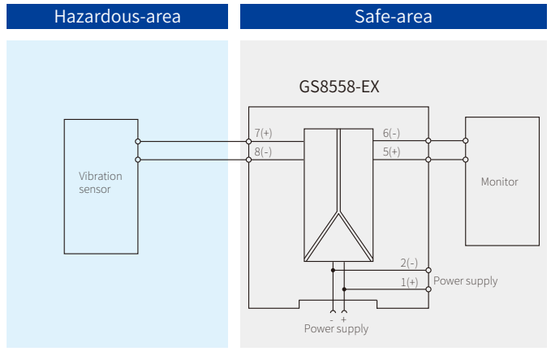
0Hz~600Hz	±0.2%F.S.
600Hz~10kHz	-1.5%~+0.2%F.S.

Phase response： Less than 1us is equals to

-0.72°	200Hz
-2°	600Hz
-3.6°	1kHz
-36°	10kHz

Bandwidth(-3dB)：≥40kHz
Temperature Drift：0.005%/℃(-20℃~+60℃)
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ≥2500V AC
Between power supply part and output part ≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ≥100MΩ
Between power supply part and output part ≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.100g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Vibration transducer

Connection



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8 terminals)：
U_O=1.2V，I_O=0.2mA，P_O=0.06mW
II C：C_O=100μF，L_O=100mH
*II B：C_O=300μF，L_O=300mH
II A：C_O=800μF，L_O=800mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

Frequency Converters

1/1：GS8555-EX

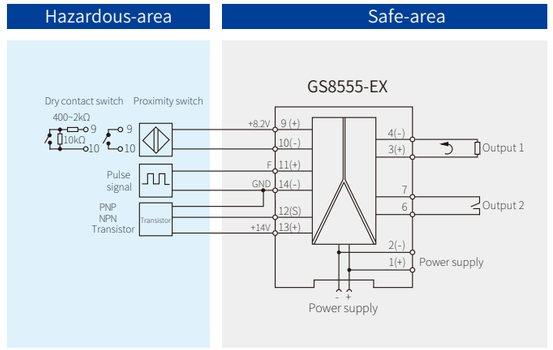
Frequency converter isolated barrier, change the digital input signal in the hazardous area into a proportional free adjustable 0/4~20mA(or 0/1~5V) analog output signal and function as a trip alarm.The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

Supply Voltage：20~35V DC
Current Consumption：≤60mA(Supply voltage: 24V, Output current: 20mA, Relay: energized)
Safe-area Output：
Current：0~20mA，4~20mA
Load resistance≤400Ω
Voltage：0~5V，1~5V
Load resistance≥330kΩ
(Note：Customers need to specify current output or voltage output when ordering)
Safe-area Relay Characteristics：
Response Time：≤20ms
Contact Loading：250V AC,2A or 30V DC,2A
Load Type：Resistive load
Hazardous-area Input：
Signal Type：
1)3-wire PNP/NPN Sensor Input：
Sensor Distribution：14V，current＜20mA
Input Frequency：0.1Hz~100kHz
2)Frequency Signal Input：
Input Frequency：0.1Hz~100kHz
Max. Input Voltage：30Vp-p
Min.Input voltage:∿2V,(2Hz~100KHz)
⎍2V,(0.1Hz~100KHz)
3)Dry Contact or Proximity Switch Input：
Distribution Voltage：≈8V，Short-circuit current：≈8mA
Input Frequency：0.1Hz~100kHz
Pulse Width：≥2μs
Temperature Drift：0.1%F.S.
Temperature Drift：0.01%F.S./℃
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ≥2500V AC
Between power supply part and output part ≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ≥100MΩ
Between power supply part and output part ≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Dry contact or DIN19234 standard NAMUR proximity switch input field devices (including the intrinsically safe type pressure switch、temperature switches、liquid level switches, etc.), voltage pulse, 3-wire PNP/NPN sensor output, incremental encoder.

Connection



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10 terminals)：
U_O=10.5V，I_O=14mA，P_O=37mW
II C：C_O=2.4μF，L_O=165mH
*II B：C_O=16.8μF，L_O=495mH
II A：C_O=75.0μF，L_O=1000mH
(11、14 terminals)：
U_O=14V，I_O=8mA，P_O=28mW
II C：C_O=0.73μF，L_O=150mH
*II B：C_O=4.60μF，L_O=450mH
II A：C_O=17.0μF，L_O=1000mH
(12、13、14 terminals)：
U_O=17V，I_O=330mA，P_O=1.4W
II C：C_O=0.375μF，L_O=0.22mH
*II B：C_O=2.20μF，L_O=0.66mH
II A：C_O=9.0μF，L_O=1.76mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

1/3：GS8355-EX

Frequency converter isolated barriers，change the digital input signal in the hazardous area into a proportional free adjustable 0/4~20mA(or 0/1~5V) analog output signal and function as a trip alarm. The user can set the instrument parameters through the 3 buttons on the panel, and the 5-digit 7-segment LCD displays the measured value and the instrument parameter setting value.The product needs an independent power supply and galvanic isolation among power supply, input and output.

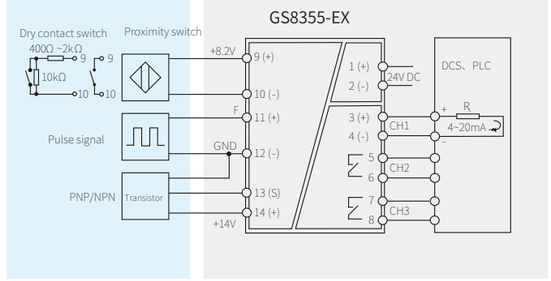
Dimensions：107.5mm×75.0mm×45mm

Specification

Supply Voltage：20~35V DC
Current Consumption：⩽110mA(Supply voltage: 24V, Output current: 20mA, Relay: energized)
Safe-area Output：
Current：0~20mA，4~20mA
Load resistance⩽400Ω
Voltage：0~5V，1~5V
Load resistance⩾330kΩ
(Note：Customers need to specify output signal when ordering)
Safe-area Relay Characteristics：
Response Time：⩽20ms
Contact Loading：250V AC,2A or 30V DC,2A
Load Type：Resistive load
Hazardous-area Input：
Signal Type：
1)3-wire PNP/NPN Sensor Input：
Sensor Distribution：14V，Current＜20mA
Input Frequency：0.1Hz~100kHz
2)Frequency Signal Input：
Input Frequency：0.1Hz~100kHz
Max. Input Voltage：30Vp-p
Min.Input voltage：∿2V,(2Hz~100KHz)
⎍2V,(0.1Hz~100KHz)
3)Dry Contact or Proximity Switch Input：
Distribution Voltage：≈8V，Short-circuit current：≈8mA
Input Frequency：0.1Hz~100kHz
Pulse Width：⩾2μs
Transmission Accuracy：0.1%F.S.
Temperature Drift：0.01%F.S./℃
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Weight：Approx.350g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Dry contact or DIN19234 standard NAMUR proximity switch input field devices (including the intrinsically safe type pressure switch、temperature switches、liquid level switches, etc.), voltage pulse, 3-wire PNP/NPN sensor output, incremental encoder.

Connection

Hazardous-area | Safe-area



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex iaD]
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10 terminals)：
U_0=10.5V，I_0=14mA，P_0=37mW
II C：C_0=2.4μF，L_0=165mH
*II B：C_0=16.8μF，L_0=495mH
II A：C_0=75.0μF，L_0=1000mH
(11、12 terminals)：
U_0=14V，I_0=8mA，P_0=28mW
II C：C_0=0.73μF，L_0=150mH
*II B：C_0=4.60μF，L_0=450mH
II A：C_0=17.0μF，L_0=1000mH
(13、14 terminals)：
U_0=17V，I_0=330mA，P_0=1.4W
II C：C_0=0.375μF，L_0=0.22mH
*II B：C_0=2.20μF，L_0=0.66mH
II A：C_0=9.0μF，L_0=1.76mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]

Bus Connector

	Suitable for 12.5mm Isolated Barrier	Suitable for 17.5mm Isolated Barrier
	Bus connector (CZBPS-C-12.5)	Bus connector (CZBPS-C-17.5)
		
Number of Positions	5	5
Pitch	3.81mm	3.81mm
Normal voltage Un	150V	150V
Normal current In	8A	8A
Rated Surge Voltage	2500V	2500V

Bus Connector Plug

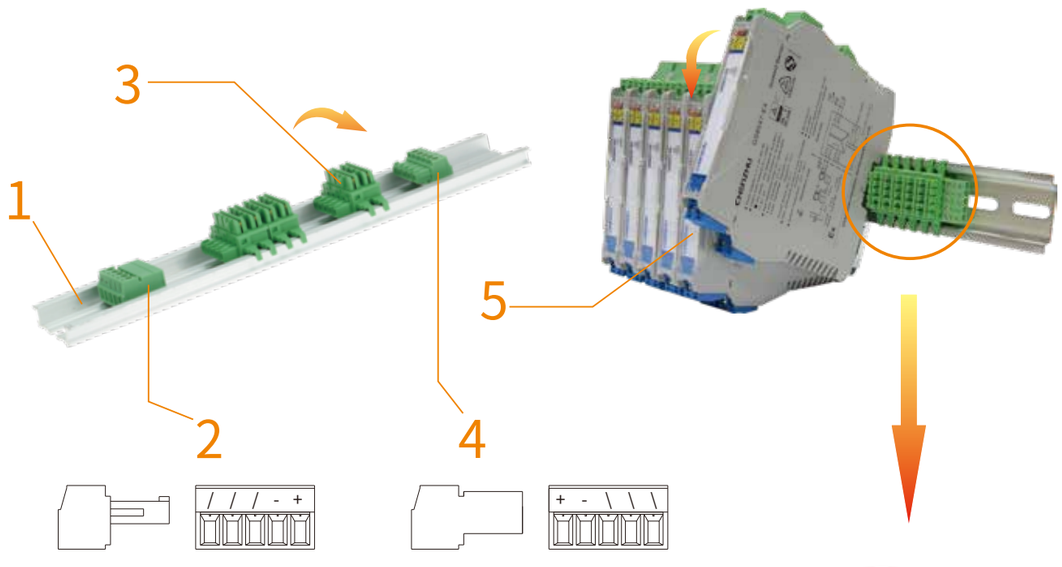
Suitable for GS8500-EX Range

	Male plug (CZBPS-F1)	Female plug (CZBPS-B1)
		
Number of Positions	5	5
Pitch	3.81mm	3.81mm
Normal Voltage Un	160V	160V
Normal Current In	8A	8A
Rated Surge Voltage	2500V	2500V
Conductor Cross Section	0.14~1.5mm²	0.14~1.5mm²
Conductor Cross Section with Ferrules	0.25~1.5mm²(without plastic sleeve) 0.25~0.5mm²(with plastic sleeve)	0.25~1.5mm²(without plastic sleeve) 0.25~0.5mm²(withplastic sleeve)

Configuration Accessory

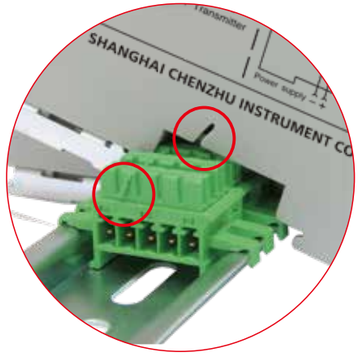
Configuration Tool: USBCOM-MINI	Software: Easyconfig
	

Bus Powered Description



Component：

1、DIN 35mm rail
2、Female plug
3、Bus connector
4、Male plug
5、Isolated barrier



Instruction for Use：

1. Each isolated barrier is matched with a bus connector. The connectors can be spliced together. It is recommended to connect 8-16 connectors in a group.
2. A male plug and a female plug are required at the head and tail of each group of connectors.
3. The wire used in the bus power supply module has a length of about 8 mm for the ferrules or exposed wire. The exposed wires or ferrules should be fixed by M2 screws in the plug.
4. Bus connector has a pluggable error-proof function. Pay attention to the direction of the error-proof slot on the barrier housing when installing the isolated barrier to the bus connector.

Power Transmitter

CZDL Series

Model	Name	Input	Output	Power supply mode	Page
CZDL-IAC-10A	AC current transmitter	0~1A/5A/10A AC	4~20mA/0~20mA/1~5V/0~5V/0~10V	90~260V AC 120V~300V DC	23
CZDL-IAC-10T	AC current transmitter(true RMS)	0~1A/5A/10A AC	4~20mA/0~20mA/1~5V/0~5V/0~10V	20~30V DC	23
CZDL-IDC-10	DC current transmitter	0~1A/2A/5A/10A DC	4~20mA/0~20mA/-20~20mA 1~5V/0~5V/0~10V/-10~10V	20~30V DC	24
CZDL-VAC-370T	AC voltage transmitter(true RMS)	0~(30~500V) AC	4~20mA/0~20mA/1~5V/0~5V/0~10V	20~30V DC	25
CZDL-VDC-400	DC voltage transmitter	0~(10~100V DC), 0~(100~1000V DC)	4~20mA/0~20mA/1~5V/0~5V/0~10V	20~30V DC	26
CZDL-1PH	single-phase power transmitter	0~1A/5A/10A AC	4~20mA/0~20mA/1~5V/0~5V/0~10V	20~30V DC	27

ESC Series

Model	Name	Input	Output	Power supply mode	Page
ESC-I-30	AC/DC current transmitter	0~20A/25A/30A AC/DC	4~20mA/0~20mA/0~5V/0~10V/±5V/±10V	20~30V DC	28
ESC-I-60	AC/DC current transmitter	0~40A/50A/60A AC/DC	4~20mA/0~20mA/0~5V/0~10V/±5V/±10V	20~30V DC	28

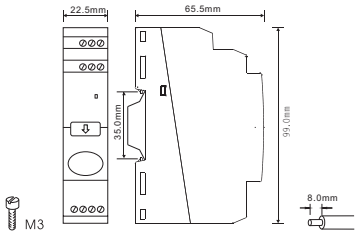
AC current Transmitter

Specification

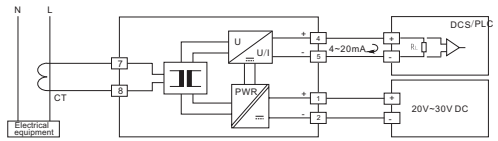
Compact shell structure
DIN35mm rail mounting
Variety current, voltage output selectable

	CZDL – IAC – 10T DC supply(True RMS)	CZDL–IAC–10A AC supply
Input		
Input current range(In)	0~1A/5A/10A AC	0~1A/5A/10A AC
Max. input current(Imax)	1.2×In(continues), 2×In(1minute)	1.2×In(continues), 2×In(1minute)
Frequency range	40Hz~1kHz	40Hz~60Hz
Output		
Current output	4~20mA/0~20mA	4~20mA/0~20mA
Max. output current	30mA	30mA
Load resistance	≤550Ω	≤550Ω
Voltage output	0~5V/1~5V/0~10V	0~5V/1~5V/0~10V
Max. output voltage	15V	15V
Load resistance	≥300kΩ	≥100kΩ
General parameters		
Supply voltage	20V~30V DC	120V~300V DC/90V~260V AC
Rated power consumption	1W(40mA, 24V)	3VA(1.2W)
Response time	Reach 90% of final value in 330ms	Reach 90% of final value in 330ms
Transfer accuracy	0.5%F.S.	0.5%F.S.
Temperature drift	0.02%F.S./℃	0.02%F.S./℃
Operating temperature	−20℃~+60℃	−20℃~+60℃
Storage temperature	−40℃~+80℃	−40℃~+80℃
Relative humidity	15%~90%	15%~90%
Pollution degree	3	3
EMC	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Dimensions	99.0mm×65.5mm×22.5mm	99.0mm×65.5mm×22.5mm
Safety parameters		
Insulation performance test standards	GB4793.1 (IEC 61010-1)	GB4793.1 (IEC 61010-1)
Dielectric strength (input~power, output)	4000V AC, 1min	4000V AC, 1min
Impulse voltage	4000V	4000V
Insulation resistance	100MΩ	100MΩ
IP degree (Comply with IEC60529)	IP20	IP20

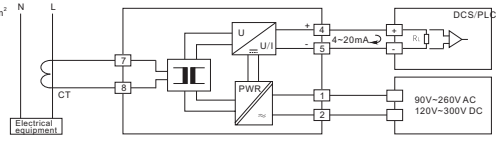
Dimensions



Appilcation



CZDL – IAC – 10T



CZDL – IAC – 10A

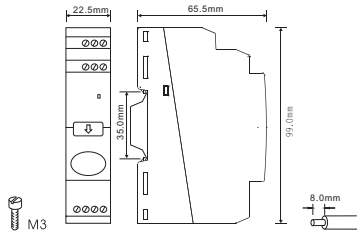
DC current Transmitter

Specification

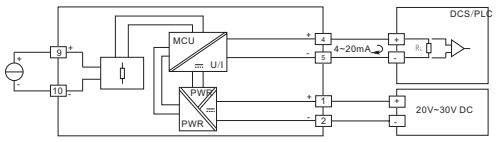
Compact shell structure
DIN35mm rail mounting
Variety current, voltage output selectable

	CZDL – IDC – 10 DC supply
Input	
Input current range(In)	0~1A/2A/5A/10A DC
Max. input current(Imax)	1.2×In(continues), 2×In(1minute)
Current input impedance	5mΩ
Output	
Current output	0~20mA/4~20mA/−20~20mA
Max. output current	24mA
Load resistance	≤550Ω
Voltage output	0~10V/0~5V/1~5V/-10~10V
Max. output voltage	12V
Load resistance	≥300kΩ
General parameters	
Supply voltage	20V~30V DC
Rated power consumption	≤1W
Response time	Reach 90% of final value in 200ms
Transfer accuracy	0.5%F.S.
Temperature drift	0.02%F.S./℃
Operating temperature	−20℃~+60℃
Storage temperature	−40℃~+80℃
Relative humidity	15%~90%
Pollution degree	3
EMC	GB/T 18268(IEC 61326-1)
Dimensions	99.0mm×65.5mm×22.5mm
Safety parameters	
Insulation performance test standards	GB4793.1 (IEC 61010-1)
Dielectric strength (input~power, output)	2500V AC, 1min
Impulse voltage	4000V
Insulation resistance	100MΩ
IP degree (Comply with IEC60529)	IP20

Dimensions



Appilcation



CZDL – IDC – 10

AC voltage Transmitter

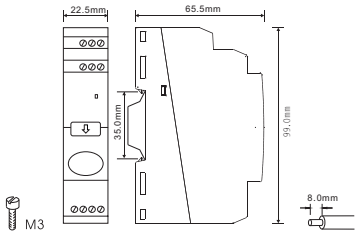
Specification

Compact shell structure
DIN35mm rail mounting
Variety current, voltage output selectable

CZDL – VAC – 370T
DC supply(True RMS)

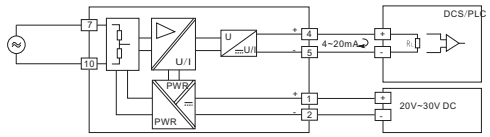
Input	
Input voltage range(Un)	0~(30~500V)AC
Max. input voltage(Umax)	1.2×Un(continues), 2×Un(1minute)
Voltage input impedance	800kΩ
Frequency range	40Hz~1kHz
Output	
Current output	4~20mA/0~20mA
Max. output current	25mA
Load resistance	≤550Ω
Voltage output	1~5V/0~5V/0~10V
Max. output voltage	12.5V
Load resistance	≥100kΩ
General parameters	
Supply voltage	20V~30V DC
Rated power consumption	≤1W
Response time	Reach 90% of final value in 330ms
Transfer accuracy	0.5%F.S.
Temperature drift	0.02%F.S./℃
Operating temperature	−20℃~+60℃
Storage temperature	−40℃~+80℃
Relative humidity	15%~90%
Pollution degree	3
EMC	GB/T 18268(IEC 61326-1)
Dimensions	99.0mm×65.5mm×22.5mm
Safety parameters	
Insulation performance test standards	GB4793.1 (IEC 61010-1)
Dielectric strength (input~power, output)	2500V AC, 1min
Impulse voltage	4000V
Insulation resistance	100MΩ
IP degree (Comply with IEC60529)	IP20

Dimensions



Conductor cross section: 0.5~2.5mm²

Appilcation



CZDL – VAC – 370T

DC voltage Transmitter

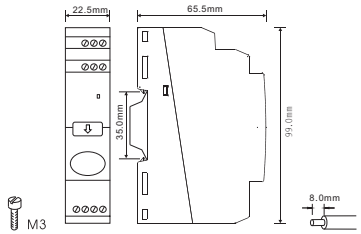
Specification

Compact shell structure
DIN35mm rail mounting
Variety current, voltage output selectable

CZDL – VDC – 400
DC supply

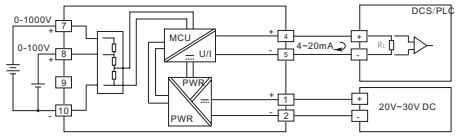
Input	
Input voltage range(Un)	0~(10~100V DC), 0~(100~1000V DC)
Max. input voltage(Umax)	1.2×Un(continues), 2×Un(1minute)
Voltage input impedance	≥200kΩ(10V≤input≤100V) ≥2MΩ(100V<input≤1000V)
Output	
Current output	0~20mA/4~20mA
Max. output current	24mA
Load resistance	≤550Ω
Voltage output	0~10V/0~5V/1~5V
Max. output voltage	12V
Load resistance	≥300kΩ
General parameters	
Supply voltage	20V~30V DC
Rated power consumption	≤1W
Response time	Reach 90% of final value in 200ms
Transfer accuracy	0.1%F.S.(0~100V); 0.2%F.S.(0~1000V)
Temperature drift	0.01%F.S./℃
Operating temperature	−20℃~+60℃
Storage temperature	−40℃~+80℃
Relative humidity	15%~90%
Pollution degree	3
EMC	GB/T 18268(IEC 61326-1)
Dimensions	99.0mm×65.5mm×22.5mm
Safety parameters	
Insulation performance test standards	GB4793.1 (IEC 61010-1)
Dielectric strength (input~power, output)	2500V AC, 1min
Impulse voltage	4000V
Insulation resistance	100MΩ
IP degree (Comply with IEC60529)	IP20

Dimensions



Conductor cross section: 0.5~2.5mm²

Appilcation



CZDL–VDC–400

Single–phase power transmitter

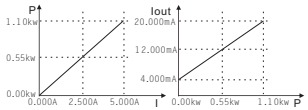
Specification

Independent power supply, realize measurement of active power, reactive power, power factor and current
DIN35mm rail mounting
Variety current, voltage output selectable

	CZDL – 1PH
	Single–phase power
Input	
Input current range(In)	0~1A/5A/10A AC
Max. input current(Imax)	1.2×In(continues), 2×In(1minute)
Rated voltage(Un)	100V/220V/380V AC
Max. input voltage(Umax)	1.2×Un(continues), 2×Un(1minute)
Voltage input impedance	＞800kΩ
Frequency range	45Hz~65Hz
Current input impedance	＜50mΩ
Output	
Current output	0~20mA/4~20mA
Max. output current	25mA
Load resistance	≤550Ω
Voltage output	0~10V/0~5V/1~5V
Max. output voltage	12.5V
Load resistance	≥300kΩ
General parameters	
Supply voltage(Ue)	20~30V DC
Rated power consumption	＜50mA
Power factor PF-cos ϕ	0.000≤PF≤1.000
Response time	Reach 90% of final value in 330ms
Transfer accuracy	0.5%F.S.(sinusoidal 50Hz, 23℃)
Temperature drift	0.02%F.S./℃
Operating temperature	-20℃~+60℃
Storage temperature	-40℃~+80℃
Relative humidity	10%~90%
Pollution degree	3
EMC	GB/T 18268(IEC 61326-1)
Dimensions(L×H×W)	99.0mm×65.5mm×22.5mm
Safety parameters	
Insulation performance test standards	GB4793.1 (IEC 61010-1)
Dielectric strength (input~power, output)	Input~Output, power 2500V AC, 50Hz, 1min Power~Output 1500V AC, 50Hz, 1min
Impulse voltage	4000V
Insulation resistance	100MΩ
IP degree (Comply with IEC60529)	IP20

Output curve(active power)

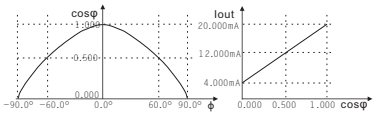
1/Active power tranfer into 4~20mA, rated voltage 220V, when ϕ=0° (resistive load), as following curve:



Active power output curve 4~20mA output curve

Output curve(power factor)

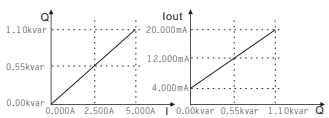
3/Power factor tranfer into 4~20mA, according to PF=cosϕ(ϕ is current leads voltage phase angle), when −90° ≤ ϕ ≤90° , as following curve:



Power factor output curve 4~20mA output curve

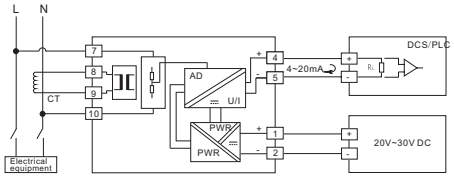
Output curve(reactive power)

2/Reactive power tranfer into 4~20mA, rated voltage 220V, when ϕ=90° /−90° (capacitive/inductive load), as following curve:



Reactive power output curve 4~20mA output curve

Appilcation



CZDL–1PH

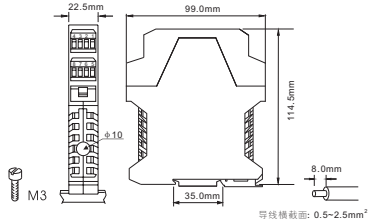
AC/DC current transmitter

Specification

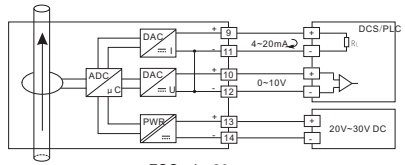
Variety voltage, current output selectable
Output signal can be characterized by direction of DC current
Measurement range is selectable

	ESC – I – 30	ESC – I – 60
	Input current access through perforation	Input current access through perforation
Input		
Input current range(In)	0A~20A/25A/30A AC/DC	0A~40A/50A/60A AC/DC
Max. input current(Imax)	Depend on current carrying capacity of wire	Depend on current carrying capacity of wire
Frequency range	15Hz~400Hz	15Hz~400Hz
Output		
Current output	4~20mA/0~20mA	4~20mA/0~20mA
Max. output current	22mA	22mA
Load resistance	≤550Ω	≤550Ω
Voltage output	0~5V/0~10V/±5V/±10V	0~5V/0~10V/±5V/±10V
Max. output voltage	±12V	±12V
Load resistance	≥10kΩ	≥10kΩ
General parameters		
Supply voltage	20V~30V DC	20V~30V DC
Rated power consumption	1.2W(50mA, 24V)	1.2W(50mA, 24V)
Response time	Reach 90% of final value in 330ms	Reach 90% of final value in 330ms
Transfer accuracy	0.5%F.S.(sinusoidal 50Hz/True RMS/23℃)	0.5%F.S.(sinusoidal 50Hz/True RMS/23℃)
Temperature drift	0.03%F.S./℃	0.03%F.S./℃
Operating temperature	−20℃~+60℃	−20℃~+60℃
Storage temperature	−40℃~+80℃	−40℃~+80℃
Relative humidity	15%~90%	15%~90%
Pollution degree	3	3
EMC	GB/T 18268 (IEC 61326-1)	GB/T 18268 (IEC 61326-1)
Dimensions	114.5mm×99.0mm×22.5mm	114.5mm×99.0mm×22.5mm
Safety parameters		
Insulation performance test standards	GB4793.1 (IEC 61010-1)	GB4793.1 (IEC 61010-1)
Dielectric strength (input~power, output)	4000V AC, 1min	4000V AC, 1min
Impulse voltage	4000V	4000V
Insulation resistance	≥100MΩ; 500V DC	≥100MΩ; 500V DC
IP degree (Comply with IEC60529)	IP20	IP20

Dimensions



Appilcation



ESC – I – 30
ESC – I – 60

【Alibaba】

CZYB-E13.02/2022.02

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CHENZHU

Signal Conditioner

Catalogue (2022)

5 Year WARRANTY

https://en.chenzhu-inst.com

CHENZHU COMPANY OVERVIEW

CHENZHU' s headquarter is located at Shanghai, China, with an area of 8500m².

Shanghai Chenzhu Instrument Co,Ltd. was founded in April, 2002, who was originated from Shanghai Institute of Process Automation Instrumentation. CHENZHU is a professional company with core expertise of R&D, manufacturing and sale service of high quality safety products, such as isolated barriers, signal conditioners, surge protective devices, safety relays etc.

Experience	Foundation	Sales volume	Applications
24+	2002	5,000,000	5000+
Years	Since	Pcs	Projects

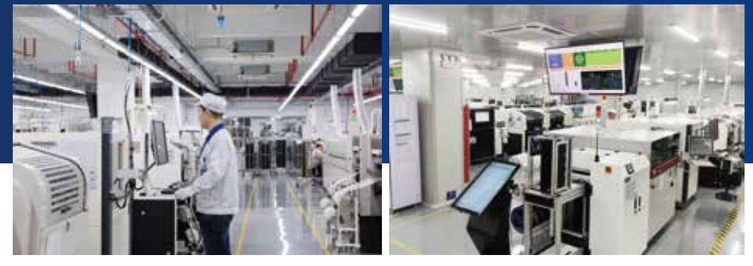
R&D Strength

Based on ISO/IEC/GB standards, CHENZHU has established the professional laboratory which is applied up to 70 test capabilities and verification items in CHENZHU's safety electrical products' development process.

R&D Team	R&D Investment	Innovation	Testing Facility
28%	11%	100+	80+
Work Force	of Sale Revenue	Patents	Capabilities

Smart Factory

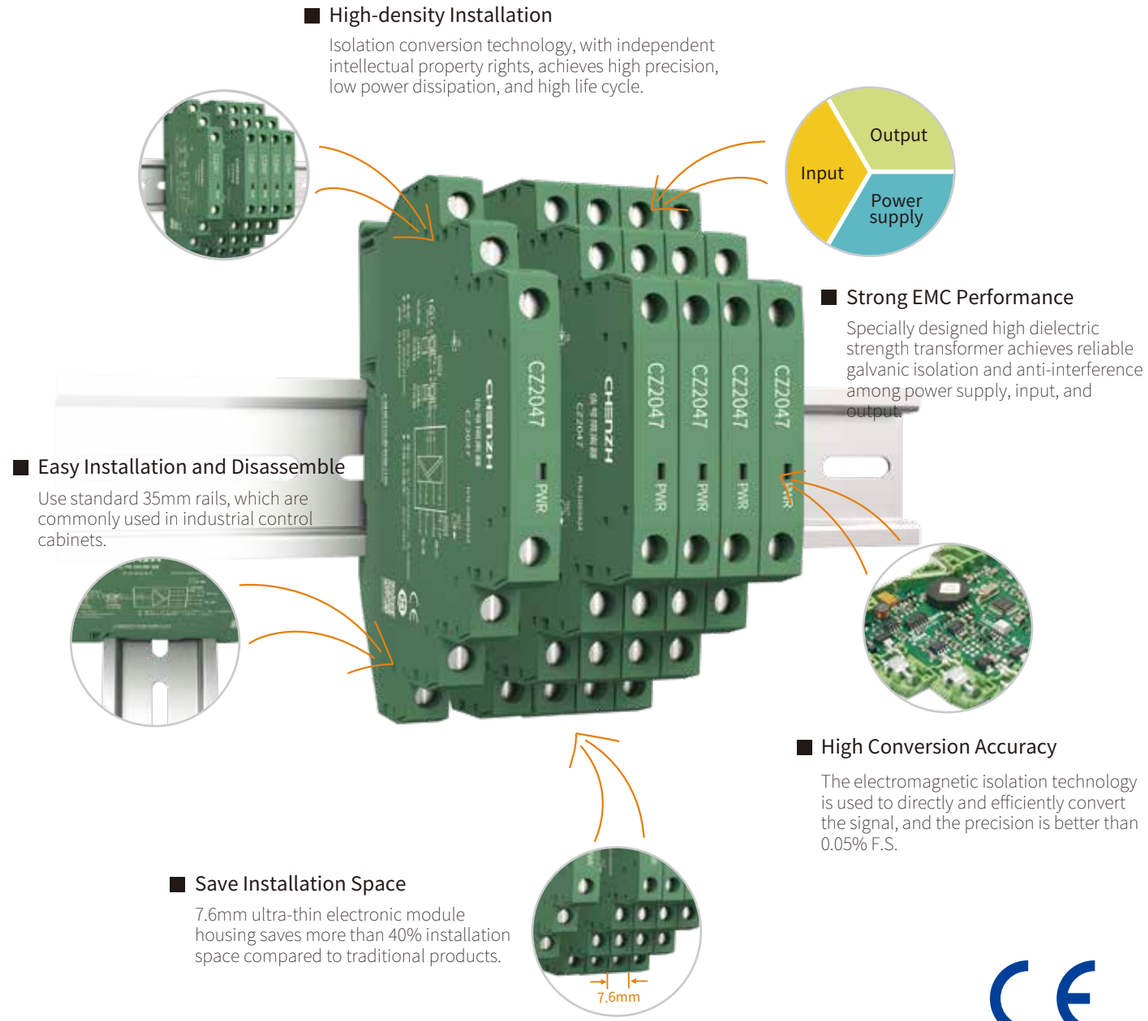
CHENZHU factory is continually driven by lean management and flexible production. By our strict quality examination, CHENZHU ensures the production meets the design specification and satisfies our customers.



Factory	Max Cap.	Lean Production
3500㎡	2,000,000pcs	10+
In total	Year	Years' experience

CZ2000 Range

CZ2000 range signal conditioners use high-efficiency electromagnetic isolation technology to achieve reliable galvanic isolation among power supply，input，and output, which effectively solves the problem of field interference in industrial automation control systems. This ensures a stable and reliable operation of the system. By using the advanced low power dissipation technology, it achieves low-power dissipation, low-heat, high-precision signal conversion under 7.6mm ultra-thin housing, ensuring long-term reliability in the high-density installation, saving the cabinet installation space.



■ **High-density Installation**

Isolation conversion technology, with independent intellectual property rights, achieves high precision, low power dissipation, and high life cycle.

■ **Strong EMC Performance**

Specially designed high dielectric strength transformer achieves reliable galvanic isolation and anti-interference among power supply, input, and output.

■ **Easy Installation and Disassemble**

Use standard 35mm rails, which are commonly used in industrial control cabinets.

■ **High Conversion Accuracy**

The electromagnetic isolation technology is used to directly and efficiently convert the signal, and the precision is better than 0.05% F.S.

■ **Save Installation Space**

7.6mm ultra-thin electronic module housing saves more than 40% installation space compared to traditional products.

Selection Guide

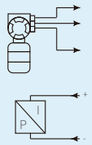
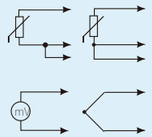
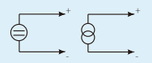
Field Instrument	Application	Module No.	Channels	Input	Output	Features	Page
	Analog Input / Analog Output	CZ2031	1/1	4~20mA (HART)	4~20mA (HART)	Loop powered	6
		CZ2047	1/1	0/4~20mA	0/4~20mA 0/1~5V	Independent powered	7
		CZ2067	1/1				
	Temperature Converters	CZ2071	1/1	RTD	0~20mA，4~20mA 0~5V，1~5V	Independent powered Configurable via software	8
		CZ2171	1/1	TC mV			
		CZ2271	1/1	RTD TC			
		CZ2077	1/1	RTD	4~20mA	Loop powered Configurable via software	9
		CZ2177	1/1	TC mV			
		CZ2277	1/1	RTD TC			
	Voltage/Current Converters	CZ2083	1/1	0~20mA，4~20mA 0~5V，1~5V 0~10V，2~10V	0~20mA，4~20mA 0~5V，1~5V 0~10V，2~10V	Independent powered	10
		CZ2083.A	1/1			Independent powered Configurable via DIP switches	

Table 1 Input Signal Type and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200°C~+400°C	50°C	1°C / 0.2%
	E	-200°C~+900°C	50°C	1°C / 0.2%
	J	-200°C~+1200°C	50°C	1°C / 0.2%
	K	-200°C~+1372°C	50°C	1°C / 0.2%
	N	-200°C~+1300°C	50°C	1°C / 0.2%
	R	-40°C~+1768°C	500°C	3°C / 0.2%
	S	-40°C~+1768°C	500°C	3°C / 0.2%
	B	+320°C~+1820°C	500°C	3°C / 0.2%
RTD	Pt100	-200°C~+850°C	20°C	0.4°C / 0.2%
	Cu50	-50°C~+150°C	20°C	0.4°C / 0.2%
	Cu100	-50°C~+150°C	20°C	0.4°C / 0.2%
mV		-100mV~+100mV	10mV	40μV / 0.2%

Note：
1. The "%" of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.
2. Allow a maximum wire resistance of 50Ω/line for RTD input(3-wire).
3. When the thermocouple is input, the conversion accuracy does not include the CJC.
For every 100Ω increase in the compensation wire, the cold junction error increases by 0.2°C.
4. When the Type B thermocouple is input, the lower limit of temperature range is required to be greater than 680 °C to ensure the accuracy index.
5. mV signal input needs to be customized.

Configuration Accessory

Configuration Tool: USBCOM-MINI

Software: Easyconfig

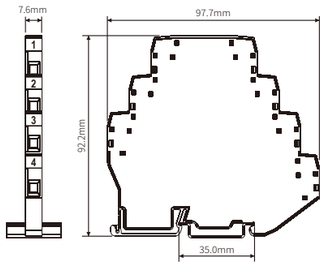
Analog Input /Analog Output (Loop Powered)

Features

1-channel signal conditioner
24V DC loop powered
Suitable for analog input and analog output
Support HART communication
Ultra-slim housing width 7.6mm

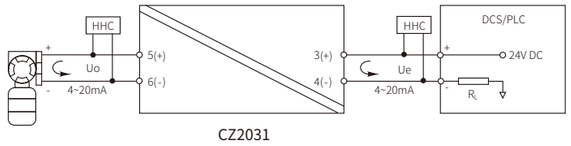
	CZ2031 Application 1: Analog Input	CZ2031 Application 2: Analog Output
Input		
Input Current	4~20mA(HART)	4~20mA(HART)
Distribution Voltage	$U_o \geqslant U_e - R_L \times 0.02$-6	
Loop Current	⩽25mA	⩽25mA
Output		
Output Current	4~20mA(HART)	4~20mA(HART)
Load Resistance	$R_L \geqslant 250\Omega$(HART)	$R_L \leqslant (U_t - 6)/\ 0.02$
Loop Current	⩽25mA	⩽25mA
General Parameters		
Loop Supply Voltage(U_e)	20~30V DC	20~30V DC
Power Reverse Protection	Support	Support
Transmission Accuracy	0.4%F.S.	0.3%F.S.
Temperature Drift	0.03%F.S./°C	0.03%F.S./°C
Response Time (0~90%)	⩽0.5 ms	⩽0.5 ms
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C	-20°C~+60°C
Suitable Field Apparatus	2-wire transmitter	2-wire Valve positioner， Electrical converter

Dimensions



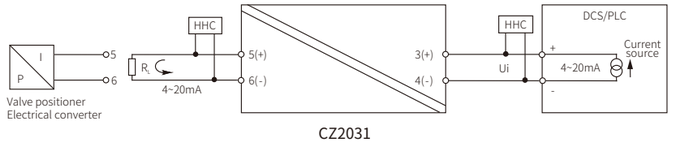
Connection

Application 1: Analog input



CZ2031

Application 2: Analog output



CZ2031

Note: HHC (HART Hand Held Communicator) cannot be used simultaneously on the input side and output side

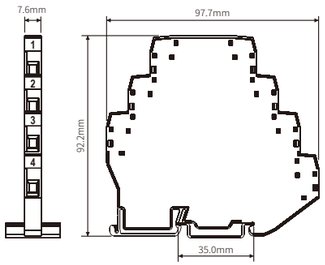
Analog Input / Analog Output

Features

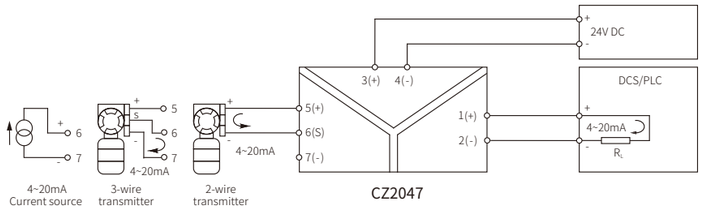
1-channel signal conditoner
24V DC supply
0/4~20mA current input/output
Ultra-slim housing width 7.6mm

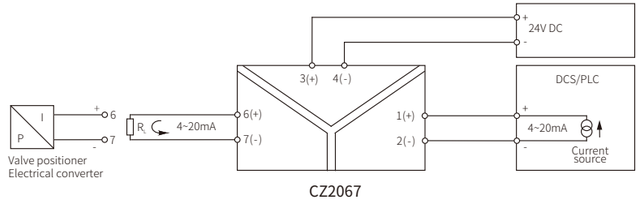
	CZ2047 Analog Input	CZ2067 Analog Output
Input		
Input Current	0/4~20mA	0/4~20mA
Distribution Voltage	⩾19V	
Input Voltage Drop		⩽7V@20mA
Max. Input Current	＜50mA	＜50mA
Output		
Output Current/Load Resistance	0(4)~20mA / R_L⩽550Ω	0(4)~20mA / R_L⩽800Ω
Max. Output Current	＜50mA	＜50mA
Output Voltage/Load Resistance	0(1)~5V / R_L⩾330kΩ	0(1)~5V / R_L⩾330kΩ
General Parameters		
Supply Voltage	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support
Current Consumption(Supply voltage:24V)	⩽65mA	⩽40mA
Transmission Accuracy	0.1%F.S.(Typical：0.05%F.S.)	0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift	0.005%F.S./℃	0.005%F.S./℃
Response Time (0~90%)	⩽0.5 ms	⩽0.5ms
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire transmitter，current source	2-wire valve positioner，electrical converter

Dimensions



Connection





RTD / TC Input

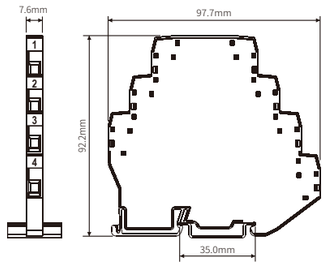
Features

1-channel signal conditioner
24V DC supply
Line fault detection(LFD)
Configurable by software
Ultra-slim housing width 7.6mm

	CZ2071 RTD Input	CZ2171 TC Input	CZ2271 RTD/TC Input
Input			
Input Signal	Pt100，Cu100，Cu50	T、E、J、K、N、R、S、B (Customized mV signal)	Pt100，Cu100，Cu50 T、E、J、K、N、R、S、B
Internal CJC Temperature Range		-20°C~+60°C	-20°C~+60°C
CJC Precision		±1°C	±1°C
Output			
Output Current/Load Resistance	0~20mA，4~20mA / R_L⩽300Ω	0~20mA，4~20mA / R_L⩽300Ω	0~20mA，4~20mA / R_L⩽300Ω
Output Voltage/Load Resistance	0~5V，1~5V / R_L⩾2kΩ	0~5V，1~5V / R_L⩾2kΩ	0~5V，1~5V / R_L⩾2kΩ
Fault Current of Overrange/Underrange	I_H≈20.8mA/I_L≈3.8mA	I_H≈20.8mA/I_L≈3.8mA	I_H≈20.8mA/I_L≈3.8mA
Fault Current of Line Break	I≈20.8mA	I≈20.8mA	I≈20.8mA
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	⩽45mA	⩽45mA	⩽45mA
Conversion Accuracy	0.2%	0.2%	0.2%
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	⩽1s	⩽1s	⩽1s
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C
Suitable Field Apparatus	2-or 3-wire RTD sensor	TC sensor，mV signal	2-or 3-wire RTD，TC sensor

Note: Fault current of line break <4mA or other special requirements, need to be customized.

Dimensions



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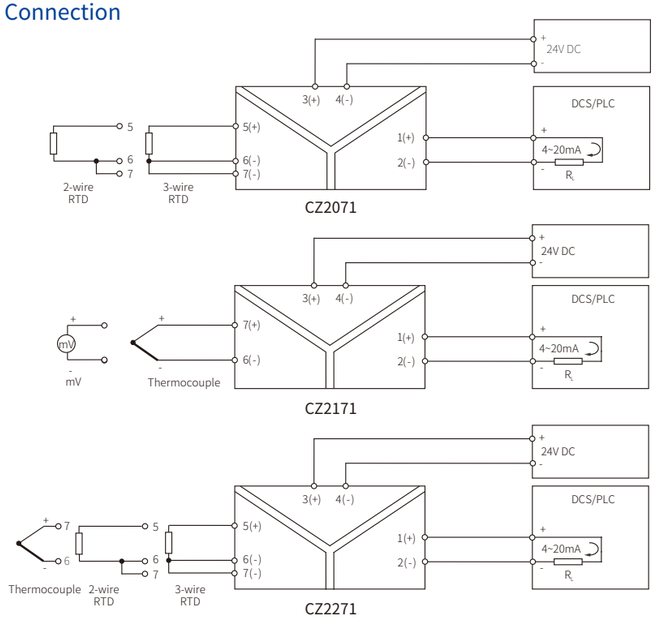


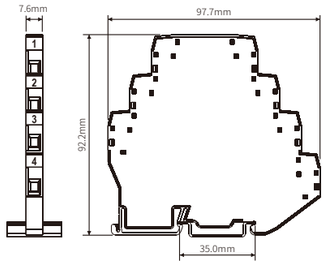
RTD / TC Input (Loop Powered)

Features

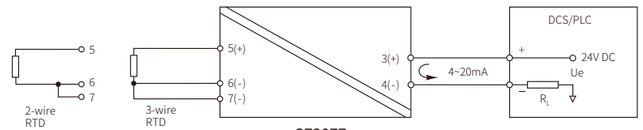
1-channel signal conditoner
24V DC loop powered
Line fault detection(LFD)
Configurable by software
Ultra-slim housing width 7.6mm

	CZ2077 RTD Input	CZ2177 TC Input	CZ2277 RTD/TC Input
Input			
Signal type	Pt100，Cu100，Cu50	T、E、J、K、N、R、S、B (Customized mV signal)	Pt100，Cu100，Cu50 T、E、J、K、N、R、S、B
Internal CJC Temperature Range		-20°C~+60°C	-20°C~+60°C
CJC Precision		±1°C	±1°C
Output			
Output Current	4~20mA	4~20mA	4~20mA
Load Resistance	$R_L \leqslant (U_e-9)/0.021\Omega$	$R_L \leqslant (U_e-9)/0.021\Omega$	$R_L \leqslant (U_e-9)/0.021\Omega$
Fault Current of Overrange/Underrange	$I_H \approx 20.8mA / I_L \approx 3.8mA$	$I_H \approx 20.8mA / I_L \approx 3.8mA$	$I_H \approx 20.8mA / I_L \approx 3.8mA$
Fault Current of Line Break	I≈20.8mA	I≈20.8mA	I≈20.8mA
General Parameters			
Loop Supply Voltage(U_e)	9~30V DC	9~30V DC	9~30V DC
Power Reverse Protection	Support	Support	Support
Power Dissipation	⩽0.5W	⩽0.5W	⩽0.5W
Conversion Accuracy	0.2%	0.2%	0.2%
Temperature Drift	0.01%F.S./°C	0.01%F.S./°C	0.01%F.S./°C
Response Time (0~90%)	⩽1s	⩽1s	⩽1s
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C
Suitable Field Apparatus	2-or 3-wire RTD sensor	TC sensor，mV signal	RTD，TC sensor

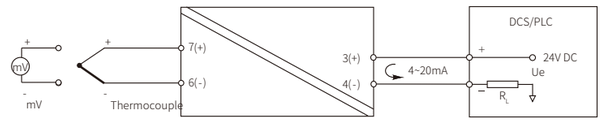
Dimensions



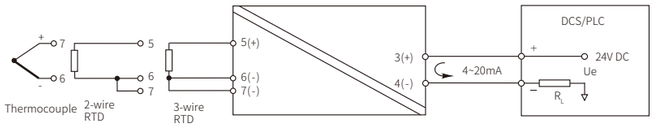
Connection



CZ2077



CZ2177



CZ2277

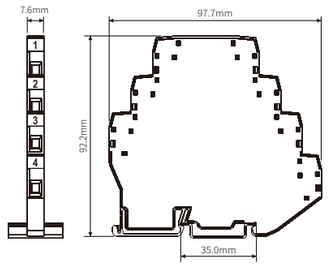
Voltage / Current Converters

Features

1-chanel signal conditioner
24V DC supply
Configurable by DIP switches (CZ2083.A)
Ultra-slim housing width 7.6mm

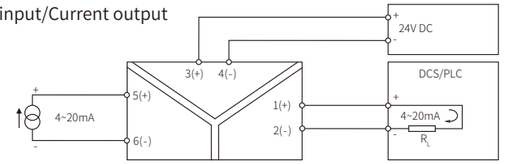
	CZ2083	CZ2083.A DIP configurable
Input		
Configuration	Not support	Via DIP switches
Input Signal	0~20mA，4~20mA 0~5V，1~5V，0~10V，2~10V	0~20mA，4~20mA 0~5V，1~5V，0~10V，2~10V
Output		
Configuration	Not support	Via DIP switches
Output Signal	0~20mA，4~20mA 0~5V，1~5V，0~10V，2~10V	0~20mA，4~20mA 0~5V，1~5V，0~10V，2~10V
General Parameters		
Supply Voltage	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support
Current Consumption(Supply voltage:24V)	⩽45mA	⩽45mA
Transmission Accuracy	0.1%F.S.	0.1%F.S.
Temperature Drift	0.01%F.S./°C	0.01%F.S./°C
Response Time (0~90%)	⩽100ms	⩽100ms
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ	⩾100MΩ
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C	-20°C~+60°C
Suitable Field Apparatus	current source，voltage source	current source，voltage source

Dimensions

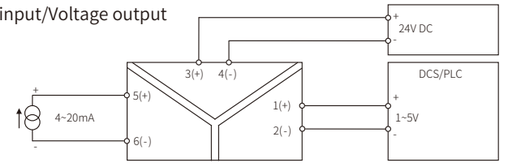


Connection

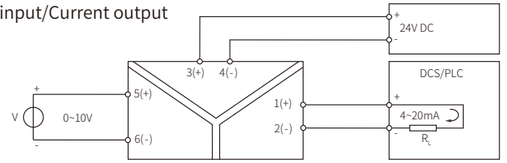
Application 1：Current input/Current output



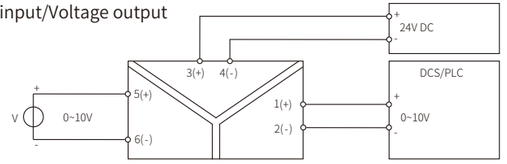
Application 2：Current input/Voltage output



Application 3：Voltage input/Current output

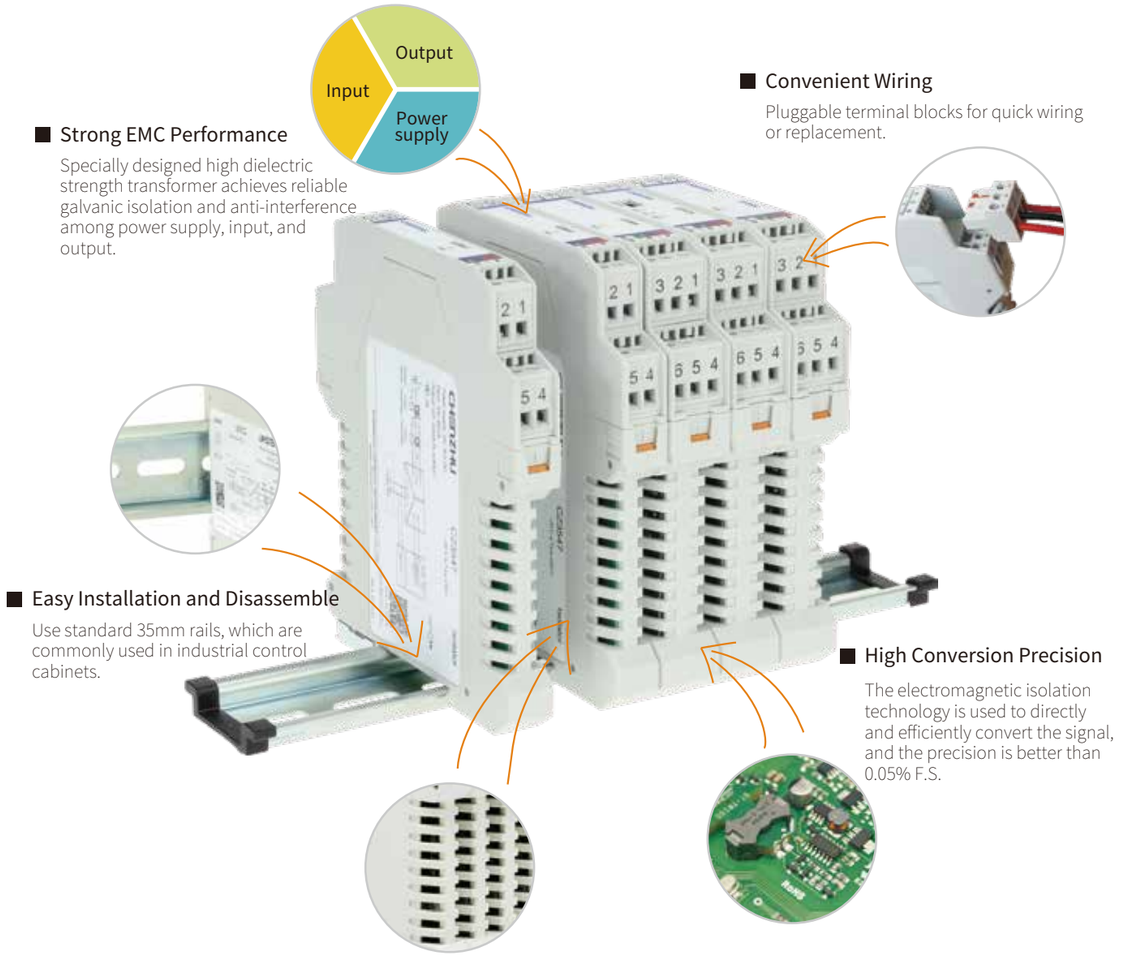


Application 4：Voltage input/Voltage output



CZ3000 Range

CZ3000 range signal conditioners are electrical devices, which are connected between the industrial field instrument and the control room. They effectively solve the field interference of industrial automation control systems and ensure stable and reliable operation of the system through reliable galvanic isolation among the power supply, input, and output. The product model is rich, and basically covers various signal isolation, conversion, distribution and other functional requirements in the automatic control system.



■ **Strong EMC Performance**

Specially designed high dielectric strength transformer achieves reliable galvanic isolation and anti-interference among power supply, input, and output.

■ **Convenient Wiring**

Pluggable terminal blocks for quick wiring or replacement.

■ **Easy Installation and Disassemble**

Use standard 35mm rails, which are commonly used in industrial control cabinets.

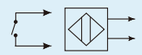
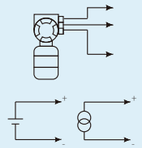
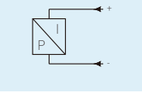
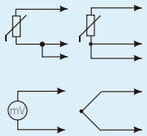
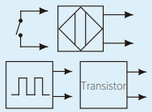
■ **High Conversion Precision**

The electromagnetic isolation technology is used to directly and efficiently convert the signal, and the precision is better than 0.05% F.S.

■ **Good Heat Dissipation**

Ventilation grid design for good heat dissipation.

CE

Field Instrument	Application	Module No.	Channels	Input	Output	Features	Page
	Digital Input	CZ3011.C	1/1	Dry-contact switch	Relay contact output	Independent powered	14
		CZ3012.S	2/2	Proximity switch input		Configurable via DIP switches	
	Analog Input	CZ3031	1/1	4~20mA (HART)	4~20mA (HART)	Loop powered	15
		CZ3032	2/2				
		CZ3047	1/1	0/4~20mA	0/4~20mA	Independent powered	16
		CZ3035	1/2		0/1~5V	Current/voltage source output	
		CZ3036	2/2				
		CZ3047T	1/1		0/4~20mA	Independent powered	17
		CZ3035T	1/2			Sink mode output	
		CZ3036T	2/2				
		CZ3065T	1/1	4~20mA	4~20mA	Loop powered	18
		CZ3066T	2/2				
	Analog Output	CZ3067	1/1	0/4~20mA	0/4~20mA	Independent powered	19
		CZ3038	2/2		0/1~5V		
	Temperature Converters	CZ3071	1/1	RTD	0~20mA，4~20mA	Independent powered	20
		CZ3076	1/2		0~5V，1~5V	Configurable via software	
		CZ3079	2/2				
		CZ3072	1/1	TC			21
		CZ3074	1/2	mV			
		CZ3079.TC	2/2				
		CZ3077	1/1	RTD	4~20mA	Loop powered	22
		CZ3078	2/2			Configurable via software	
		CZ3177	1/1	TC			
		CZ3178	2/2	mV			
		CZ3277	1/1	RTD，TC			
		CZ3278	2/2				
		CZ3075	1/1	0~5kΩ	0~20mA，4~20mA	Independent powered	23
		CZ3076.R	1/2	0~10kΩ	0~5V，1~5V	Configurable via software	
		CZ3079.R	2/2				
	Pulse Input	CZ3051	1/1	Voltage pulse 0~10kHz	Voltage pulse, transistor 0~10kHz	Indepentent powered	24
		CZ3052	2/2				
		CZ3053	1/2				
	Frequency Converters	CZ3055	1/2	Dry contact Proximity switch Voltage pulse, transistor 0.1~100kHz	0~20mA，4~20mA 0~5V，1~5V SPST relay contact	Independent powered Configurable via software	25
		CZ3355	1/3			Independent powered Configurable via membrane keypad	

Selection Guide

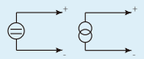
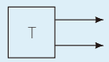
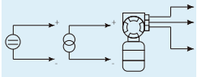
Field Instrument	Application	Module No.	Channels	Input	Output	Features	Page
	Vibration Tansducer Input	CZ3058	1/1	Vibration transducer -10V~10V	-10V~10V	Independent powered	26
	Voltage Input	CZ3083 CZ3088 CZ3089	1/1 2/2 1/2	0~5V，1~5V 0~10V	0~20mA，4~20mA 0~5V，1~5V 0~10V	Independent powered	27
	Communication Input	CZ3093	1/1	RS-485 half duplex	RS-485 half duplex	Independent powered	28
	Signal Spliter	CZ3383.11 CZ3383.13 CZ3383	1/1 1/3 1/4	0~20mA，4~20mA 0~5V，1~5V 0~10V，2~10V	0~20mA，4~20mA 0~5V，1~5V 0~10V，2~10V	Independent powered	29 30

Table 2 Input Signal Type and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200°C~+400°C	50°C	0.5°C/0.1%
	E	-200°C~+900°C	50°C	0.5°C/0.1%
	J	-200°C~+1200°C	50°C	0.5°C/0.1%
	K	-200°C~+1372°C	50°C	0.5°C/0.1%
	N	-200°C~+1300°C	50°C	0.5°C/0.1%
	R	-40°C~+1768°C	500°C	1.5°C/0.1%
	S	-40°C~+1768°C	500°C	1.5°C/0.1%
	B	+320°C~+1820°C	500°C	1.5°C/0.1%
RTD	Pt100	-200°C~+850°C	20°C	0.2°C/0.1%
	Cu50	-50°C~+150°C	20°C	0.2°C/0.1%
	Cu100	-50°C~+150°C	20°C	0.2°C/0.1%
mV		-100mV~+100mV	10mV	20μV/0.1%
Potentiometer		0~5kΩ		0.1%
		0~10kΩ		0.1%

Note：
1. The “%” of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.
2. Allow a maximum wire resistance of 50Ω/line for RTD input(3-wire).
3. When the thermocouple is input, the conversion accuracy does not include the CJC. For every 100Ω increase in the compensation wire, the cold junction error increases by 0.2°C.
4. When the Type B thermocouple is input, the lower limit of temperature range is required to be greater than 680 °C to ensure the accuracy index.
5. mV signal input needs to be customized.

Configuration Accessory

Configuration Tool: USBCOM-MINI

Software: Easyconfig

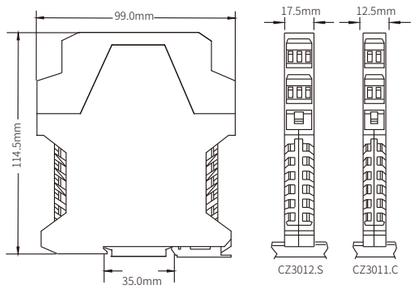
Switch Amplifier

Features

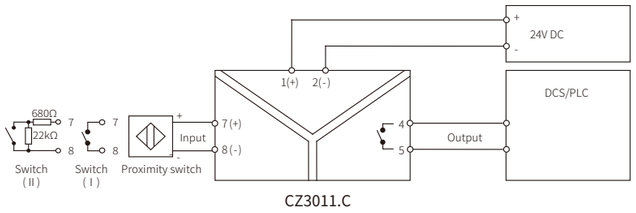
- 24V DC independent power supply
- Dry contact or proximity switch input
- Relay contact output
- Line fault detection(LFD)
- Configurable by DIP switches

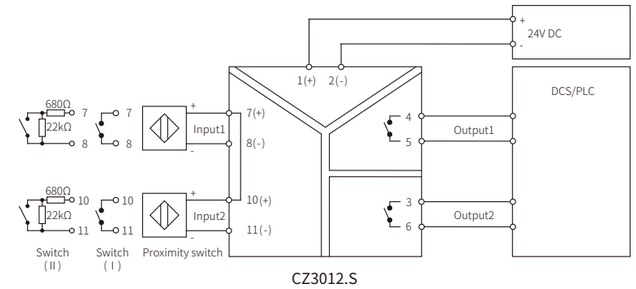
	CZ3011.C 1/1	CZ3012.S 2/2
Input		
Open-circuit Voltage	Approx.8V	Approx.8V
Short-circuit Current	Approx.8mA	Approx.8mA
Input and output characteristics(Phase noninverting)	If field switch is in the status of ‘close’ or input loop current＞2.1mA, output relay will be energized, with yellow LED ON If field switch is in the status of ‘close’ or input loop current＜1.2mA, output relay will be de-energized, with yellow LED OFF	
Output		
Contact Rating	250V AC,2A or 30V DC,2A	250V AC,2A or 30V DC,2A
Load Type	Resistive load	Resistive load
Response Time (0~90%)	⩽10ms	⩽10ms
Input/Output Inverting(See the manual for details)	Via switch K1	Via switch K1、K3
Line Fault Detection(See the manual for details)	Via switch K2	Via switch K2、K4
General Parameters		
Supply Voltage	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support
Current Consumption(Supply voltage:24V)	⩽30mA	⩽40mA
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C	-20°C~+60°C
Suitable Field Apparatus	Dry contact, NAMUR proximity switch according to DIN 19234 standards (including: pressure switches, temperature switches, liquid level switches, etc.)	

Dimensions



Connection





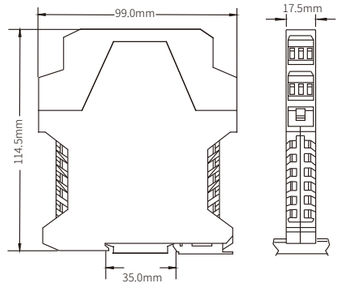
Analog Input / Analog Output (Loop Powered)

Features

24V DC Loop powered
Suitable for analog input and analog output
Support HART communication

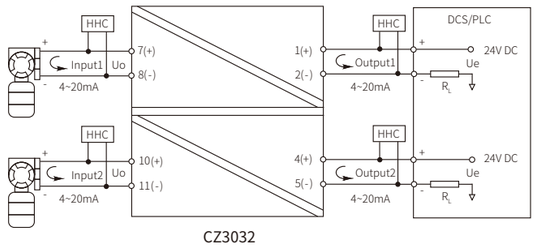
	1/1：CZ3031 2/2：CZ3032 Application 1: Analog Input	1/1：CZ3031 2/2：CZ3032 Application 2: Analog Output
Input		
Input Current	4~20mA(HART)	4~20mA(HART)
Voltage Drop	U_d≤6V	U_d≤6V
Distribution Voltage	U_o≥U_e-R_L×0.02-6	
Output		
Output Current	4~20mA(HART)	4~20mA(HART)
Load Resistance	R_L≥250Ω(HART)	R_L≤(U_e-6)/0.02
General Parameters		
Loop Supply Voltage(U_e)	20~30V DC	20~30V DC
Power Reverse Protection	Support	Support
Power Dissipation	0.1W	0.1W
Transmission Accuracy	0.4%F.S.	0.2%F.S.
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	≤0.5 ms	≤0.5 ms
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	≥100MΩ	≥100MΩ
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-wire transmitter	2-wire Valve positioner/ Electrical converter

Dimensions



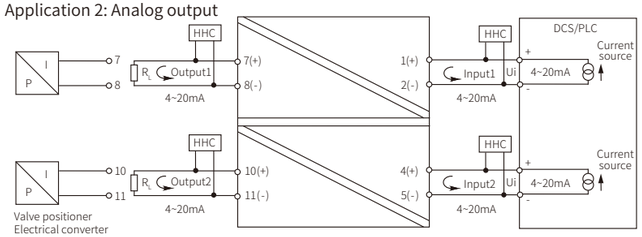
Connection

Application 1: Analog input



CZ3032

Application 2: Analog output



CZ3032

Note:

1. HHC (HART Hand Held Communicator) cannot be used simultaneously on the input side and output side
2. CZ3031 refers to the CZ3032 channel 1 to wire.

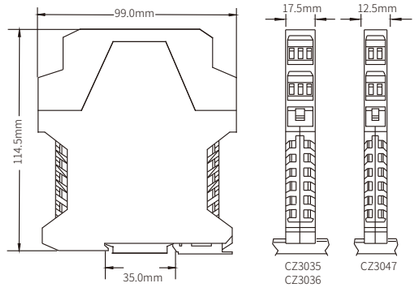
Analog Input(Current Source Output)

Features

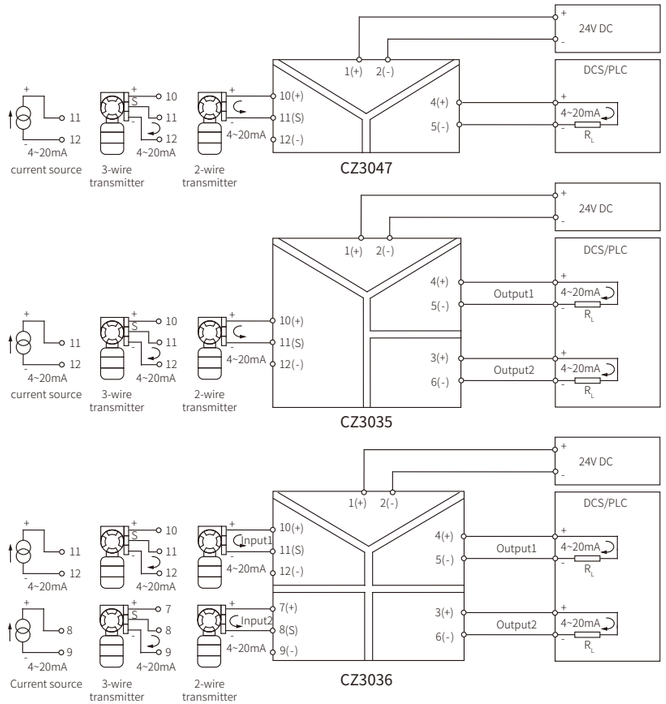
24V DC independent power supply
0/4~20mA current input
0/4~20mA current source output

	CZ3047 1/1	CZ3035 1/2	CZ3036 2/2
Input			
Input Current	0/4~20mA	0/4~20mA	0/4~20mA
Input Impedance	≤50Ω	≤50Ω	≤50Ω
Distribution Voltage/Max. Current	17.5~25V/＜35mA	17.5~25V/＜35mA	17.5~25V/＜35mA
Output			
Output Current	0/4~20mA	0/4~20mA	0/4~20mA
Load Resistance(Current output)	R_L≤800Ω	R_L≤300Ω	R_L≤300Ω
Output Voltage	0/1~5V，0/2~10V	0/1~5V，0/2~10V	0/1~5V，0/2~10V
Load Resistance(Voltage output)	R_L≥330kΩ(0/1~5V) R_L≥660kΩ(0/2~10V)	R_L≥330kΩ(0/1~5V) R_L≥660kΩ(0/2~10V)	R_L≥330kΩ(0/1~5V) R_L≥660kΩ(0/2~10V)
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	≤60mA	≤75mA	≤100mA
Transmission Accuracy	0.1%F.S.(Typical：0.05%F.S.)	0.1%F.S.(Typical：0.05%F.S.)	0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift	0.005%F.S./℃	0.005%F.S./℃	0.005%F.S./℃
Response Time (0~90%)	≤0.5 ms	≤0.5 ms	≤0.5 ms
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	≥100MΩ; 500V DC	≥100MΩ; 500V DC	≥100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire transmitter，current source	2-or 3-wire transmitter，current source	2-or 3-wire transmitter，current source

Dimensions



Connection



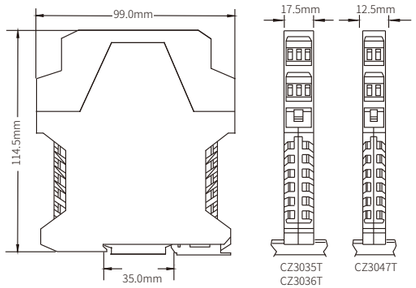
Analog Input(Sink Mode Output)

Features

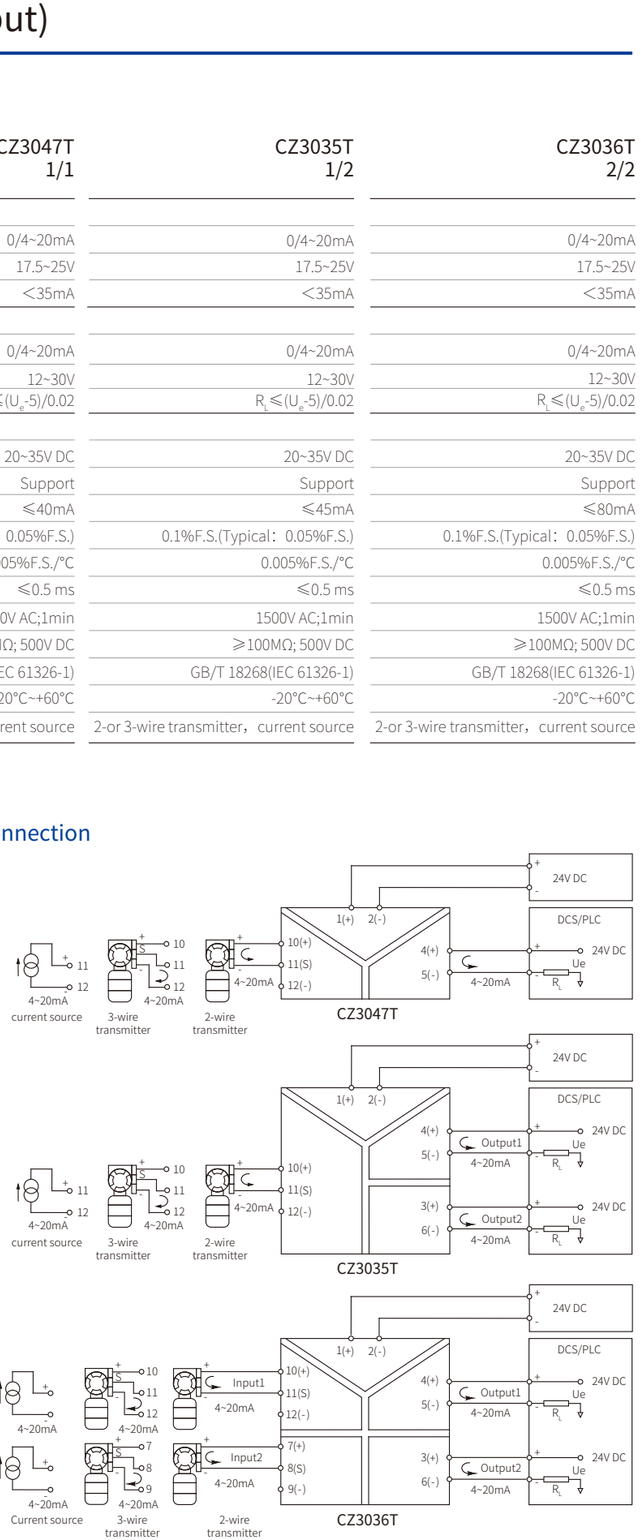
24V DC independent power supply
0/4~20mA current input
0/4~20mA sink mode output

	CZ3047T 1/1	CZ3035T 1/2	CZ3036T 2/2
Input			
Input Current	0/4~20mA	0/4~20mA	0/4~20mA
Distribution Voltage	17.5~25V	17.5~25V	17.5~25V
Max. Current	＜35mA	＜35mA	＜35mA
Output			
Output Current	0/4~20mA	0/4~20mA	0/4~20mA
Ext.Source Voltage(U_e)	12~30V	12~30V	12~30V
Load Resistance	$R_L \leqslant (U_e-5)/0.02$	$R_L \leqslant (U_e-5)/0.02$	$R_L \leqslant (U_e-5)/0.02$
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	⩽40mA	⩽45mA	⩽80mA
Transmission Accuracy	0.1%F.S.(Typical：0.05%F.S.)	0.1%F.S.(Typical：0.05%F.S.)	0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift	0.005%F.S./℃	0.005%F.S./℃	0.005%F.S./℃
Response Time (0~90%)	⩽0.5 ms	⩽0.5 ms	⩽0.5 ms
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire transmitter，current source	2-or 3-wire transmitter，current source	2-or 3-wire transmitter，current source

Dimensions



Connection



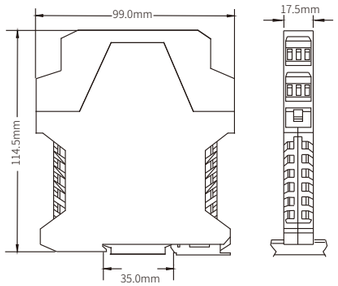
Analog Input(Loop Powered)

Features

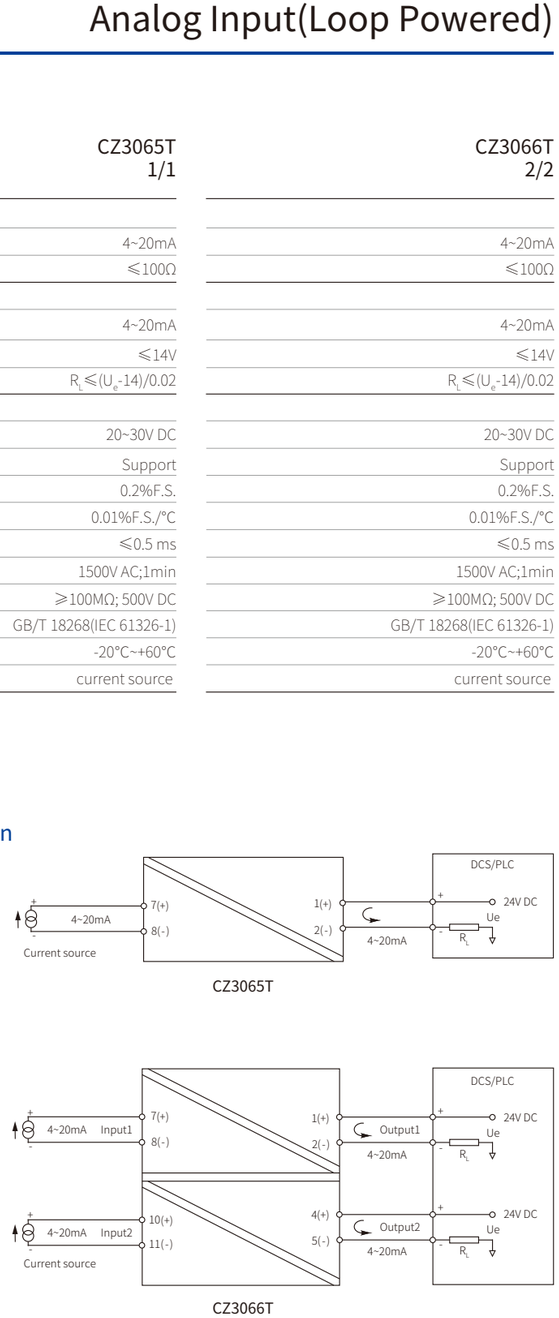
24V DC loop power supply
4~20mA current source input
4~20mA sink mode output

	CZ3065T 1/1	CZ3066T 2/2
Input		
Input Current	4~20mA	4~20mA
Input Impedance	⩽100Ω	⩽100Ω
Output		
Output Current	4~20mA	4~20mA
Voltage Drop	⩽14V	⩽14V
Load Resistance	$R_L \leqslant (U_e-14)/0.02$	$R_L \leqslant (U_e-14)/0.02$
General Parameters		
Loop Supply Voltage(U_e)	20~30V DC	20~30V DC
Power Reverse Protection	Support	Support
Transmission Accuracy	0.2%F.S.	0.2%F.S.
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	⩽0.5 ms	⩽0.5 ms
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	current source	current source

Dimensions



Connection



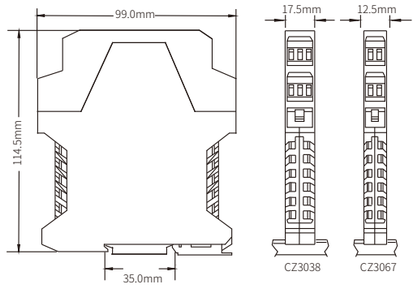
Analog Output

Features

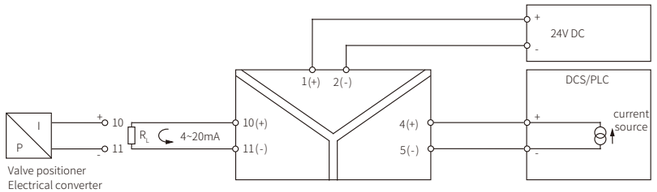
24V DC independent power supply
0/4~20mA current input/output
Output load up to 800Ω

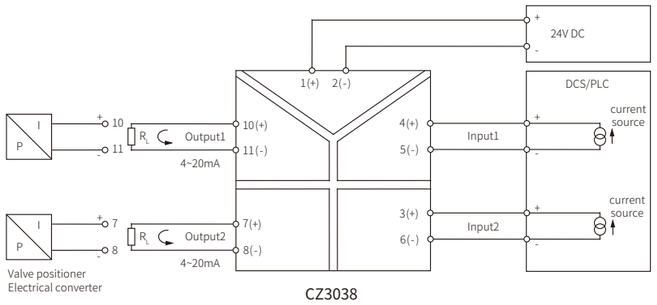
	CZ3067 1/1	CZ3038 2/2
Input		
Input Signal	0/4~20mA	0/4~20mA
Input Voltage Drop	⩽2V	⩽2V
Max. Input Current	＜30mA	＜30mA
Output		
Output Current/Load Resistance	0(4)~20mA / R_L⩽800Ω	0(4)~20mA / R_L⩽800Ω
Max.Output Current	＜30mA	＜30mA
Output Voltage/Load Resistance	0(1)~5V / R_L⩾330kΩ	0(1)~5V / R_L⩾330kΩ
General Parameters		
Supply Voltage	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support
Current Consumption(Supply voltage:24V)	⩽40mA	⩽65mA
Transmission Accuracy	0.1%F.S.(Typical：0.05%F.S.)	0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift	0.005%F.S./℃	0.005%F.S./℃
Response Time (0~90%)	⩽2ms	⩽2ms
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-wire valve positioner， electrical converter	2-wire valve positioner， electrical converter

Dimensions



Connection





RTD Input

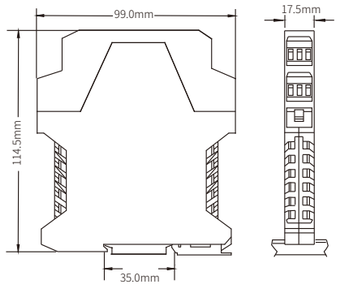
Features

24V DC independent power supply
Line fault detection(LFD)
Configurable by software

	CZ3071 1/1	CZ3076 1/2	CZ3079 2/2
Input			
Input Signal	Pt100，Cu100，Cu50	Pt100，Cu100，Cu50	Pt100，Cu100，Cu50
Output			
Output Current/Load Resistance	0~20mA，4~20mA / R_L⩽300Ω	0~20mA，4~20mA / R_L⩽300Ω	0~20mA，4~20mA / R_L⩽300Ω
Output Voltage/Load Resistance	0~5V，1~5V / R_L⩾20kΩ	0~5V，1~5V / R_L⩾20kΩ	0~5V，1~5V / R_L⩾300kΩ
Fault Current of Overrange/Underrange	I_H≈20.8mA/I_L≈3.8mA	I_H≈20.8mA/I_L≈3.8mA	I_H≈20.8mA/I_L≈3.8mA
Fault Current of Line Break	I≈20.8mA	I≈20.8mA	I≈20.8mA
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	⩽35mA	⩽55mA	⩽55mA
Conversion Accuracy	0.1%	0.1%	0.1%
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	⩽1s	⩽1s	⩽1s
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire RTD	2-or 3-wire RTD	2-or 3-wire RTD

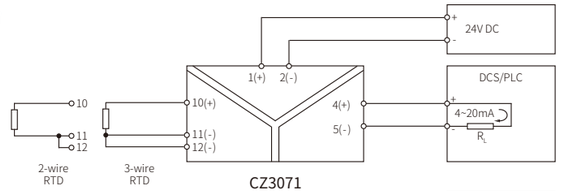
Note: Fault current of line break <4mA or other special requirements, need to be customized.

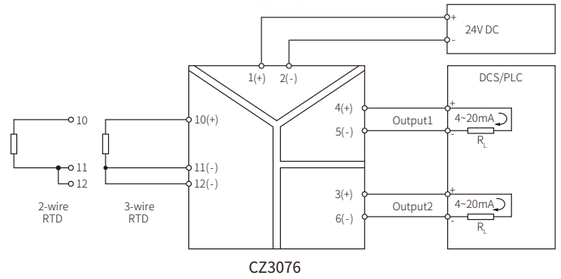
Dimensions

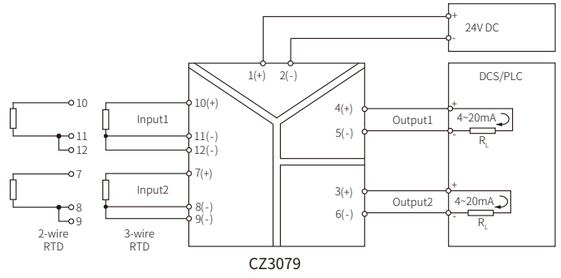


Note:
1. For 3-wire Input, keep the resistance of the three wires as equal as possible.
2. For 2-wire Input, terminal 11, 12(CZ3071/C3076), terminal 11, 12 and 8, 9(CZ3079) should be shorted.

Connection







TC Input

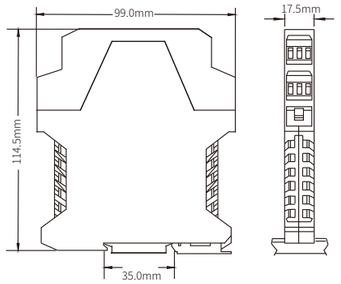
Features

24V DC independent power supply
Line fault detection(LFD)
Configurable by software
Integral CJC on terminals

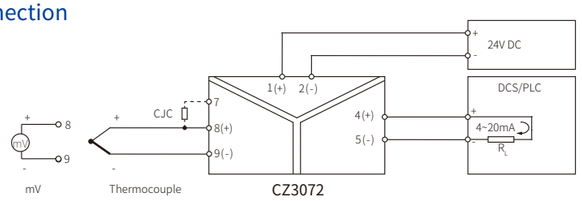
	CZ3072 1/1	CZ3074 1/2	CZ3079.TC 2/2
Input			
Input Signal(Customized mV signal)	T、E、J、K、N、R、S、B	T、E、J、K、N、R、S、B	T、E、J、K、N、R、S、B
Internal CJC Temperature Range	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C
CJC Precision	±1°C	±1°C	±1°C
Output			
Output Current/Load Resistance	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω
Output Voltage/Load Resistance	0~5V，1~5V / R_L≥20kΩ	0~5V，1~5V / R_L≥20kΩ	0~5V，1~5V / R_L≥20kΩ
Fault Current of Overrange/Underrange	I_H≈20.8mA/I_L≈3.8mA	I_H≈20.8mA/I_L≈3.8mA	I_H≈20.8mA/I_L≈3.8mA
Fault Current of Line Break	I≈20.8mA	I≈20.8mA	I≈20.8mA
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	≤35mA	≤55mA	≤55mA
Conversion Accuracy	See P13 Table 2	See P13 Table 2	See P13 Table 2
Temperature Drift	0.01%F.S./°C	0.01%F.S./°C	0.01%F.S./°C
Response Time (0~90%)	≤1s	≤1s	≤1s
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	≥100MΩ; 500V DC	≥100MΩ; 500V DC	≥100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C
Suitable Field Apparatus	TC and mV signal sensor	TC and mV signal sensor	TC and mV signal sensor

Note: Fault current of line break <4mA or other special requirements, need to be customized.

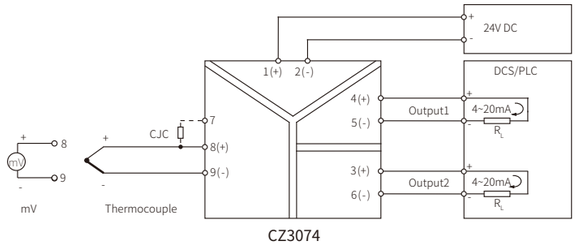
Dimensions



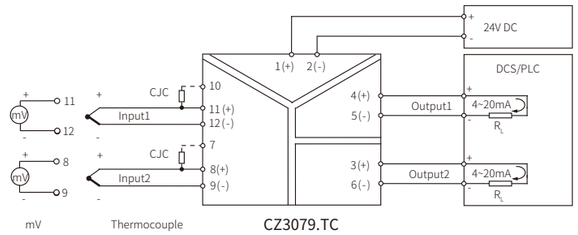
Connection



CZ3072



CZ3074



CZ3079.TC

RTD/TC Input(Loop Powered)

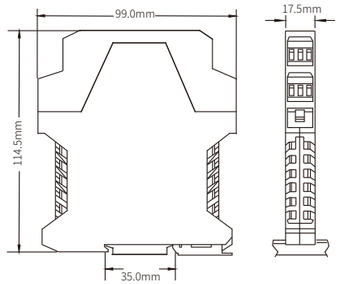
Features

24V DC loop power supply
Line fault detection(LFD)
Configurable by software
Integral CJC on TC input terminals

	1/1: CZ3077 2/2: CZ3078	1/1: CZ3177 2/2: CZ3178	1/1: CZ3277 2/2: CZ3278
Input			
Input Signal	Pt100，Cu100，Cu50	T、E、J、K、N、R、S、B (Customized mV signal)	Pt100，Cu100，Cu50 T、E、J、K、N、R、S、B
Internal CJC Temperature Range		-20~+60°C	-20~+60°C
CJC Precision		±1°C	±1°C
Output			
Output Current	4~20mA	4~20mA	4~20mA
Load Resistance	R_L≤(U_e-12)/0.021Ω	R_L≤(U_e-12)/0.021Ω	R_L≤(U_e-12)/0.021Ω
Fault Current of Overrange/Underrange	I_L≈20.8mA/I_L≈3.8mA	I_L≈20.8mA/I_L≈3.8mA	I_L≈20.8mA/I_L≈3.8mA
Fault Current of Line Break	I≈20.8mA	I≈20.8mA	I≈20.8mA
General Parameters			
Loop Supply Voltage(U_e)	12~30V DC	12~30V DC	12~30V DC
Power Reverse Protection	Support	Support	Support
Conversion Accuracy	See P13 Table 2	See P13 Table 2	See P13 Table 2
Temperature Drift	0.01%F.S./°C	0.01%F.S./°C	0.01%F.S./°C
Response Time (0~90%)	≤1s	≤1s	≤1s
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	≥100MΩ; 500V DC	≥100MΩ; 500V DC	≥100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C
Suitable Field Apparatus	2-or 3-wire RTD	TC sensor，mV signal	RTD，TC sensor

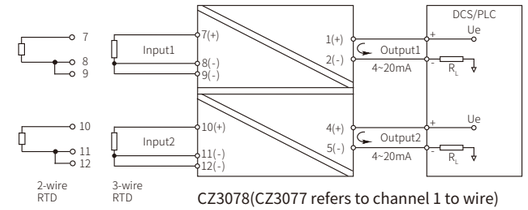
Note: Fault current of line break <4mA or other special requirements, need to be customized.

Dimensions

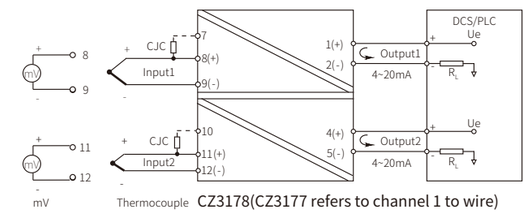


Note:
1. CZ3277/CZ3278 is universal temperature converter. Use standard terminal for RTD input.
2. Use CJC terminal for thermocouple input.9(CZ3079) should be shorted.

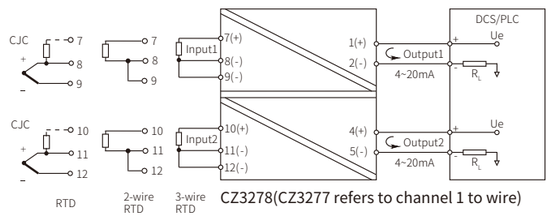
Connection



CZ3078(CZ3077 refers to channel 1 to wire)



CZ3178(CZ3177 refers to channel 1 to wire)



CZ3278(CZ3277 refers to channel 1 to wire)

Potentiometer Input

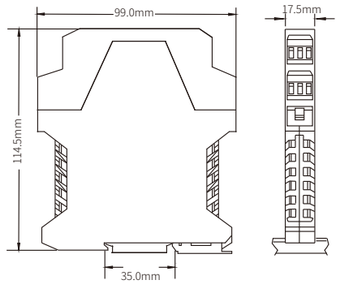
Features

24V DC independent power supply
Line fault detection(LFD)
Configurable by software

	CZ3075 1/1	CZ3076.R 1/2	CZ3079.R 2/2
Input			
Input Signal	0~5kΩ，0~10kΩ	0~5kΩ，0~10kΩ	0~5kΩ，0~10kΩ
Output			
Output Current/Load Resistance	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω
Output Voltage/Load Resistance	0~5V，1~5V/R_L≥20kΩ	0~5V，1~5V/R_L≥20kΩ	0~5V，1~5V/R_L≥20kΩ
Fault Current of Overrange/Underrange	I_L≈20.8mA/I_L≈3.8mA	I_L≈20.8mA/I_L≈3.8mA	I_L≈20.8mA/I_L≈3.8mA
Fault Current of Line Break	I≈20.8mA	I≈20.8mA	I≈20.8mA
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	≤40mA	≤55mA	≤55mA
Conversion Accuracy	5Ω/0.1%(Take the larger value)	5Ω/0.1%(Take the larger value)	5Ω/0.1%(Take the larger value)
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	≤1s	≤1s	≤1s
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	≥100MΩ; 500V DC	≥100MΩ; 500V DC	≥100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire Potentiometer	2-or 3-wire Potentiometer	2-or 3-wire Potentiometer

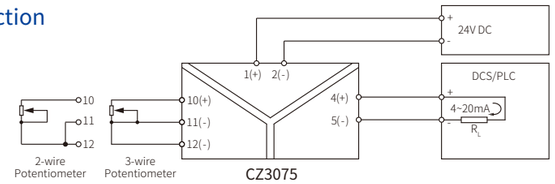
Note: Fault current of line break <4mA or other special requirements, need to be customized.

Dimensions

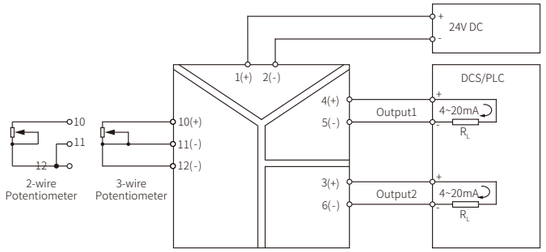


Note:
1. For 3-wire Input, keep the resistance of the three wires as equal as possible.
2. For 2-wire Input, terminal 11, 12(CZ3075/C3076.R) and 8, 9(CZ3079.R) should be shorted.

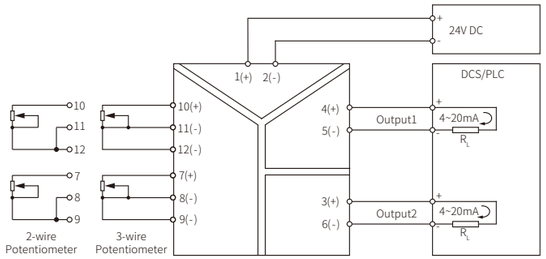
Connection



CZ3075



CZ3076.R



CZ3079.R

Pulse input

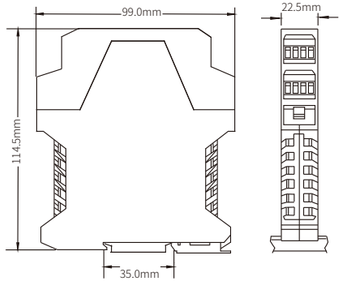
Features

24V DC independent power supply
PNP/NPN transistor output or voltage pulse output

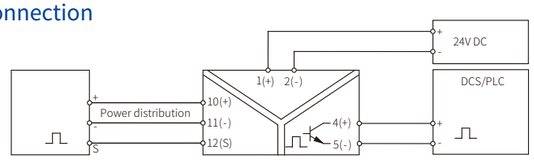
	CZ3051 1/1	CZ3052 2/2	CZ3053 1/2
Input			
Frequency Range	≤10kHz，Duty cycle≥30%	≤10kHz，Duty cycle≥30%	≤10kHz，Duty cycle≥30%
Pulse Voltage Level	4V≤V_H≤12V，V_L≤1V	4V≤V_H≤12V，V_L≤1V	4V≤V_H≤12V，V_L≤1V
Distribution Voltage(Specify when ordering)	No power distribution 5V or 12V or 24V@20mA	No power distribution 5V or 12V or 24V@20mA	No power distribution 5V or 12V or 24V@20mA
Output			
External Supply Voltage Vcc (Transistor output)	≤35V DC	≤35V DC	≤35V DC
Max.on-stage Current(Transistor output)	≤35mA	≤35mA	≤35mA
Transistor Collector Output	V_H: Vcc，V_L: ≤2.5V	V_H: Vcc，V_L: ≤2.5V	V_H: Vcc，V_L: ≤2.5V
Pull-up Resistance	2kΩ≤R_L≤20kΩ	2kΩ≤R_L≤20kΩ	2kΩ≤R_L≤20kΩ
Transistor Emitter Output	V_H: Vcc-2.5V，V_L: ≤0.5V	V_H: Vcc-2.5V，V_L: ≤0.5V	V_H: Vcc-2.5V，V_L: ≤0.5V
Pull-down Resistance	2kΩ≤R_L≤10kΩ	2kΩ≤R_L≤10kΩ	2kΩ≤R_L≤10kΩ
Voltage Pulse Output	V_H: 4.5V≤V_H≤24V，V_L: ≤0.5V	V_H: 4.5V≤V_H≤24V，V_L: ≤0.5V	V_H: 4.5V≤V_H≤24V，V_L: ≤0.5V
Load Resistance	R_L≥1kΩ	R_L≥1kΩ	R_L≥1kΩ
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption (Supply voltage:24V，no power distribution)	≤30mA	≤55mA	≤50mA
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	≥100MΩ	≥100MΩ	≥100MΩ
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire voltage pulse source	2-or 3-wire voltage pulse source	2-or 3-wire voltage pulse source

Note：Voltage pulse output can be selected 5V, 12 and 24V. V_H is related to the output level. See the manual for details.

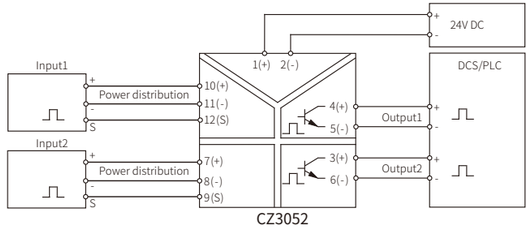
Dimensions



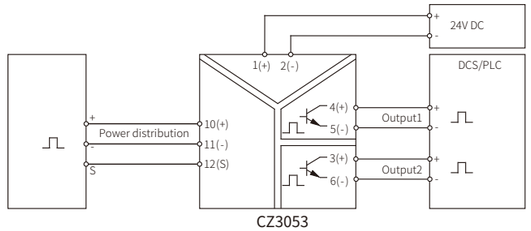
Connection



CZ3051



CZ3052



CZ3053

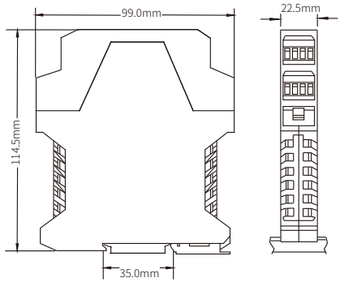
Frequency Converter

Features

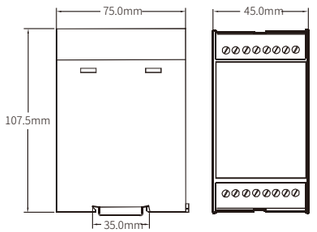
24V DC independent power supply
Acquisition of NPN, PNP, NAMUR, and frequency signals
Line fault detection(LFD)
Configurable by software(CZ3055) or membrane keypad(CZ3355)
LED display(CZ3355)

	CZ3055 1/1	CZ3355 1/3
Input		
PNP / NPN Transistor	Power distribution:14V，current＜20mA	Power distribution:14V，current＜20mA
Voltage Pulse Source	Max. Input voltage:30V	Max. Input voltage:30V
Switch/Proximity Switch	Power distribution≈8V，Short-circuit current≈8mA	Power distribution≈8V，Short-circuit current≈8mA
Frequency Range / Pulse Width	0.1Hz~100kHz/⩾2μs	0.1Hz~100kHz/⩾2μs
Output		
Output Current/Load Resistance	0~20mA，4~20mA / R_L⩽400Ω	0~20mA，4~20mA / R_L⩽400Ω
Output Voltage/Load Resistance	0~5V，1~5V / R_L⩾300kΩ	0~5V，1~5V / R_L⩾300kΩ
Relay Output	1*SPST	2*SPST
Contact Rating	250V AC,2A / 30V DC,2A；Resistive load	250V AC,2A / 30V DC,2A；Resistive load
Response Time @100kHz input(0~90%)	⩽20ms	⩽20ms
General Parameters		
Supply Voltage	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support
Current Consumption(Supply voltage: 24V)	⩽90mA	⩽110mA
Conversion Accuracy	0.1%F.S.(Typical⩽0.05%F.S.)	0.1%F.S.(Typical⩽0.05%F.S.)
Temperature Drift	0.01% F.S./°C	0.01% F.S./°C
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ；500V DC	⩾100MΩ；500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C	-20°C~+60°C
Suitable Field Apparatus	NAMUR proximity switch，dry contact，frequency generator, PNP/NPN transistor outputs according to DIN 19234 standards	

Dimensions

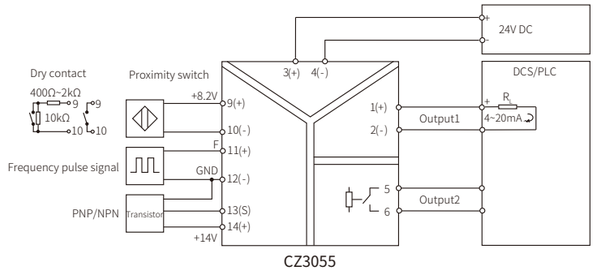


CZ3055

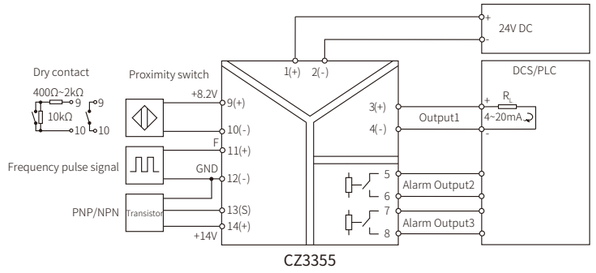


CZ3355

Connection



CZ3055



CZ3355

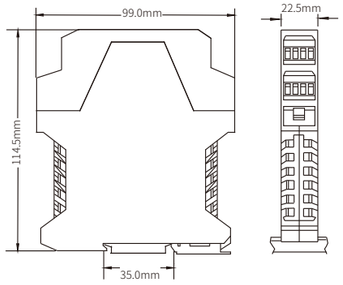
Vibration Transducer Input

Features

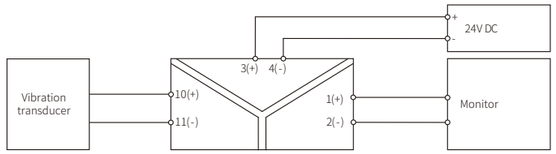
24V DC independent power supply
Vibration transducer input
-10~+10V voltage input/output

	CZ3058 1/1
Input	
Input Voltage	-10V~+10V
Input Impedance	10kΩ
Output	
Output Voltage	-10V~+10V
Load Resistance	R_L⩾20kΩ
General Parameters	
Supply Voltage	20~35V DC
Power Reverse Protection	Support
Current Consumption(Supply voltage:24V)	⩽40mA
DC Transmission Accuracy	＜±0.2%F.S.
AC Transmission Accuracy	0Hz~600Hz：±0.2%F.S. 600Hz~10kHz：-1.5%~+0.2%F.S.
Phase Response(0~90%)	＜10μs
Voltage Bandwidth(-3dB)	⩾40kHz
Temperature Drift	100ppm/°C
Dielectric Strength	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C
Suitable Field Apparatus	Vibration transducer

Dimensions



Connection



CZ3058

Voltage Input

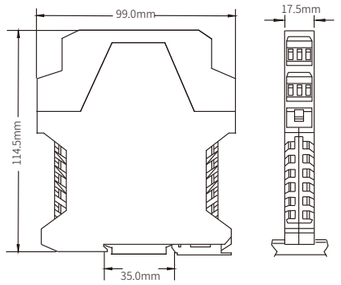
Features

24V DC independent power supply
Multiple voltage input
Multiple current/voltage output

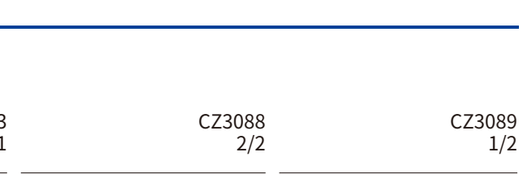
	CZ3083 1/1	CZ3088 2/2	CZ3089 1/2
Input			
Input Voltage	0~5V，1~5V，0~10V	0~5V，1~5V，0~10V	0~5V，1~5V，0~10V
Input Impedance	⩾100kΩ	⩾100kΩ	⩾100kΩ
Distribution Voltage(Specify when ordering)	No power distribution 10V or 15V@20mA	No power distribution 10V or 15V@20mA	No power distribution 10V or 15V@20mA
Output			
Output Current	0~20mA，4~20mA	0~20mA，4~20mA	0~20mA，4~20mA
Load Resistance(Current output)	R_L⩽300Ω	R_L⩽300Ω	R_L⩽300Ω
Output Voltage	0~5V，1~5V，0~10V	0~5V，1~5V，0~10V	0~5V，1~5V，0~10V
Load Resistance(Voltage output)	R_L⩾20kΩ	R_L⩾20kΩ	R_L⩾20kΩ
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V，power distribution current: 20mA)	⩽110mA	⩽130mA	⩽130mA
Transmission Accuracy	0.1%F.S.	0.1%F.S.	0.1%F.S.
Temperature Drift	0.005%F.S./℃	0.005%F.S./℃	0.005%F.S./℃
Response Time (0~90%)	⩽0.1s	⩽0.1s	⩽0.1s
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	Voltage source output device	Voltage source output device	Voltage source output device

Note: CZ3088,CZ3089 can only order no power distribution module when current output.

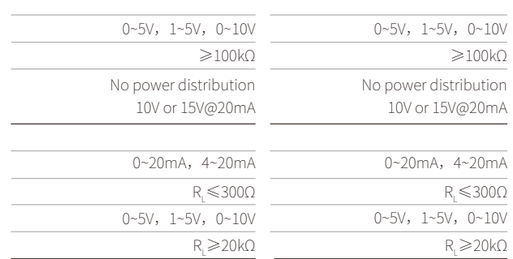
Dimensions



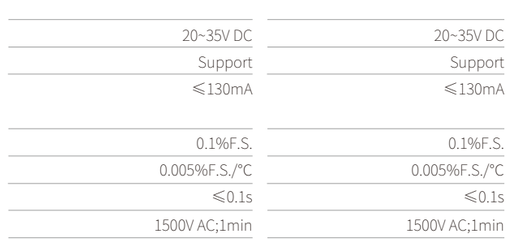
Connection



CZ3083



CZ3088



CZ3089

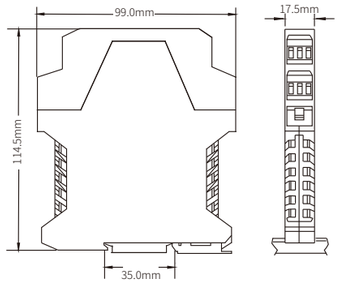
Communication Input

Features

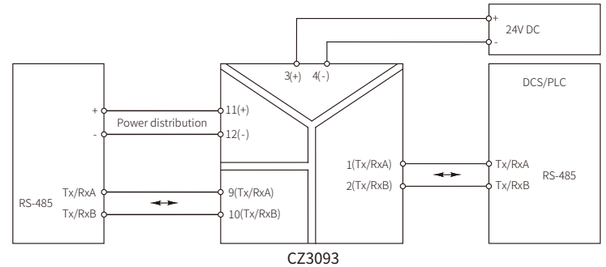
24V DC independent power supply
Automatic transmit/receive changeover
Transmission speed up to 56kbps

	CZ3093 1/1
Input	
Input Signal	RS-485 half duplex
Distribution Voltage(Specify when ordering)	5V or 6V@100mA
	8V or 9V or 12V@50mA
Output	
Output Signal	RS-485 half duplex
Communiction Signal Specification	RS-485
Signal Level Rules	standard RS-485 differential level
Transmission Delay	⩽10μs
Serial Transmission Speed	⩽56kbps
General Parameters	
Supply Voltage	20~35V DC
Power Reverse Protection	Support
Current Consumption(Supply voltage:24V，power distribution: 6V/100mA)	⩽160mA
Dielectric Strength	1500V AC;1min
Insulation Resistance	⩾100MΩ
EMC Standards	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃
Suitable Field Apparatus	Device with RS-485 communication interface

Dimensions



Connection



CZ3093

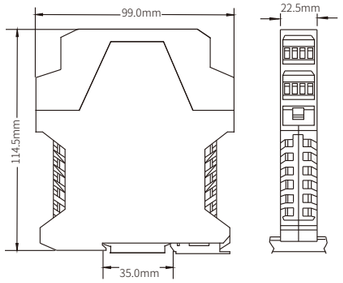
Signal Spliter

Features

24V DC independant power supply
1 channle current/voltage input
Multiple channles current/voltage ouput

	CZ3383.11 1/1	CZ3383.13 1/3
Input		
Input Current/Input Impedance	0~20mA，4~20mA/⩽100Ω	0~20mA，4~20mA/⩽100Ω
Input Voltage/Input Impedance	0~5V，1~5V/⩾100kΩ 0~10V，2~10V/⩾300kΩ	0~5V，1~5V/⩾100kΩ 0~10V，2~10V/⩾300kΩ
Power Distribution	⩾15.5V/20mA	⩾15.5V/20mA
Output		
Output Current	0~20mA，4~20mA	0~20mA，4~20mA
Load Resistance(Current output)	R_L⩽300Ω	R_L⩽300Ω
Output Voltage	0~5V，1~5V，0~10V，2~10V	0~5V，1~5V，0~10V，2~10V
Load Resistance(Voltage output)	R_L⩾2kΩ	R_L⩾2kΩ
Fault Indicator and Current	When line break/ line shorted, the alarm light flashes and the output is 0mA.	
General Parameters		
Supply Voltage	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support
Current Consumption(Supply voltage:24V)	⩽70mA	⩽100mA
Transmission Accuracy	0.1%F.S.	0.1%F.S.
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	⩽0.5s	⩽0.5s
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire transmitter, current source, voltage source	2-or 3-wire transmitter, current source, voltage source

Dimensions



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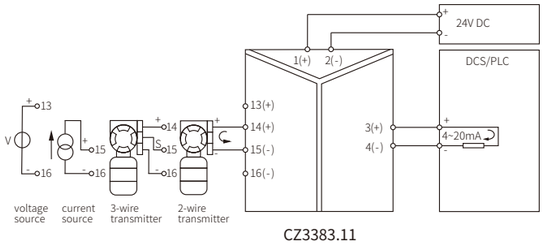
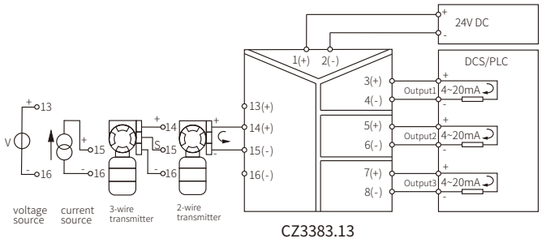


CZ3383.11



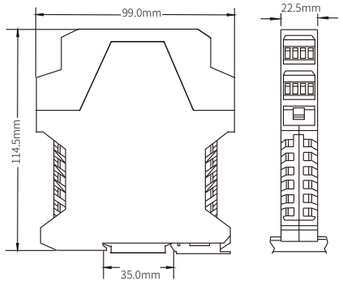
CZ3383.13

Features

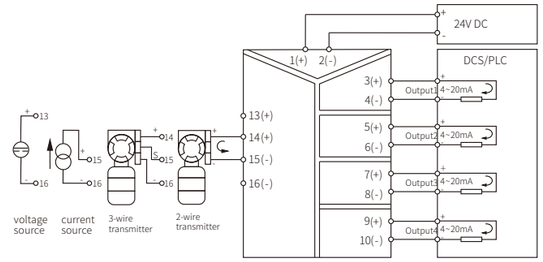
24V DC independent power supply
Signal spliter(1 input,4 output)

	CZ3383 1/4
Input	
Input Current/Input Impedance	0~20mA，4~20mA/⩽100Ω
Input Voltage/Input Impedance	0~5V，1~5V/⩾100kΩ 0~10V，2~10V/⩾300kΩ
Power Distribution	⩾15.5V/20mA
Output	
Output Current	0~20mA，4~20mA
Load Resistance(Current output)	R_L⩽300Ω
Output Voltage	0~5V，1~5V，0~10V，2~10V
Load Resistance(Voltage output)	R_L⩾2kΩ
Fault Indicator and Current	When line break/line shorted, the alarm light flashes and the output is 0mA.
General Parameters	
Supply Voltage	20~35V DC
Power Reverse Protection	Support
Current Consumption(Supply voltage:24V)	⩽110mA
Transmission Accuracy	0.1%F.S.
Temperature Drift	0.01%F.S./℃
Response Time (0~90%)	⩽0.5s
Dielectric Strength	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire transmitter，current source，voltage source

Dimensions



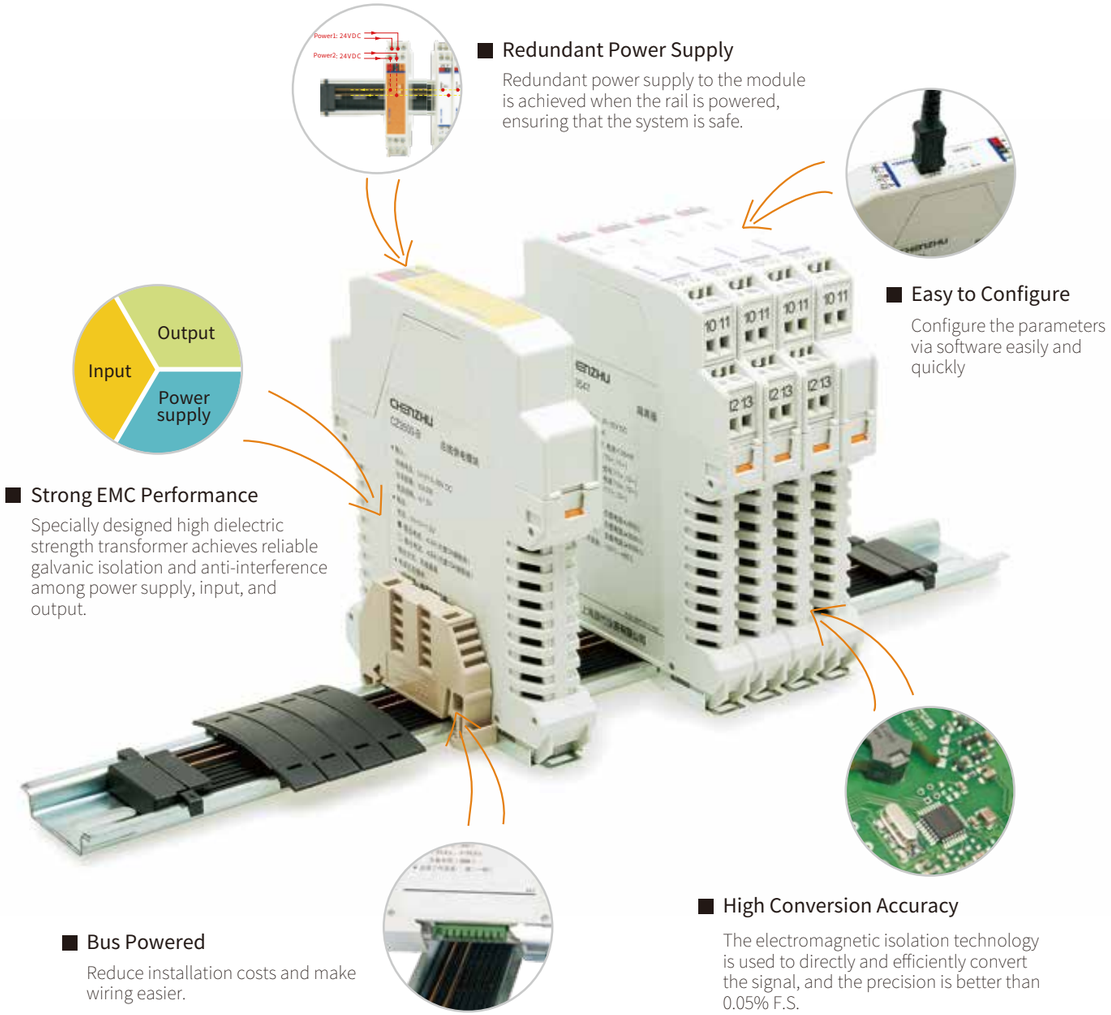
Connection



CZ3383

CZ3500 Range

CZ3500 range rail-powered signal conditioners are high-performance products. The new design concept and technology are perfectly combined to achieve various performance characteristics, such as high-precision, small-volume, easy installation and high interference suppression, ensuring more convenient system integration and more reliable operation.



■ **Redundant Power Supply**

Redundant power supply to the module is achieved when the rail is powered, ensuring that the system is safe.

■ **Easy to Configure**

Configure the parameters via software easily and quickly

■ **Strong EMC Performance**

Specially designed high dielectric strength transformer achieves reliable galvanic isolation and anti-interference among power supply, input, and output.

■ **Bus Powered**

Reduce installation costs and make wiring easier.

■ **High Conversion Accuracy**

The electromagnetic isolation technology is used to directly and efficiently convert the signal, and the precision is better than 0.05% F.S.

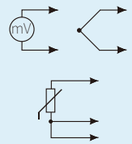
Field Instrument	Application	Module No.	Channels	Input	Output	Features	Page
	Analog Input	CZ3547	1/1	0/4~20mA	0/4~20mA	Independent powered	33
		CZ3535	1/2		0/1~5V		
		CZ3536	2/2				
	Analog Output	CZ3567	1/1	0/4~20mA	0/4~20mA	Independent powered	34
		CZ3538	2/2		0/1~5V		
	Temperature Converters	CZ3571	1/1	RTD	0~20mA，4~20mA	Independent powered	35
		CZ3576	1/2		0~5V，1~5V	Configurable via software	
		CZ3579	2/2				
		CZ3572	1/1	TC	0~20mA，4~20mA		36
		CZ3574	1/2	mV	0~5V，1~5V		
		CZ3579.TC	2/2				
		CZ3575	1/1	0~5kΩ	0~20mA，4~20mA		37
		CZ3576.R	1/2	0~10kΩ	0~5V，1~5V		
		CZ3579.R	2/2				
	Power Supply Feed Module	CZ3500-B		21.5V~25V	21.5V~25V	Redundant power supply	38

Table 3 Input Signal Type and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200℃~+400℃	50℃	0.5℃/0.1%
	E	-200℃~+900℃	50℃	0.5℃/0.1%
	J	-200℃~+1200℃	50℃	0.5℃/0.1%
	K	-200℃~+1372℃	50℃	0.5℃/0.1%
	N	-200℃~+1300℃	50℃	0.5℃/0.1%
	R	-40℃~+1768℃	500℃	1.5℃/0.1%
	S	-40℃~+1768℃	500℃	1.5℃/0.1%
	B	+320℃~+1820℃	500℃	1.5℃/0.1%
RTD	Pt100	-200℃~+850℃	20℃	0.2℃/0.1%
	Cu50	-50℃~+150℃	20℃	0.2℃/0.1%
	Cu100	-50℃~+150℃	20℃	0.2℃/0.1%
mV		-100mV~+100mV	10mV	20μV/0.1%
Potentiometer		0~5kΩ		0.1%
		0~10kΩ		0.1%

Note:
1. The "%" of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.
2. Allow a maximum wire resistance of 50Ω/line for RTD input(3-wire).
3. When the thermocouple is input, the conversion accuracy does not include the CJC. For every 100Ω increase in the compensation wire, the cold junction error increases by 0.2°C.
4. When the Type B thermocouple is input, the lower limit of temperature range is required to be greater than 680 °C to ensure the accuracy index.
5. mV signal input needs to be customized.

Configuration Accessory

Configuration Tool: USBCOM-MINI

Software: Easyconfig

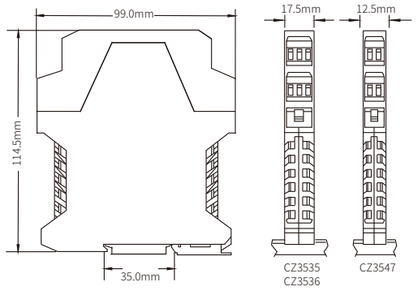
Analog Input

Features

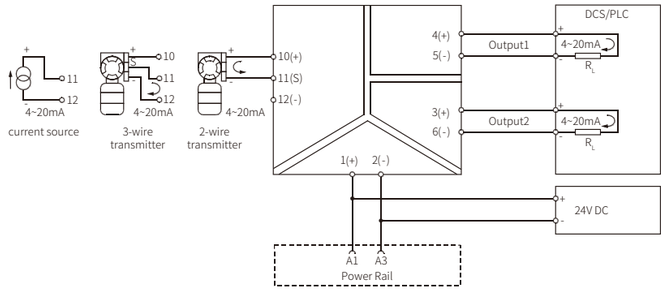
24V DC independent power supply
0/4~20mA current input
o/4~20mA current source output
Powerd via DIN bus or terminal

	CZ3547 1/1	CZ3535 1/2	CZ3536 2/2
Input			
Input Current	0/4~20mA	0/4~20mA	0/4~20mA
Input Impedance	⩽50Ω	⩽50Ω	⩽50Ω
Distribution Voltage	17.5V~25V	17.5V~25V	17.5V~25V
Max.Input Current	＜35mA	＜35mA	＜35mA
Output			
Output Current/Load Resistance	0(4)~20mA / R_L⩽800Ω	0(4)~20mA / R_L⩽300Ω	0(4)~20mA / R_L⩽300Ω
Output Voltage/Load Resistance	0(1)~5V / R_L⩾330kΩ	0(1)~5V / R_L⩾330kΩ	0(1)~5V / R_L⩾330kΩ
	0(2)~10V / R_L⩾660kΩ	0(2)~10V / R_L⩾660kΩ	0(2)~10V / R_L⩾660kΩ
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	⩽60mA	⩽75mA	⩽100mA
Transmission Accuracy	0.1%F.S. (Typical：0.05%F.S.)	0.1%F.S. (Typical：0.05%F.S.)	0.1%F.S. (Typical：0.05%F.S.)
Temperature Drift	0.005%F.S./℃	0.005%F.S./℃	0.005%F.S./℃
Response Time (0~90%)	⩽0.5 ms	⩽0.5 ms	⩽0.5 ms
Dielectric Strength	1500V DC;1min	1500V DC;1min	1500V DC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire transmitter，current source	2-or 3-wire transmitter，current source	2-or 3-wire transmitter，current source

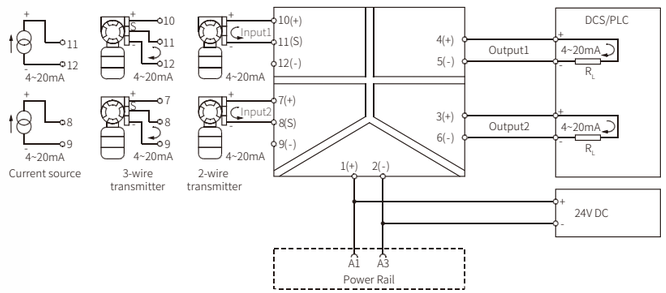
Dimensions



Connection



CZ3535(CZ3547 Output part only contains output 1)



CZ3536

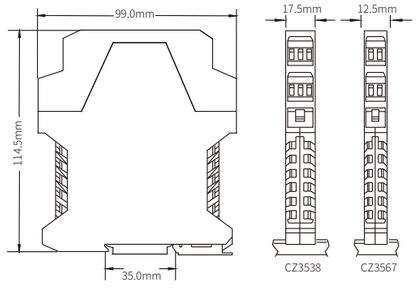
Analog Output

Features

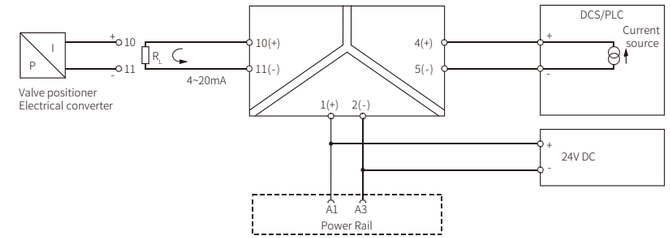
24V DC independent power supply
0/4~20mA current input/output
Output load up to 800Ω
Powerd via DIN bus or terminal

	CZ3567 1/1	CZ3538 2/2
Input		
Input Current	0/4~20mA	0/4~20mA
Input Voltage Drop	⩽2V	⩽2V
Max. Input Current	＜30mA	＜30mA
Output		
Output Current/Load Resistance	0(4)~20mA / R_L⩽800Ω	0(4)~20mA / R_L⩽800Ω
Max. Output Current	＜30mA	＜30mA
Output Voltage/Load Resistance	0(1)~5V / R_L⩾330kΩ	0(1)~5V / R_L⩾330kΩ
General Parameters		
Supply Voltage	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support
Current Consumption(Supply voltage:24V)	⩽40mA	⩽65mA
Transmission Accuracy	0.1%F.S.(Typical：0.05%F.S.)	0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift	0.005%F.S./℃	0.005%F.S./℃
Response Time (0~90%)	⩽2ms	⩽2ms
Dielectric Strength	1500V DC;1min	1500V DC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-wire Valve positioner， Electrical converter	2-wire Valve positioner， Electrical converter

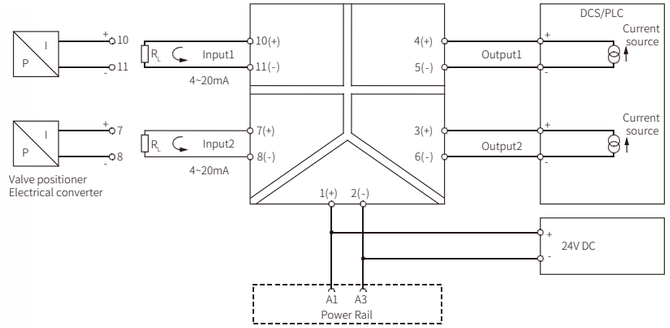
Dimensions



Connection



CZ3567



CZ3538

RTD Input

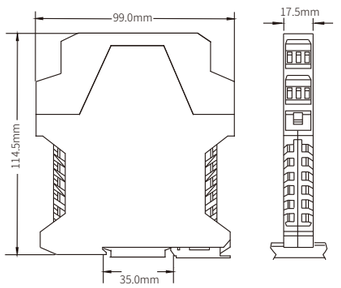
Features

24V DC independent power supply
Line fault detection(LFD)
Configurable by software
Powerd via DIN bus or terminal

	CZ3571 1/1	CZ3576 1/2	CZ3579 2/2
Input			
Input Signal	PT100，Cu100，Cu50	PT100，Cu100，Cu50	PT100，Cu100，Cu50
Output			
Output Current/Load Resistance	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω
Output Voltage/Load Resistance	0~5V，1~5V / R_L≥20kΩ	0~5V，1~5V / R_L≥20kΩ	0~5V，1~5V / R_L≥20kΩ
Fault Current of Overrange/Underrange	I_L≈20.8mA/I_L≈3.8mA	I_L≈20.8mA/I_L≈3.8mA	I_L≈20.8mA/I_L≈3.8mA
Fault Current of Line Break	I≈20.8mA	I≈20.8mA	I≈20.8mA
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	≤35mA	≤55mA	≤55mA
Conversion Accuracy	See P32 Table 3	See P32 Table 3	See P32 Table 3
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	≤1s	≤1s	≤1s
Dielectric Strength	1500V DC;1min	1500V DC;1min	1500V DC;1min
Insulation Resistance	≥100MΩ; 500V DC	≥100MΩ; 500V DC	≥150MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire RTD	2-or 3-wire RTD	2-or 3-wire RTD

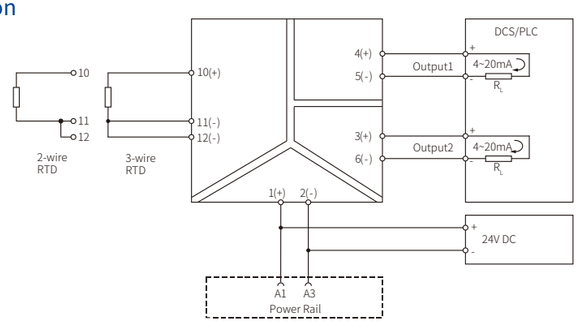
Note: Fault current of line break <4mA or other special requirements, need to be customized.

Dimensions

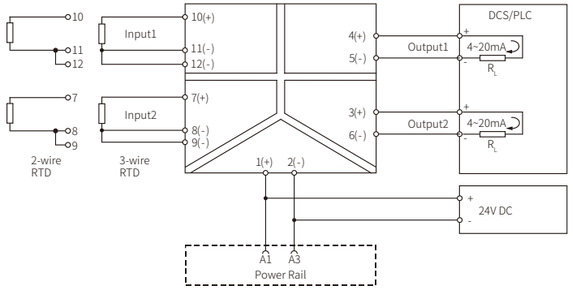


Note:
1. For 3-wire Input, keep the resistance of the three wires as equal as possible.
2. For 2-wire Input, terminal 11, 12(CZ3571/C3576), terminal 11, 12 and 8, 9(CZ3579) should be shorted.

Connection



CZ3576(CZ3571 Output part only contains output 1)



CZ3579

TC Input

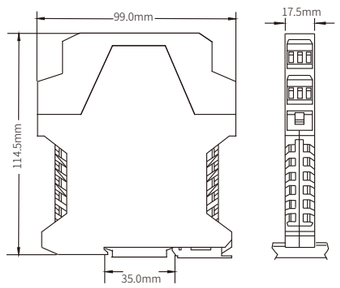
Features

24V DC independent power supply
Line fault detection(LFD)
Configurable by software
Integral CJC on terminals
Powerd via DIN bus or terminal

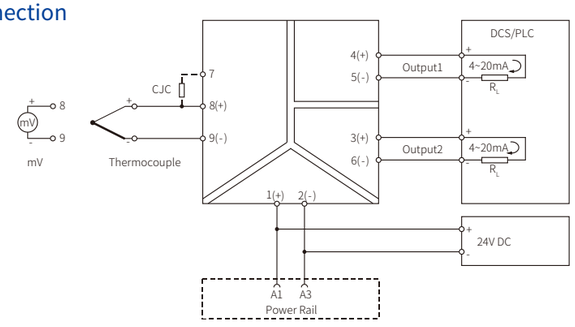
	CZ3572 1/1	CZ3574 1/2	CZ3579.TC 2/2
Input			
Input Signal(Customized mV signal)	T、E、J、K、N、R、S、B	T、E、J、K、N、R、S、B	T、E、J、K、N、R、S、B
Internal CJC Temperature Range	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C
CJC Precision	±1°C	±1°C	±1°C
Output			
Output Current/Load Resistance	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω
Output Voltage/Load Resistance	0~5V，1~5V / R_L≥20kΩ	0~5V，1~5V / R_L≥20kΩ	0~5V，1~5V / R_L≥20kΩ
Fault Current of Overrange/Underrange	I_L≈20.8mA/I_L≈3.8mA	I_L≈20.8mA/I_L≈3.8mA	I_L≈20.8mA/I_L≈3.8mA
Fault Current of Line Break	I≈20.8mA	I≈20.8mA	I≈20.8mA
General Parameters			
Loop Supply Voltage(U_s)	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage: 24V)	≤35mA	≤55mA	≤55mA
Conversion Accuracy	See P32 Table 3	See P32 Table 3	See P32 Table 3
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	≤1s	≤1s	≤1s
Dielectric Strength	1500V DC;1min	1500V DC;1min	1500V DC;1min
Insulation Resistance	≥100MΩ; 500V DC	≥100MΩ; 500V DC	≥100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C
Suitable Field Apparatus	TC sensor and mV signal	TC sensor and mV signal	TC sensor and mV signal

Note: Fault current of line break <4mA or other special requirements, need to be customized.

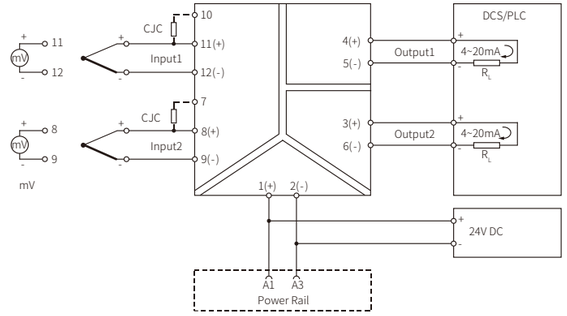
Dimensions



Connection



CZ3574(CZ3572 Output part 1)



CZ3579.TC

Potentiometer Input

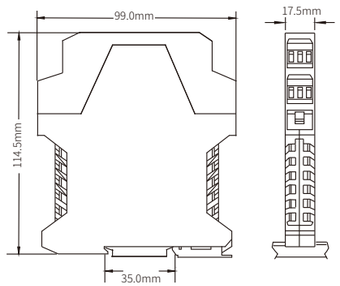
Features

24V DC independent power supply
Line fault detection(LFD)
Configurable by software
Powerd via DIN bus or terminal

	CZ3575 1/1	CZ3576.R 1/2	CZ3579.R 2/2
Input			
Input Signal	0~5kΩ，0~10kΩ	0~5kΩ，0~10kΩ	0~5kΩ，0~10kΩ
Output			
Output Current/Load Resistance	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω
Output Voltage/Load Resistance	0~5V，1~5V / R_L≥20kΩ	0~5V，1~5V / R_L≥20kΩ	0~5V，1~5V / R_L≥20kΩ
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	≤40mA	≤55mA	≤55mA
Conversion Accuracy	5Ω/0.1%(Take the larger value)	5Ω/0.1%(Take the larger value)	5Ω/0.1%(Take the larger value)
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	≤1s	≤1s	≤1s
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	≥100MΩ; 500V DC	≥100MΩ; 500V DC	≥100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire Potentiometer	2-or 3-wire Potentiometer	2-or 3-wire Potentiometer

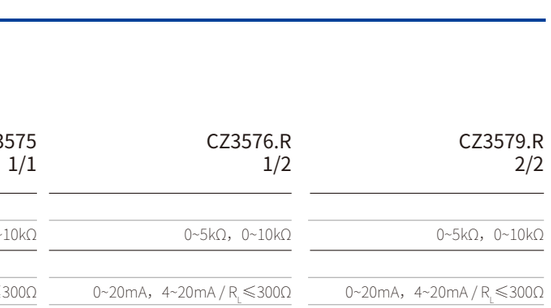
Note: Fault current of line break <4mA or other special requirements, need to be customized.

Dimensions

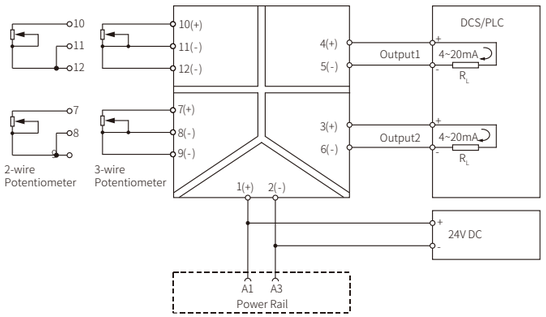


Note:
1. For 3-wire Input, keep the resistance of the three wires as equal as possible.
2. For 2-wire Input, terminal 11, 12(CZ3575/C3576.R), terminal 11, 12 and 8, 9(CZ3579) should be shorted.

Connection



CZ3576.R(CZ3575 Output part only contains output 1)



CZ3579.R

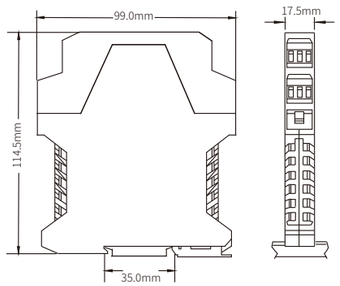
Redundant Power Feed Module

Features

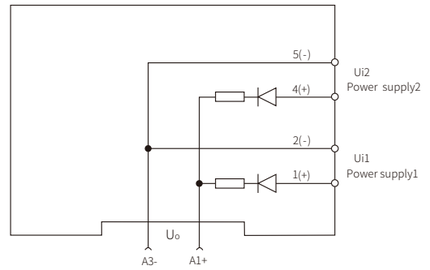
Used to deliver the power supply voltage to the DIN rail
Designed for application requiring redundant power
Supply rating 4 A or 8A, external fuse

	CZ3500-B
Input	
Rated Voltage (Ui)	21.5~35V DC
Power Dissipation	≤0.2W
Voltage Drop	≤1.5V
Output	
Output Voltage	U_O=U_I-1.5V
Output Current	Built-in 5A fuse：≤4A Built-in 10A fuse：≤8A
Output to	Bus base
Status Indication	
Green LED	LED on: power supply is normal LED off: power supply failure
General Parameters	
Power Reverse Protection	Support
Isolation	Input and Output are not isolated
Ambient Temperature	-20℃~+60℃
Storage Temperature	-40℃~+80℃
Relative Humidity	10%~90%RH

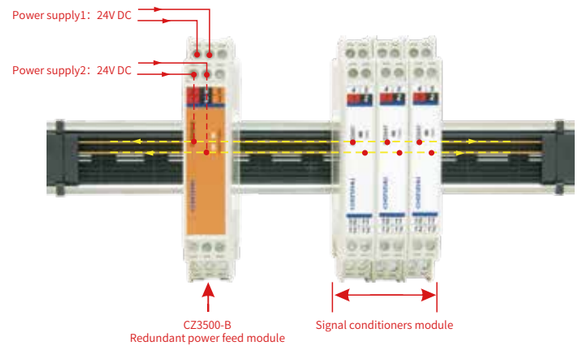
Dimensions



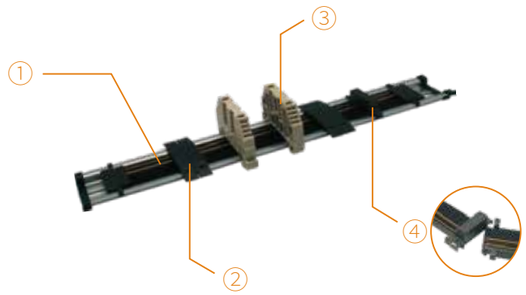
Connection



CZ3500-B

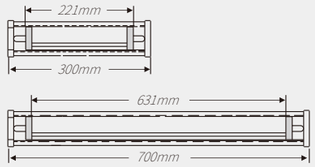


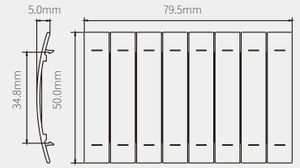
Accessories

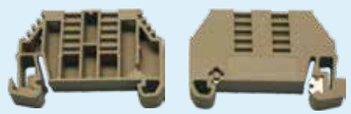
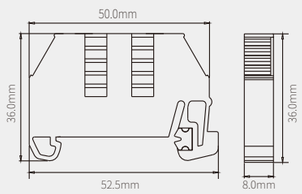


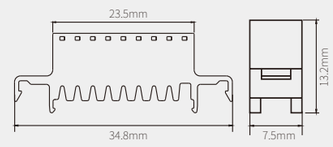
Componet:

① Bus base (including rail)
② Bus cover
③ End bracket
④ Expansion connector

Bus base (including rail)	Dimensions	Description		
		Module no.	CZBR-300	CZBR-700
		Rail length	300mm	700mm
		Installation length	221mm	631mm
		Number of rail slots	2	2

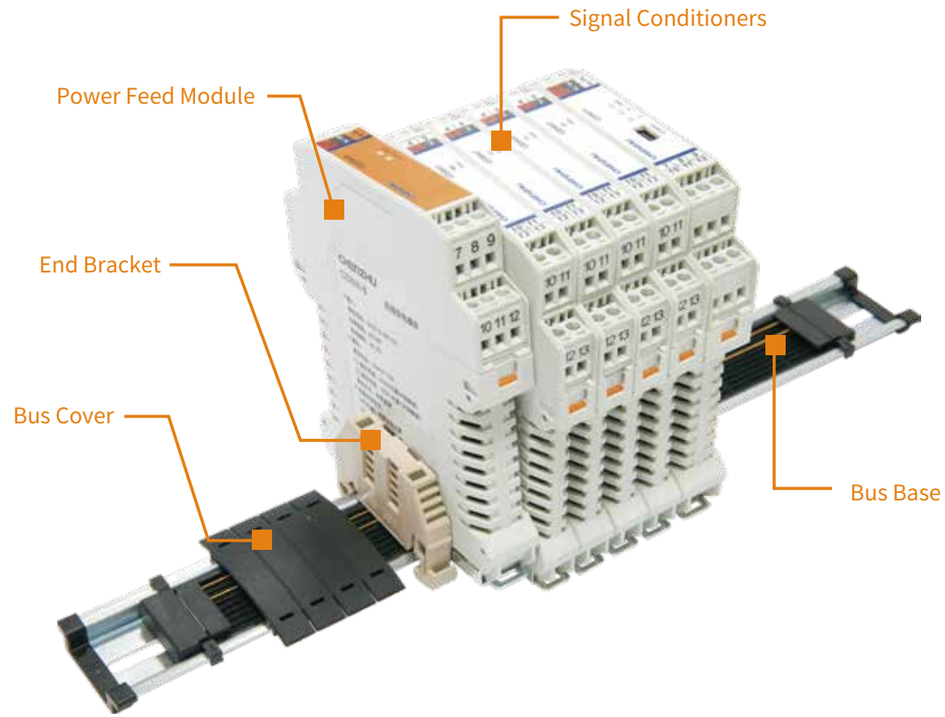
Bus cover	Dimensions	Description	
		Module no.	CZBR-C
		Function	Protect the exposed bus, can be split as needed

End bracket	Dimensions	Description	
		Module no.	CZBR-E
		Function	One set of two as standard, used to fix the module to prevent loosening

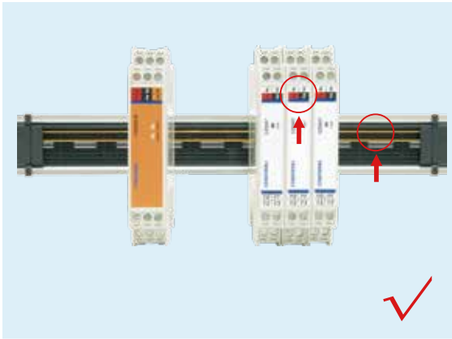
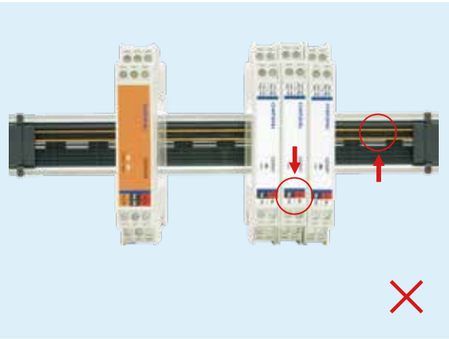
Expansion connector	Dimensions	Description	
		Module no.	CZBR-B
		Function	Connect the bus bases for extending

Installation Introduction

Bus Power Supply Structure



Module and Bus Base Connection

Right: The module label is oriented in the same direction as the bus base metal channel:	Wrong: The module label is oriented in the opposite direction as the bus base metal channel:
	

【Factory video @Youtube】

CZYB-E09.02/2022.07

Headquarters

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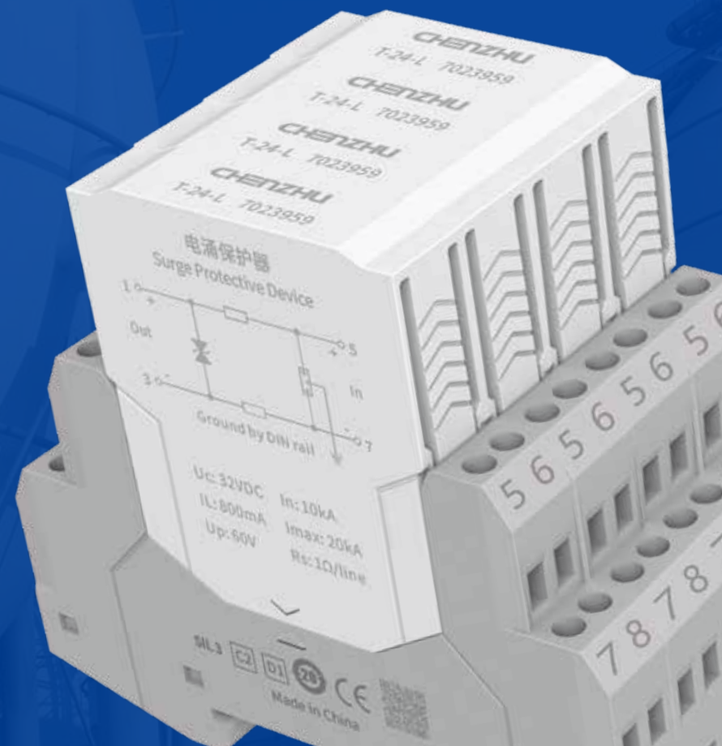
Tel: +60-3-80704739
E-mail: sales@chenzhu-asean.com
Web:www.chenzhu-asean.com

CHENZHU

Surge Protective Device（SPD）

5 Year WARRANTY

https://en.chenzhu-inst.com/



CHENZHU COMPANY OVERVIEW

CHENZHU' s headquarter is located at Shanghai, China, with an area of 8500m².

Shanghai Chenzhu Instrument Co,Ltd. was founded in April, 2002, who was originated from Shanghai Institute of Process Automation Instrumentation. CHENZHU is a professional company with core expertise of R&D, manufacturing and sale service of high quality safety products, such as isolated barriers, signal conditioners, surge protective devices, safety relays etc.

MANAGEMENT SYSTEMS

ISO9001

ISO14001

ISO45001

IECEx QUALITY ASSESSMENT

R&D Strength

Based on ISO/IEC/GB standards, CHENZHU has established the professional laboratory which is applied up to 70 test capabilities and verification items in CHENZHU's safety electrical products' development process.

R&D Team
28%
Work Force

R&D Investment
11%
of Sale Revenue

Innovation
110+
Patents

Testing Facility
80+
Capabilities

Smart Factory

CHENZHU factory is continually driven by lean management and flexible production. By our strict quality examination, CHENZHU ensures the production meets the design specification and satisfies our customers.

Factory
3500㎡
In total

Max Cap.
2,000,000pcs
Year

Sales Volume
1,080,000pcs
In 2021

Lean Production
10+
Years' experience

Test Verification of Conformity

Verification Number: 181200538SHA-V1

CE Certification

FUNCTIONAL SAFETY CERTIFICATE

This is to certify that the

Surge Protective Devices CZLBX-48 and CZLBX-48-S series

manufactured by

SHANGHAI CHENZHU INSTRUMENT CO., LTD.

Floor 7~8, Building 6, No. 201,
Minyi Road, Songjiang District,
Shanghai 201612, China

have been assessed by Sira Certification Service with reference to the CASS methodologies and found to meet the requirements of

IEC 61508:2010
Routes 1_H & 1_S
Systematic Capability (SC3)

as an element/subsystem suitable for use in safety related systems performing safety functions up to and including

SIL 3 capable with HFT=0 (1oo1)*

* The SIL3 result has taken into consideration external diagnostics that may be available when the SPD is integrated into a SIS. The hardware/software failures of the assumed diagnostics is outside the scope of this certification and must be considered at system level by the integrator.

This certificate does not waive the need for further functional safety verification to establish the achieved Safety Integrity Level (SIL) of the safety related system

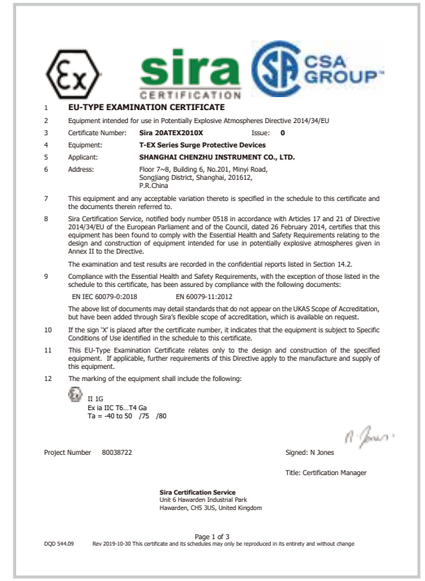
SIL Certification

IECEx TEST REPORT COVER

ExTR Reference Number	GM/CQM/ExTR15.0001/00
ExTR Free Reference Number	CQM/MP/ExTR15.0001
Complied by + signature (ExTL)	Lu Gao
Reviewed by + signature (ExTL)	Huang Yongwei
Reviewed by + signature (ExCB)	Ge Qing
Approved by + signature (ExCB)	Zhang Wei
Date of issue	2015-03-30
Ex Testing Laboratory (ExTL)	Shanghai Inspection and Testing Institute of Instruments and Automatic Systems(SITIAIS) National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation(NSPSI)
Address	103 Cao Bei Road, Shanghai 200233, China
Ex Certification Body (ExCB)	China Quality Mark Certification Group Co., Ltd.
Address	No. 33, Zongguang Road, Haidian District, Beijing City, China
Applicant's name	Shanghai Chenzhu Instrument Co. Ltd
Address	Building 6, 201 West Road, Caohejing Development Zone, Songjiang District, Shanghai, 201612, P.R. China
Standards assessed with the ExTR package	IEC 60079-0:2011 IEC 60079-11:2011 IEC 60079-26:2006
Clauses considered	All clauses considered
Test procedure	IECEx System
Test Report Form Number	ExTR Cover, 6 released 2014-01
Test item description	Surge Protective Device
Model/type reference	CZLBX-48*
Code (e.g. Ex __ IIC T__)	Ex ia IIC T4~T6 Ga
Rating	Safe parameters refer to the General Product Information
All testing fully performed by ExTL (Yes) or shift of ExTL additional data	

Instructions for Extended Use of ExTR Covers
An ExTR Cover is the sole top-level document to associate together all other parts of an IECEx Test Report (ExTR) package. An ExTR package is comprised of an ExTR Cover and one or more associated ExTR documents (which may include Ex Test Reports, ExTR Addendums and ExTR of Technical Differences). All ExTR package documents are compiled and reviewed by the ExTL. The issuing ExCB indicates final approval of the overall ExTR package on the ExTR Cover.

IECEx Certification



sira CERTIFICATION · CSA GROUP

1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 20ATEX2010X** Issue: **0**

4 Equipment: **T-EX Series Surge Protective Devices**

5 Applicant: **SHANGHAI CHENZHU INSTRUMENT CO., LTD.**

6 Address: Floor 7~8, Building 6, No.201, Minyi Road, Songjiang District, Shanghai, 201612, P.R.China

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-11:2012

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

II 1G
Ex ia IIC T6...T4 Ga
Ta = -40 to 50 /75 /80

Project Number 80038722

Signed: N Jones

Title: Certification Manager

Sira Certification Service
Unit 6 Hawarden Industrial Park
Hawarden, CH5 3US, United Kingdom

Page 1 of 3

DQD 544.09 Rev 2019-10-30 This certificate and its schedules may only be reproduced in its entirety and without change

ATEX Certification

防爆合格证

证号：GYB19.1101X

由 上海振竹仪表有限公司 制造的产品：

名 称 浪涌保护器

型号规格 CZLBX-48-※

防爆标志 Ex ia IIC T6...T4 Ga

产品标准 /

图样编号 CZLBX-48.0, CZLBX-48-3.0, CZLBX-48-4.0

检测样品及技术文件的审查和样品检验，确认上述产品符合 GB 3836.1-2010, GB 3836.4-2010, GB 3836.20-2010 标准，特颁发此证。

本证书有效期：2019 年 2 月 1 日至 2024 年 1 月 31 日

备注：

站长

国家仪器仪表防爆安全监督检验站

二〇一九 年 二 月 一 日

NEPSI Certification

型式试验报告

Type Test Report

No. L20200421

产品名称：电话和信号网络的电涌保护器

型 号：T-5-L，T-5-L3，T-5-L4，T-24-L，T-24-L3，T-24-L4，T-5-EX-L，T-5-EX-L3，T-5-EX-L4，T-24-EX-L，T-24-EX-L3，T-24-EX-L4，T-24，T-24-LF，T-24-LF1，T-24-L3F，T-5-LF，T-5-LF1，T-5-L3F

受检单位：上海振竹仪表有限公司

报告签发日期：2020.06.18

上海市防雷中心防雷产品测试中心

Type Test Report

发明专利证书

Patent

太平洋保险 CPIC

产品责任险保险单

（副本）

Product Liability Insurance

T Series Functional SPD

SPD for signal

- 12.5mm width
- 2-wire,3-wire,4-wire is optional
- Hot pluggable

SPD for power

- 18mm/P width
- T2: 40~80kA (8/20μs)
- Short circuit withstand-ing：1000A

CZLB Series Classical SPD

SPD for signal

- 7.6mm width
- Ground via terminal or DIN 35mm rail

SPD for power

- 18mm/P width
- T2: 40kA (8/20μs)
- T1: 15kA (10/350μs)

CZLBX Series Screw Mounting SPD

- Intrinsic safety certification;explosion proof electrial product certification
- Various of thread specification is optional
- 304 or 316 stainless steel housing is optional

iFL Series Network SPD

- Fully aluminium alloy housing, good electromagnetic shielding
- FE、GE、PoE、wireless is optional
- Grounded by DIN rail or screw terminals

Catalogue

T series SPD for signal

Model	Order No.	Wiring	Load current I_L	Max.operating voltage U_C	Nominal discharge current In(8/20μs)	Impulse current limp(10/350μs)	Protection	Page
T-5-EX-L	7086993	2	500mA	6V DC	10kA	2.5kA	IS，TC、RS-485、CAN	9
T-5-EX-L3	7025543	3	500mA	6V DC	10kA	2.5kA	IS，RTD	9
T-5-EX-L4	7019501	4	500mA	6V DC	10kA	2.5kA	IS，RTD、TC、RS-422	9
T-24-EX-L	7096962	2	500mA	32V DC	10kA	2.5kA	IS，AI、AO、DI、DO	10
T-24-EX-L3	7097610	3	500mA	32V DC	10kA	2.5kA	IS，AI、AO、DI、DO、RS-232	10
T-24-EX-L4	7040569	4	500mA	32V DC	10kA	2.5kA	IS，AI、AO、DI、DO	10
T-5-L	7099647	2	800mA	6V DC	10kA	2.5kA	TC、RS-485、CAN	11
T-5-L3	7050235	3	800mA	6V DC	10kA	2.5kA	RTD	11
T-5-L4	7029162	4	800mA	6V DC	10kA	2.5kA	RTD、TC、RS-422	11
T-24-L	7023959	2	800mA	32V DC	10kA	2.5kA	AI、AO、DI、DO	12
T-24-L3	7091758	3	800mA	32V DC	10kA	2.5kA	AI、AO、DI、DO、RS-232	12
T-24-L4	7074245	4	800mA	32V DC	10kA	2.5kA	AI、AO、DI、DO	12

T series SPD for power

Model	Order No.	Max.operating voltage U_C	Recommended backup fuse	Nominal discharge current In(8/20μs)	Max. discharge current Imax(8/20μs)	Protection	Remote signaling	Page
T-24	7062371	58VDC/40VAC	–	10kA	20kA	24VDC power (＜10A)	–	13
T2-24	7073945	90VDC/60VAC	80A gG	20kA	40kA	24VDC power	–	14
T2-24F	7093094	90VDC/60VAC	80A gG	20kA	40kA	24VDC power	√	14
T2-110	7089524	180VDC/120VAC	80A gG	20kA	40kA	110VDC power	–	14
T2-110F	7062355	180VDC/120VAC	80A gG	20kA	40kA	110VDC power	√	14
T2-220	7065567	320VDC/220VAC	80A gG	20kA	40kA	220VDC power	–	14
T2-220F	7011000	320VDC/220VAC	80A gG	20kA	40kA	220VDC power	√	14
T2-1000	7053964	1000VDC	80A gG	20kA	40kA	1000VDC PV	–	15
T2-1000F	7065508	1000VDC	80A gG	20kA	40kA	1000VDC PV	√	15
T2-1500	7094994	1500VDC	80A gG	20kA	40kA	1500VDC PV	–	15
T2-1500F	7067731	1500VDC	80A gG	20kA	40kA	1500VDC PV	√	15
T2-40/2P	7067699	385VAC	80A gG	20kA	40kA	TN System	–	16
T2-40/2PF	7062709	385VAC	80A gG	20kA	40kA	TN System	√	16
T2-40/3P	7079704	385VAC	80A gG	20kA	40kA	IT、TN-C System	–	16
T2-40/3PF	7046181	385VAC	80A gG	20kA	40kA	IT、TN-C System	√	16
T2-40/4P	7085466	385VAC	80A gG	20kA	40kA	TN-S System	–	16
T2-40/4PF	7018432	385VAC	80A gG	20kA	40kA	TN-S System	√	16
T2-40/1P	7056020	385VAC	80A gG	20kA	40kA	Single line	–	17
T2-40/1PF	7031533	385VAC	80A gG	20kA	40kA	Single line	√	17
T2-40/1P+1	7032273	385VAC	80A gG	20kA	40kA	TT System	–	17
T2-40/1P+1F	7070280	385VAC	80A gG	20kA	40kA	TT System	√	17
T2-40/3P+1	7085025	385VAC	80A gG	20kA	40kA	TT System	–	17
T2-40/3P+1F	7081984	385VAC	80A gG	20kA	40kA	TT System	√	17
T2-80/2P	7030066	385VAC	125A gG	40kA	80kA	TN System	–	18
T2-80/2PF	7066780	385VAC	125A gG	40kA	80kA	TN System	√	18
T2-80/3P	7025082	385VAC	125A gG	40kA	80kA	IT、TN-C System	–	18
T2-80/3PF	7038693	385VAC	125A gG	40kA	80kA	IT、TN-C System	√	18
T2-80/4P	7018734	385VAC	125A gG	40kA	80kA	TN-S System	–	18
T2-80/4PF	7088870	385VAC	125A gG	40kA	80kA	TN-S System	√	18
T2-80/1P	7077138	385VAC	125A gG	40kA	80kA	Single line	√	19
T2-80/1PF	7012410	385VAC	125A gG	40kA	80kA	Single line	√	19
T2-80/1P+1	7015677	385VAC	125A gG	40kA	80kA	TT System	–	19
T2-80/1P+1F	7042357	385VAC	125A gG	40kA	80kA	TT System	√	19
T2-80/3P+1	7055729	385VAC	125A gG	40kA	80kA	TT System	–	19
T2-80/3P+1F	7058261	385VAC	125A gG	40kA	80kA	TT System	√	19
T2-40/700/2P	7031662	700VAC	80A gG	20kA	40kA	TN System	–	20
T2-40/700/2PF	7087013	700VAC	80A gG	20kA	40kA	TN System	√	20
T2-40/700/3P	7066877	700VAC	80A gG	20kA	40kA	IT、TN-C System	–	20
T2-40/700/3PF	7028674	700VAC	80A gG	20kA	40kA	IT、TN-C System	√	20

Model	Order No.	Max.operating voltage U_C	Recommended backup fuse	Nominal discharge current In(8/20μs)	Max. discharge current Imax(8/20μs)	Protection	Remote signaling	Page
T2-40/700/4P	7087771	700VAC	80A gG	20kA	40kA	TN-S	–	20
T2-40/700/4PF	7020165	700VAC	80A gG	20kA	40kA	TN-S	√	20
T2-40/700/1P+1	7062817	700VAC	80A gG	20kA	40kA	TT	–	21
T2-40/700/1P+1F	7033598	700VAC	80A gG	20kA	40kA	TT	√	21
T2-40/700/3P+1	7013762	700VAC	80A gG	20kA	40kA	TT	–	21
T2-40/700/3P+1F	7097406	700VAC	80A gG	20kA	40kA	TT	√	21

CZLB series SPD for signal

Model	Order No.	Wiring	Load current I_L	Max.operating voltage U_C	Nominal discharge current In(8/20μs)	Impulse current limp(10/350μs)	Protection	Page
CZLB-5(T2)	7051773	2	500mA	6V DC	10kA	2.5kA	IS，TC、RS-485、CAN	22
CZLB-5(R3)	7014195	3	500mA	6V DC	10kA	2.5kA	IS，RTD	22
CZLB-24(B2)	7090592	2	500mA	32V DC	10kA	2.5kA	IS，AI、AO、DI、DO	23
CZLB-24(B3)	7013226	3	500mA	32V DC	10kA	2.5kA	IS，AI、AO、DI、DO、RS-232	23

CZLB series SPD for power

Model	Order No.	Max.operating voltage U_C	Recommended backup fuse	Nominal discharge current In(8/20μs)	Max. discharge current Imax(8/20μs)	Protection	Remote signaling	Page
CZLB-24P	7059650	58VDC/40VAC	–	10kA	20kA	24VDC (＜10A)	–	24
CZLB-40/2P	7051402	385VAC	80A gG	20kA	40kA	TN System	–	24
CZLB-40/2PF	7028111	385VAC	80A gG	20kA	40kA	TN System	√	24
CZLB-40/3P	7061543	385VAC	80A gG	20kA	40kA	IT、TN-C System	–	25
CZLB-40/3PF	7023751	385VAC	80A gG	20kA	40kA	IT、TN-C System	√	25
CZLB-40/4P	7045781	385VAC	80A gG	20kA	40kA	TN-S System	–	25
CZLB-40/4PF	7094265	385VAC	80A gG	20kA	40kA	TN-S System	√	25
CZLB-40/1P+1	7047317	385VAC	80A gG	20kA	40kA	TT System	–	25
CZLB-40/1P+1F	7054943	385VAC	80A gG	20kA	40kA	TT System	√	25
CZLB-40/3P+1	7078829	385VAC	80A gG	20kA	40kA	TT System	–	26
CZLB-40/3P+1F	7091611	385VAC	80A gG	20kA	40kA	TT System	√	26
CZLB-160/440/2P	7024977	440VAC	200A gG	80kA	160kA	TN System	–	26
CZLB-160/440/3P	7069757	440VAC	200A gG	80kA	160kA	IT、TN-C System	√	26
CZLB-160/440/4P	7086079	440VAC	200A gG	80kA	160kA	TN-S System	–	27
CZLB-160/440/1P+1	7053172	440VAC	200A gG	80kA	160kA	TT System	–	27
CZLB-160/440/3P+1	7083196	440VAC	200A gG	80kA	160kA	TT System	–	27

CZLBX Series Screw Mounting SPD

Model	Order No.	Thread	Wiring	Max. operate voltage U_C	Nominal discharge current In(8/20μs)	Impulse current limp(10/350μs)	Protection	Page
CZLBX-48	7041233…	1/2" NPT…	2	48V DC	10kA	2.5kA	RTD、RS-485、AI、AO、DI、DO	29
CZLBX-48-3	7024477…	1/2" NPT…	3	48V DC	10kA	2.5kA	RTD、RS-485、AI、AO、DI、DO	29
CZLBX-48-4	7060125…	1/2" NPT…	4	48V DC	10kA	2.5kA	RTD、RS-485、AI、AO、DI、DO	29

iFL Series Network SPD

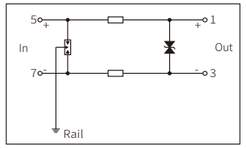
Model	Order No.	Max. operate voltage U_C	Nominal discharge current In(8/20μs)	Protection	Page
iFL-RJ45	7079893	8VDC	2kA	Network	30
iFL-RJ45-2	7978591	8VDC/58VDC	10kA	Network，24VDC power 2 in 1	30
iFL-RJ45-2	7054623	8VDC/275VAC	3kA	Network，220VAC power 2 in 1	30
iFL-RJ45/PoE	7069852	8VDC/60VDC	2kA	PoE	31
iFL-RJ45/GigE	7058560	60VDC	2kA	GigE	31
iFL-RF	7043433	24VDC	10kA	Wireless	32

For 5V signal(IS system)

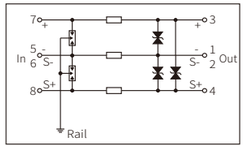
Features

- 12.5mm width
- Pluggable protection module
- Ground via DIN 35mm rail

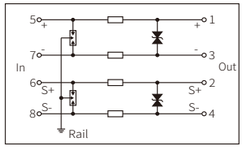
T-5-EX-L



T-5-EX-L3

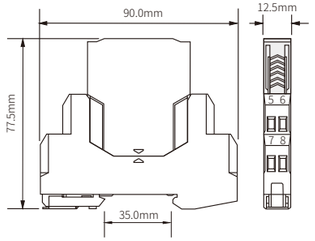


T-5-EX-L4

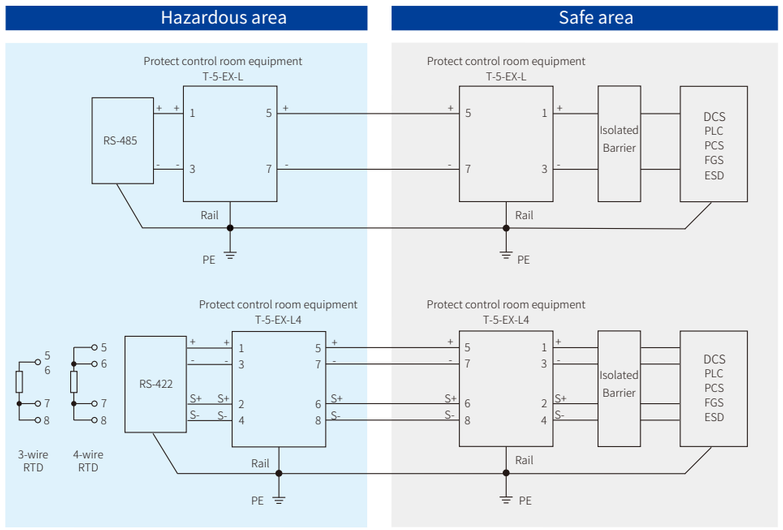


Technical data		2-wire	3-wire	4-wire
Max. continuous operating voltage U_c		6V DC	6V DC	6V DC
Nominal operating current I_L		500mA	500mA	500mA
Resistance(per line)		1Ω	1Ω	1Ω
Nominal discharge current I_n(8/20μs)		10kA	10kA	10kA
Max. discharge current I_{max}(8/20μs)		20kA	20kA	20kA
Impulse current I_{imp}(10/350μs)		2.5kA	2.5kA	2.5kA
Voltage protection level U_p(8/20μs)	L-L/L-G	40V/600V	40V/600V	40V/600V
Voltage protection level U_p (1kV/μs)	L-L/L-G	20V/600V	20V/600V	20V/600V
Bandwidth(-0.5dB)		40MHz	40MHz	40MHz
Response time		1ns	1ns	1ns
Residual current I_{PE}		<10μA	<10μA	<10μA
Housing protection grade(IEC60529)		IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)		PA66/V0	PA66/V0	PA66/V0
Testing standard		GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification				
Ex marking		II 1G Ex ia IIC T6…T4 Ga	II 1G Ex ia IIC T6…T4 Ga	II 1G Ex ia IIC T6…T4 Ga
Certificate Number		Sira 20ATEX2010X IECEx SIR 20.0018X	Sira 20ATEX2010X IECEx SIR 20.0018X	Sira 20ATEX2010X IECEx SIR 20.0018X
Entity Parameters		Ui=6V; Ii=500mA; Pi=5.32W; Ci≈0μF; Li≈0mH	Ui=6V; Ii=500mA; Pi=5.32W; Ci≈0μF; Li≈0mH	Ui=6V; Ii=500mA; Pi=5.32W; Ci≈0μF; Li≈0mH
Functional safety certification		SIL3	SIL3	SIL3
Type test		Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number		7086993	7025543	7019501

Dimensions



Typical applications

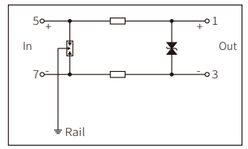


For 24V signal(IS system)

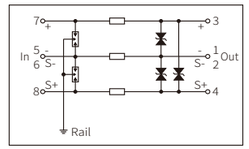
Features

- 12.5mm width
- Pluggable protection module
- Ground via DIN 35mm rail

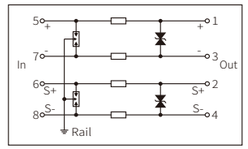
T-24-EX-L



T-24-EX-L3

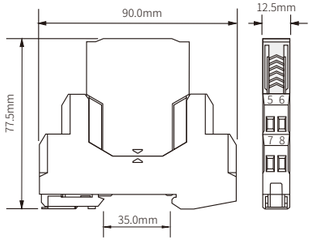


T-24-EX-L4

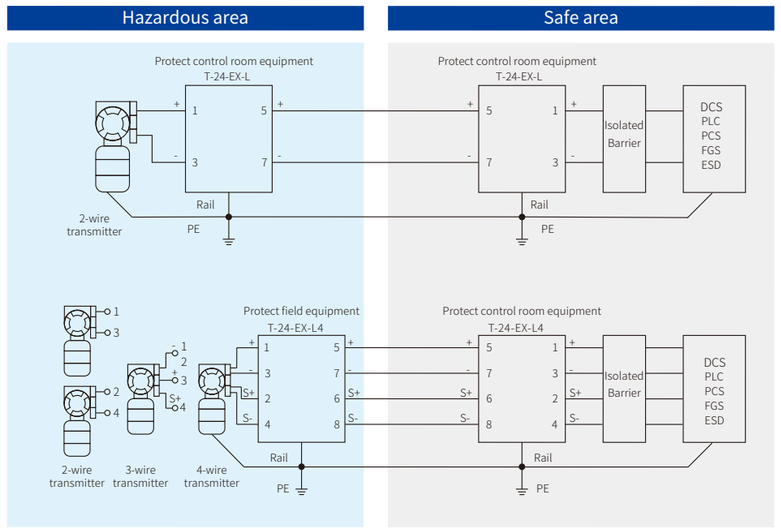


Technical data		2-wire	3-wire	4-wire
Max. continuous operating voltage U_c		32V DC	32V DC	32V DC
Nominal operating current I_L		500mA	500mA	500mA
Resistance(per line)		1Ω	1Ω	1Ω
Nominal discharge current I_n(8/20μs)		10kA	10kA	10kA
Max. discharge current I_{max}(8/20μs)		20kA	20kA	20kA
Impulse current I_{imp}(10/350μs)		2.5kA	2.5kA	2.5kA
Voltage protection level U_p(8/20μs)	L-L/L-G	60V/600V	60V/600V	60V/600V
Voltage protection level U_p (1kV/μs)	L-L/L-G	40V/600V	40V/600V	40V/600V
Bandwidth(-0.5dB)		40MHz	40MHz	40MHz
Response time		1ns	1ns	1ns
Residual current I_{PE}		<1μA	<1μA	<1μA
Housing protection grade(IEC60529)		IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)		PA66/V0	PA66/V0	PA66/V0
Testing standard		GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification				
Ex marking		II 1G Ex ia IIC T6…T4 Ga	II 1G Ex ia IIC T6…T4 Ga	II 1G Ex ia IIC T6…T4 Ga
Certificate Number		Sira 20ATEX2010X IECEx SIR 20.0018X	Sira 20ATEX2010X IECEx SIR 20.0018X	Sira 20ATEX2010X IECEx SIR 20.0018X
Entity Parameters		Ui=30V;Ii=500mA;Pi=5.32W; Ci≈0μF;Li≈0mH	Ui=30V;Ii=500mA;Pi=5.32W; Ci≈0μF;Li≈0mH	Ui=32V;Ii=500mA;Pi=5.32W; Ci≈0μF;Li≈0mH
Functional safety certification		SIL3	SIL3	SIL3
Type test		Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number		7096962	7097610	7040569

Dimensions



Typical applications

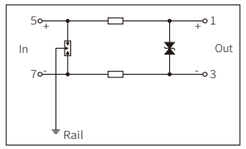


For 5V signal

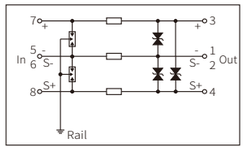
Features

- 12.5mm width
- Pluggable protection module
- Ground via DIN 35mm rail

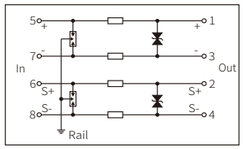
T-5-L



T-5-L3

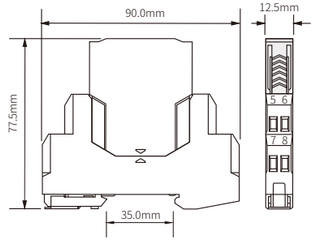


T-5-L4



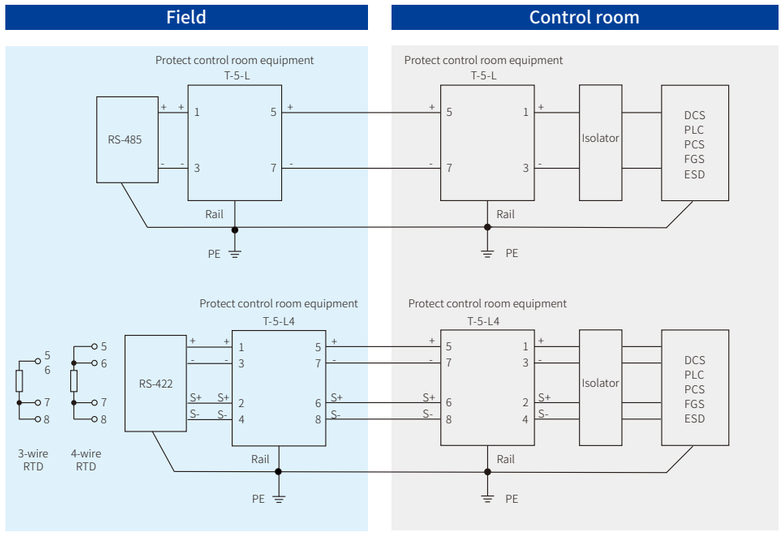
Technical data		2-wire	3-wire	4-wire
Max. continuous operating voltage U_c		6V DC	6V DC	6V DC
Nominal operating current I_L		800mA	800mA	800mA
Resistance(per line)		1Ω	1Ω	1Ω
Nominal discharge current I_n(8/20μs)		10kA	10kA	10kA
Max. discharge current I_{max}(8/20μs)		20kA	20kA	20kA
Impulse current I_{imp}(10/350μs)		2.5kA	2.5kA	2.5kA
Voltage protection level U_p(8/20μs)	L-L/L-G	40V/600V	40V/600V	40V/600V
Voltage protection level U_p (1kV/μs)	L-L/L-G	20V/600V	20V/600V	20V/600V
Bandwidth(-0.5dB)		40MHz	40MHz	40MHz
Response time		1ns	1ns	1ns
Residual current I_{PE}		<10μA	<10μA	<10μA
Housing protection grade(IEC60529)		IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)		PA66/V0	PA66/V0	PA66/V0
Testing standard		GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification				
Functional safety certification		SIL3	SIL3	SIL3
Type test		Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number		7099647	7050235	7029162

Dimensions



SIL3 IEC61508 CE

Typical applications

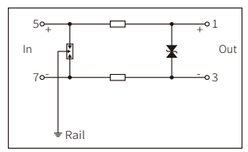


For 24V signal

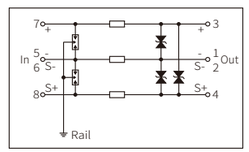
Features

- 12.5mm width
- Pluggable protection module
- Ground via DIN 35mm rail

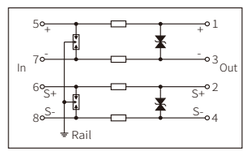
T-24-L



T-24-L3

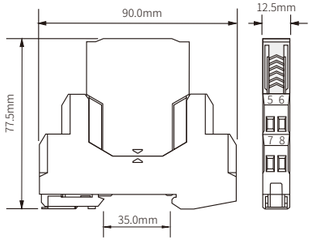


T-24-L4



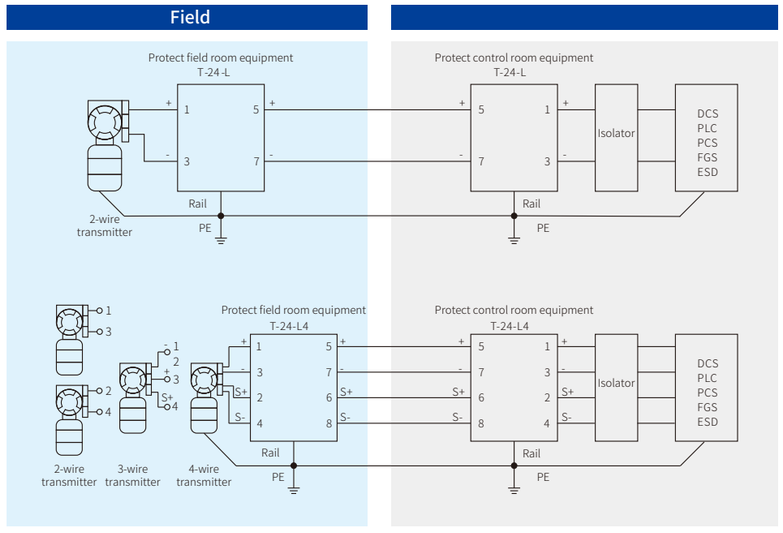
Technical data	2-wire	3-wire	4-wire
Nominal operating voltage U_n	24V DC	24V DC	24V DC
Max. continuous operating voltage U_c	32V DC	32V DC	32V DC
Nominal operating current I_L	800mA	800mA	800mA
Nominal discharge current I_n(8/20μs)	10kA	10kA	10kA
Impulse current I_{imp}(10/350μs)	2.5kA	2.5kA	2.5kA
Total impulse current I_{imp}(10/350μs)	5kA	7.5kA	10kA
Voltage protection level $U_p(I_n)$	L-G:1.3kV	L-G:1.3kV	L-G:1.3kV
Voltage protection level $U_p(I_{imp})$	L-G:70V	L-G:70V	L-G:70V
Voltage protection level U_p (1kV/μs)	L-L:40V,L-G:90V	L-L:40V,L-G:90V	L-L:40V,L-G:90V
Bandwidth(-0.5dB)	40MHz	40MHz	40MHz
Response time	L-L:1ns,L-G:200ns	L-L:1ns,L-G:200ns	L-L:1ns,L-G:200ns
Resistance(per line)	1Ω	1Ω	1Ω
Residual current I_{PE}	<1μA	<1μA	<1μA
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification			
Functional safety certification	SIL3	SIL3	SIL3
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	7023959	7091758	7074245

Dimensions



SIL3 IEC61508 CE

Typical applications

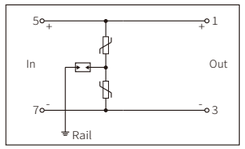


For DC power

Features

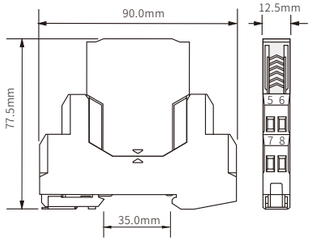
- 12.5mm width
- Pluggable protection module
- Ground via DIN 35mm rail

T-24

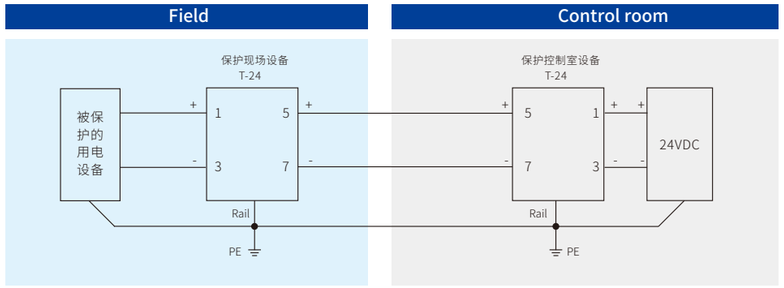


Technical data	
Max. continuous operating voltage U_c	58VDC/40VAC
Nominal operating current I_L	10A
Nominal discharge current I_n(8/20μs)	10kA
Max. discharge current I_{max}(8/20μs)	20kA
Impulse current I_{imp}(10/350μs)	2.5kA
Voltage protection level U_p	800V
Recommended grounding cable	2.5mm²
Residual current I_{PE}	<20μA
Response time	25ns
Housing protection grade(IEC60529)	IP 20
Housing material/Flammability rating(UL94)	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21
Certification	
Type test	Shanghai Lightning Protection Center
Order number	7062371

Dimensions



Typical applications

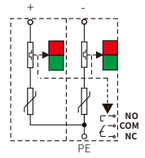


For DC power

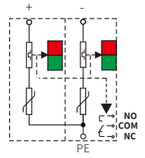
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

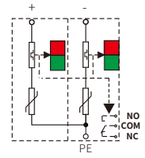
T2-24
T2-24F



T2-110
T2-110F

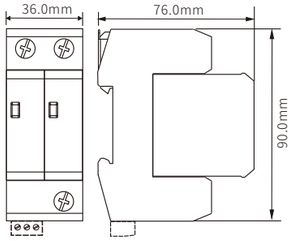


T2-220
T2-220F



Technical data			
Max. continuous operating voltage U_c	90VDC/60VAC	180VDC/120VAC	320VDC/220VAC
Nominal discharge current I_n(8/20μs)	20kA	20kA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	40kA	40kA
Voltage protection level U_p	600V	800V	1.2kV
Recommended backup fuse	80A gG	80A gG	80A gG
Short-circuit current rating I_{SCCR}	1000A	1000A	1000A
Recommended grounding cable	4~35mm²	4~35mm²	4~35mm²
Response time	25ns	25ns	25ns
Residual current	<10μA	<10μA	<10μA
Remote alarm output（model F）	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	T2-24：7073945 T2-24F：7093094	T2-110：7089524 T2-110F：7062355	T2-220：7065567 T2-220F：7011000

Dimensions（18mm/P）

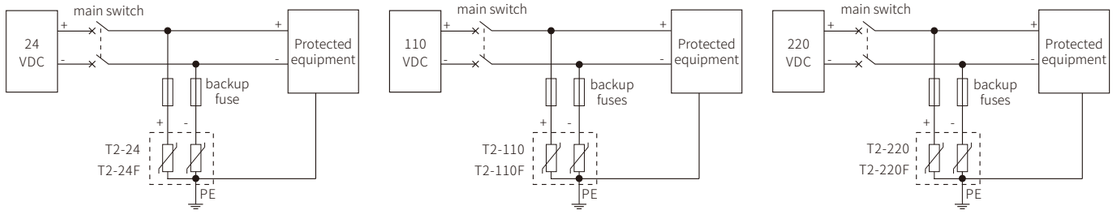


76.0mm×90.0mm×36.0mm

76.0mm×90.0mm×36.0mm

76.0mm×90.0mm×36.0mm

Typical applications



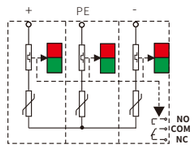
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For DC power

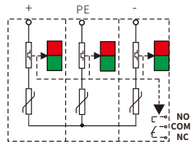
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

T2-1000
T2-1000F

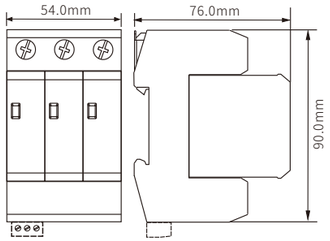


T2-1500
T2-1500F



Technical data		
Max. continuous operating voltage U_c	1000VDC	1500VDC
Nominal discharge current I_n(8/20μs)	20kA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	40kA
Voltage protection level U_p	4kV	6kV
Short-circuit current rating Iscpv	1000A	1000A
Recommended backup fuse	80A gG	80A gG
Recommended grounding cable	4~35mm²	4~35mm²
Response time	25ns	25ns
Residual current	<10μA	<10μA
Remote alarm output（model F）	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0
Testing standard	GB/T 18802.31/IEC 61643-31	GB/T 18802.31/IEC 61643-31
Certification		
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	T2-1000：7053964	T2-1500：7094994
	T2-1000F：7065508	T2-1500F：7067731

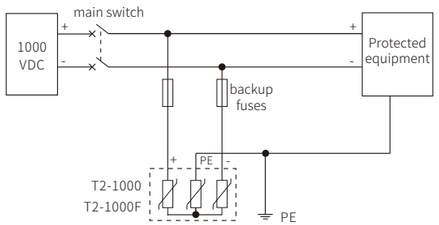
Dimensions（18mm/P）

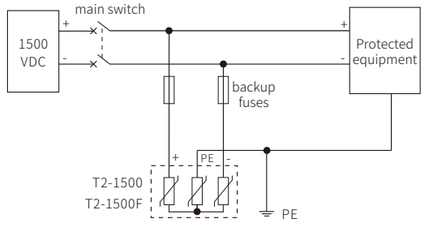


76.0mm×90.0mm×54.0mm

76.0mm×90.0mm×54.0mm

Typical applications





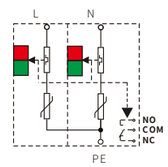
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For AC power(40kA)

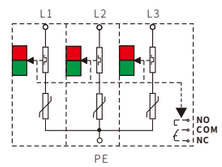
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

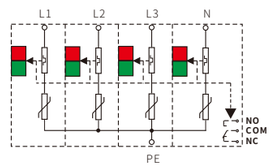
T2-40/2P
T2-40/2PF



T2-40/3P
T2-40/3PF

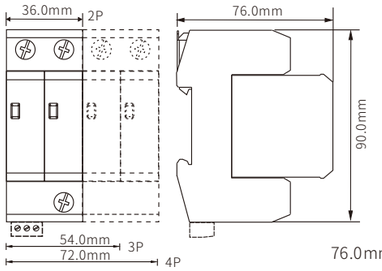


T2-40/4P
T2-40/4PF



Technical data			
Max. continuous operating voltage U_c	385VAC	385VAC	385VAC
Nominal discharge current I_n(8/20μs)	20kA	20kA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	40kA	40kA
Voltage protection level U_p	1.7kV	1.7kV	1.7kV
Recommended backup fuse	80A gG	80A gG	80A gG
Short-circuit current rating I_{SCCR}	1000A	1000A	1000A
Recommended grounding cable	4~35mm²	4~35mm²	4~35mm²
Response time	25ns	25ns	25ns
Residual current	<20μA	<20μA	<20μA
Remote alarm output（model F）	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Power supply system	Single phase（TN）	Three-phase four line（TN-C）	Three-phase five line（TN-S）
		Three-phase three line（IT）	
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	T2-40/2P：7067699	T2-40/3P：7079704	T2-40/4P：7085466
	T2-40/2PF：7062709	T2-40/3PF：7046181	T2-40/4PF：7018432

Dimensions（18mm/P）

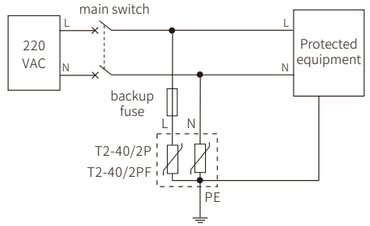


76.0mm×90.0mm×36.0mm

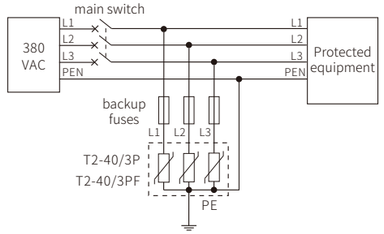
76.0mm×90.0mm×54.0mm

76.0mm×90.0mm×72.0mm

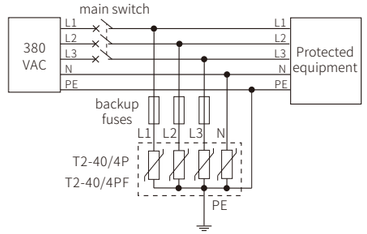
Typical applications



Single phase（TN）



Three-phase four line（TN-C）



Three-phase five line（TN-S）

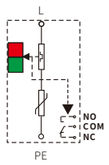
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For AC power(40kA)

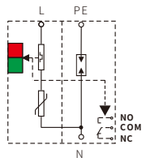
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with “F”

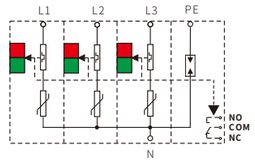
T2-40/1P
T2-40/1PF



T2-40/1P+1
T2-40/1P+1F

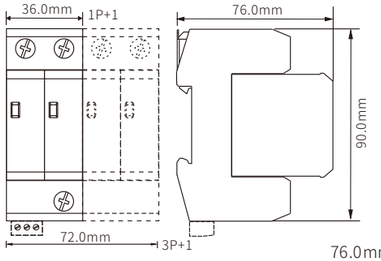


T2-40/3P+1
T2-40/3P+1F



Technical data		T2-80G module	T2-40 module	T2-80G module	T2-40 module
Max. continuous operating voltage U_c	385VAC	255VAC	385VAC	255VAC	385VAC
Nominal discharge current I_n(8/20μs)	20kA	40KA	20kA	40KA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	80kA	40kA	80kA	40kA
Voltage protection level U_p	1.7kV	1.2kV	1.7kV	1.2kV	1.7kV
Recommended backup fuse	80A gG		80A gG		80A gG
Short-circuit current rating I_{SCCR}	1000A		1000A		1000A
Recommended grounding cable	4~35mm²		4~35mm²		4~35mm²
Response time	25ns		25ns		25ns
Residual current	<20μA		<20μA		<20μA
Remote alarm output（model F）	250VAC/0.5A；24VDC/0.5A		250VAC/0.5A；24VDC/0.5A		250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)	IP 20		IP 20		IP 20
Housing material/Flammability rating(UL94)	PA66/V0		PA66/V0		PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11
Power supply system	Single line		Single phase（TT）		Three-phase four line（TT）
Certification					
Type test	Shanghai Lightning Protection Center		Shanghai Lightning Protection Center		Shanghai Lightning Protection Center
Order number	T2-40/1P：7056020		T2-40/1P+1：7032273		T2-40/3P+1：7085025
	T2-40/1PF：7031533		T2-40/1P+1F：7070280		T2-40/3P+1F：7081984

Dimensions（18mm/P）

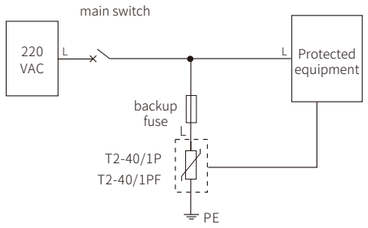


76.0mm×90.0mm×18.0mm

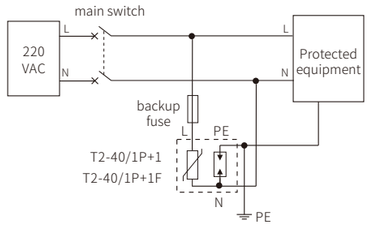
76.0mm×90.0mm×36.0mm

76.0mm×90.0mm×72.0mm

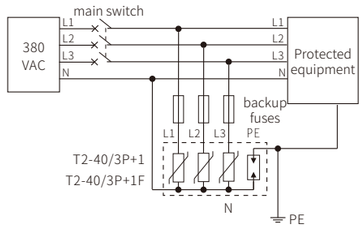
Typical applications



Single line



Single phase（TT）



Three-phase four line（TT）

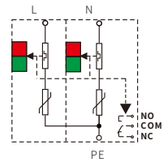
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For AC power(80kA)

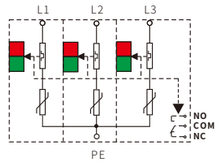
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with “F”

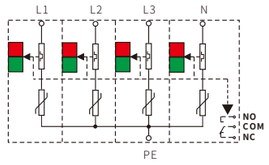
T2-80/2P
T2-80/2PF



T2-80/3P
T2-80/3PF

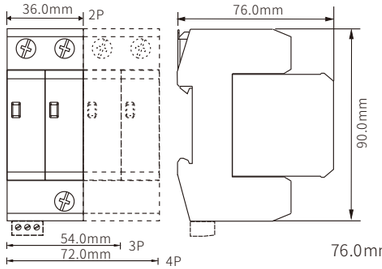


T2-80/4P
T2-80/4PF



Technical data			
Max. continuous operating voltage U_c	385VAC	385VAC	385VAC
Nominal discharge current I_n(8/20μs)	40kA	40kA	40kA
Max. discharge current I_{max}(8/20μs)	80kA	80kA	80kA
Voltage protection level U_p	2.0kV	2.0kV	2.0kV
Recommended backup fuse	125A gG	125A gG	125A gG
Short-circuit current rating I_{SCCR}	1000A	1000A	1000A
Recommended grounding cable	4~35mm²	4~35mm²	4~35mm²
Response time	25ns	25ns	25ns
Residual current	<20μA	<20μA	<20μA
Remote alarm output（model F）	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Power supply system	Single phase（TN）	Three-phase four line（TN-C） Three-phase three line（IT）	Three-phase five line（TN-S）
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	T2-80/2P：7030066	T2-80/3P：7025082	T2-80/4P：7018734
	T2-80/2PF：7066780	T2-80/3PF：7038693	T2-80/4PF：7088870

Dimensions（18mm/P）

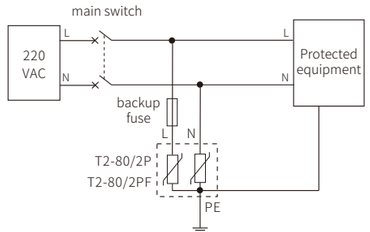


76.0mm×90.0mm×36.0mm

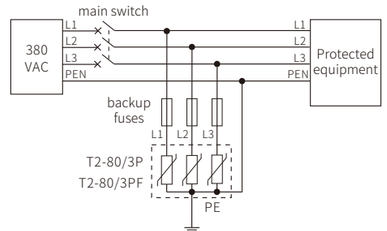
76.0mm×90.0mm×54.0mm

76.0mm×90.0mm×72.0mm

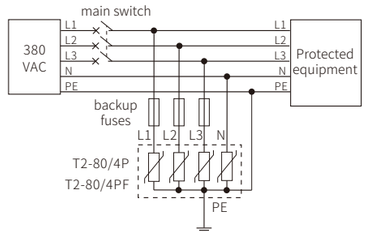
Typical applications



Single phase（TN）



Three-phase four line（TN-C）



Three-phase five line（TN-S）

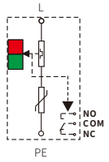
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For AC power(80kA)

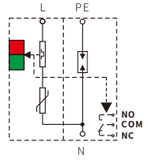
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

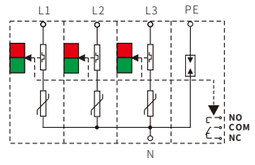
T2-80/1P
T2-80/1PF



T2-80/1P+1
T2-80/1P+1F

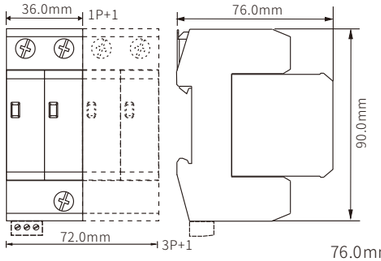


T2-80/3P+1
T2-80/3P+1F



Technical data		T2-80G module	T2-80 module	T2-80G module	T2-80 module
Max. continuous operating voltage U_c	385VAC	255VAC	385VAC	255VAC	385VAC
Nominal discharge current I_n(8/20μs)	40kA	40KA	40kA	40KA	40kA
Max. discharge current I_{max}(8/20μs)	80kA	80kA	80kA	80kA	80kA
Voltage protection level U_p	2.0kV	1.2kV	2.0kV	1.2kV	2.0kV
Recommended backup fuse	125A gG		125A gG		125A gG
Short-circuit current rating I_{SCCR}	1000A		1000A		1000A
Recommended grounding cable	4~35mm²		4~35mm²		4~35mm²
Response time	25ns		25ns		25ns
Residual current	<20μA		<20μA		<20μA
Remote alarm output（model F）	250VAC/0.5A；24VDC/0.5A		250VAC/0.5A；24VDC/0.5A		250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)	IP 20		IP 20		IP 20
Housing material/Flammability rating(UL94)	PA66/V0		PA66/V0		PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11
Power supply system	Single line		Single phase（TT）		Three-phase four line（TT）
Certification					
Type test	Shanghai Lightning Protection Center		Shanghai Lightning Protection Center		Shanghai Lightning Protection Center
Order number	T2-80/1P：7077138		T2-80/1P+1：7015677		T2-80/3P+1：7055729
	T2-80/1PF：7012410		T2-80/1P+1F：7042357		T2-80/3P+1F：7058261

Dimensions（18mm/P）

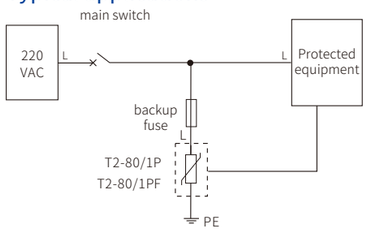


76.0mm×90.0mm×18.0mm

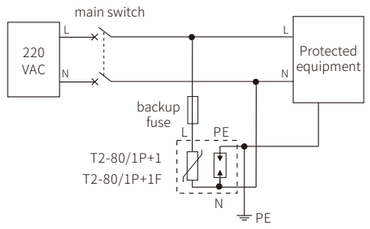
76.0mm×90.0mm×36.0mm

76.0mm×90.0mm×72.0mm

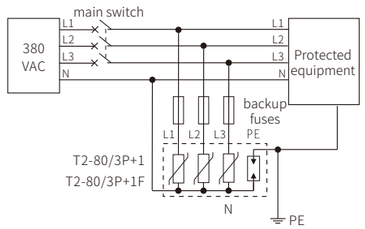
Typical applications



Single line



Single phase（TT）



Three-phase four line（TT）

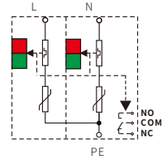
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For AC power(40kA)(400/690VAC)

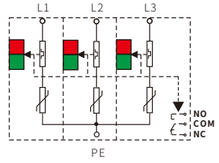
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

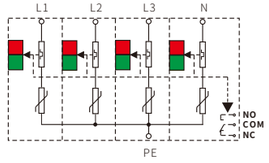
T2-40/700/2P
T2-40/700/2PF



T2-40/700/3P
T2-40/700/3PF

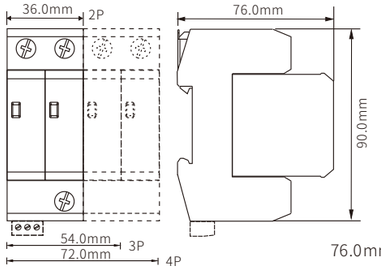


T2-40/700/4P
T2-40/700/4PF



Technical data			
Max. continuous operating voltage U_c	700VAC	700VAC	700VAC
Nominal discharge current I_n(8/20μs)	20kA	20kA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	40kA	40kA
Voltage protection level U_p	2.8kV	2.8kV	2.8kV
Recommended backup fuse	80A gG	80A gG	80A gG
Short-circuit current rating I_{SCCR}	1000A	1000A	1000A
Recommended grounding cable	4~35mm²	4~35mm²	4~35mm²
Response time	25ns	25ns	25ns
Residual current	<20μA	<20μA	<20μA
Remote alarm output（model F）	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Power supply system	Single phase（TN）	Three-phase four line（TN-C） Three-phase three line（IT）	Three-phase five line（TN-S）
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	T2-40/700/2P：7031662	T2-40/700/3P：7066877	T2-40/700/4P：7087771
	T2-40/700/2PF：7087013	T2-40/700/3PF：7028674	T2-40/700/4PF：7020165

Dimensions（18mm/P）

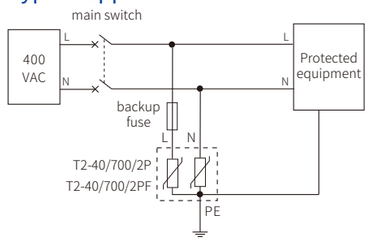


76.0mm×90.0mm×36.0mm

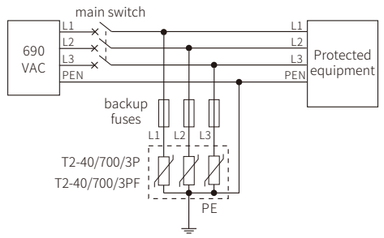
76.0mm×90.0mm×54.0mm

76.0mm×90.0mm×72.0mm

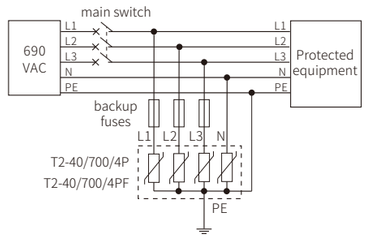
Typical applications



Single phase（TN）



Three-phase four line（TN-C）



Three-phase five line（TN-S）

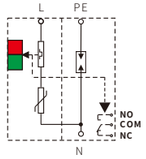
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For AC power(40kA)(400/690VAC)

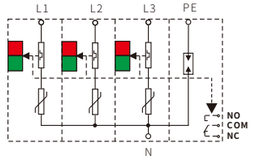
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

T2-40/700/1P+1
T2-40/700/1P+1F

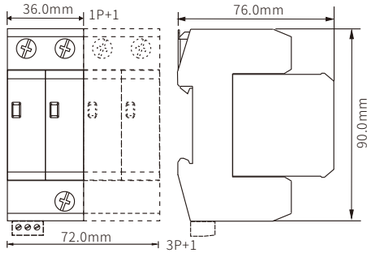


T2-40/700/3P+1
T2-40/700/3P+1F



Technical data	T2-80GH module	T2-40/700 module	T2-80GH module	T2-40/700 module
Max. continuous operating voltage U_c	2000VDC	700VAC	2000VDC	700VAC
Nominal discharge current I_n(8/20μs)	40KA	20kA	40KA	20kA
Max. discharge current I_{max}(8/20μs)	80kA	40kA	80kA	40kA
Voltage protection level U_p	3.5kV	2.8kV	3.5kV	2.8kV
Recommended backup fuse		80A gG		80A gG
Short-circuit current rating I_{SCCR}		1000A		1000A
Recommended grounding cable		4~35mm²		4~35mm²
Response time		25ns		25ns
Residual current		<20μA		<20μA
Remote alarm output（model F）		250VAC/0.5A；24VDC/0.5A		250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)		IP 20		IP 20
Housing material/Flammability rating(UL94)		PA66/V0		PA66/V0
Testing standard		GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11
Power supply system		Single phase（TT）		Three-phase four line（TT）
Certification				
Type test		Shanghai Lightning Protection Center		Shanghai Lightning Protection Center
Order number		T2-40/700/1P+1：7062817		T2-40/700/3P+1：7013762
		T2-40/700/1P+1F：7033598		T2-40/700/3P+1F：7097406

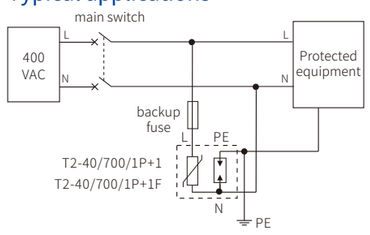
Dimensions（18mm/P）



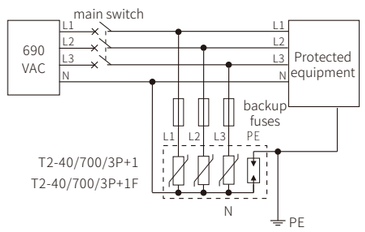
76.0mm×90.0mm×36.0mm

76.0mm×90.0mm×72.0mm

Typical applications



Single phase（TT）



Three-phase four line（TT）

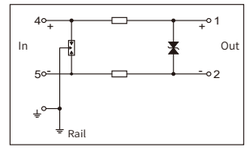
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For 5V signal(IS system)

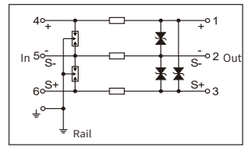
Features

- 7.6mm width
- Resistance per line:1Ω
- Ground viaterminal or DIN 35mm rail

CZLB-5(T2)

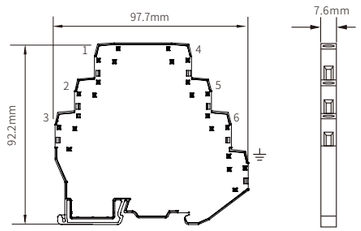


CZLB-5(R3)

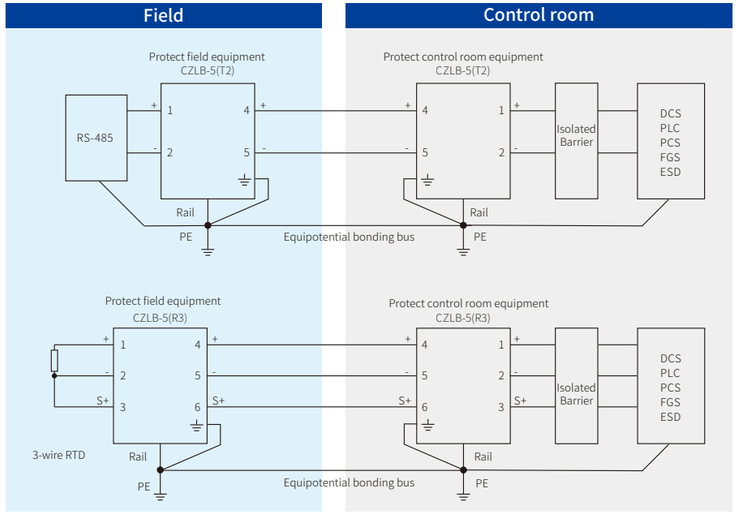


Technical data		2-wire	3-wire
Max. continuous operating voltage U_c		6V DC	6V DC
Nominal operating current I_L		500mA	500mA
Resistance(per line)		1Ω	1Ω
Nominal discharge current I_n(8/20μs)		10kA	10kA
Max. discharge current I_{max}(8/20μs)		20kA	20kA
Impulse current I_{imp}(10/350μs)		2.5kA	2.5kA
Voltage protection level U_p	L-L/L-G	40V/600V	40V/600V
Bandwidth (-0.5dB)		40MHz	40MHz
Response time		1ns	1ns
Residual current		＜10μA	＜10μA
Housing protection grade(IEC60529)		IP 20	IP 20
Housing material/Flammability rating(UL94)		PA66/V0	PA66/V0
Testing standard		GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification			
Ex marking		Ex ia IIC T4…T6 Ga	Ex ia IIC T4…T6 Ga
Certificate Number		See Certification for details	See Certification for details
Entity Parameters		Ui=6V; Ii=500mA; Pi=0.75W; Ci≈0μF; Li≈0mH	Ui=6V; Ii=500mA; Pi=0.75W; Ci≈0μF; Li≈0mH
Functional safety certification		SIL3	SIL3
Type t est		Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number		7051773	7014195

Dimensions



Typical applications

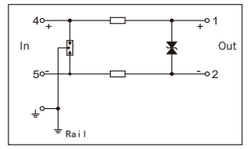


For 24V signal(IS system)

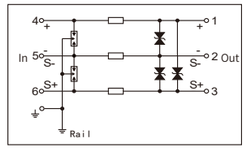
Features

- 7.6mm width
- Resistance per line:1Ω
- Ground viaterminal or DIN 35mm rail

CZLB-24(B2)

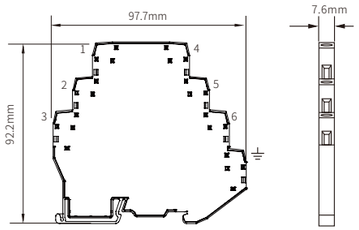


CZLB-24(B3)

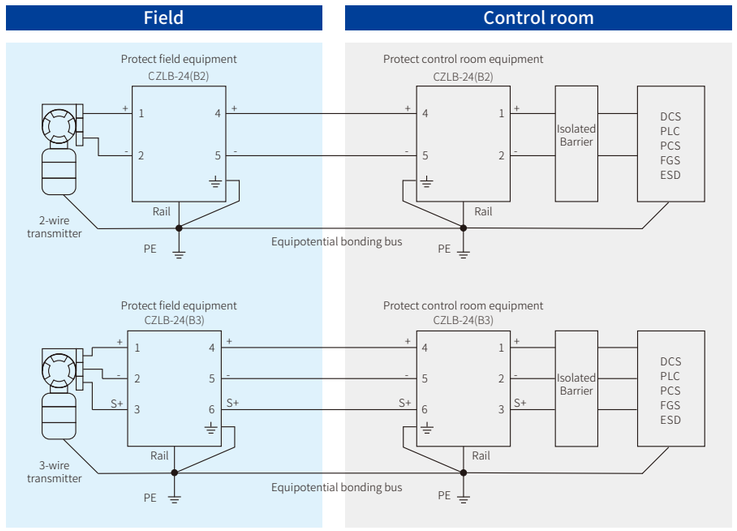


Technical data		2-wire	3-wire
Max. continuous operating voltage U_c		32V DC	32V DC
Nominal operating current I_L		500mA	500mA
Resistance(per line)		1Ω	1Ω
Nominal discharge current I_n(8/20μs)		10kA	10kA
Max. discharge current I_{max}(8/20μs)		20kA	20kA
Impulse current I_{imp}(10/350μs)		2.5kA	2.5kA
Voltage protection level U_p	L-L/L-G	60V/600V	60V/600V
Bandwidth (-0.5dB)		40MHz	40MHz
Response time		1ns	1ns
Residual current		＜1μA	＜1μA
Housing protection grade(IEC60529)		IP 20	IP 20
Housing material/Flammability rating(UL94)		PA66/V0	PA66/V0
Testing standard		GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification			
Ex marking		Ex ia IIC T4 ···T6 Ga	Ex ia IIC T4 ···T6 Ga
Certificate Number		See Certification for details	See Certification for details
Entity Parameters		Ui=30V;Ii=500mA； Pi=0.75W; Ci≈0μF;Li≈0mH	Ui=30V;Ii=500mA； Pi=0.75W; Ci≈0μF;Li≈0mH
Functional safety certification		SIL3	SIL3
Type test		Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number		7090592	7013226

Dimensions



Typical applications

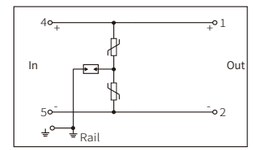


For low-voltage power (⩽10A)

Features

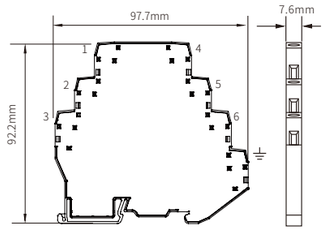
- 7.6mm width
- Ground via terminal or DIN 35mm rail

CZLB-24P

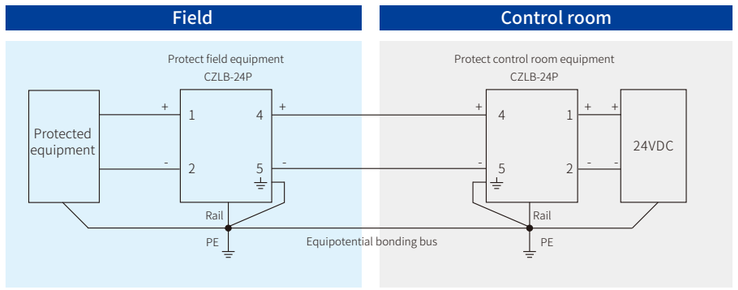


Technical data	
Max. continuous operating voltage U_c	58VDC/40VAC
Nominal operating current I_L	10A
Nominal discharge current I_n(8/20μs)	10kA
Max. discharge current I_{max}(8/20μs)	20kA
Impulse current I_{imp}(10/350μs)	2.5kA
Voltage protection level U_p	800V
Recommended grounding cable	2.5mm²
Response time	25ns
Residual current	<20μA
Housing protection grade(IEC60529)	IP 20
Housing material/Flammability rating(UL94)	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21
Certification	
Type test	Shanghai Lightning Protection Center
Order number	7059650

Dimensions



Typical applications

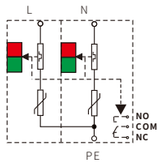


For AC Power(40kA)

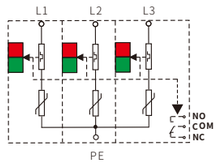
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

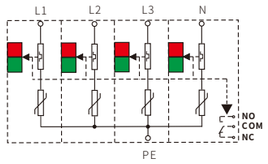
CZLB-40/2P
CZLB-40/2PF



CZLB-40/3P
CZLB-40/3PF

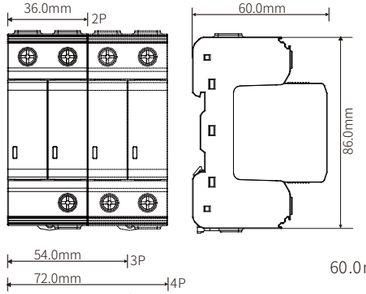


CZLB-40/4P
CZLB-40/4PF



Technical data			
Max. continuous operating voltage U_c	385VAC	385VAC	385VAC
Nominal discharge current I_n(8/20μs)	20kA	20kA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	40kA	40kA
Voltage protection level U_p	1.7kV	1.7kV	1.7kV
Recommended backup fuse	80A gG	80A gG	80A gG
Short-circuit current rating I_{SCCR}	1000A	1000A	1000A
Recommended grounding cable	4~25mm²	4~25mm²	4~25mm²
Response time	25ns	25ns	25ns
Residual current	<20μA	<20μA	<20μA
Remote alarm output（model F）	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Power supply system	Single phase（TN）	hree-phase four line（TN-C） Three-phase three line（IT）	Three-phase five line（TN-S）
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	CZLB-40/2P：7051402	CZLB-40/3P：7061543	CZLB-40/4P：7045781
	CZLB-40/2PF：7028111	CZLB-40/3PF：7023751	CZLB-40/4PF：7094265

Dimensions（18mm/P）

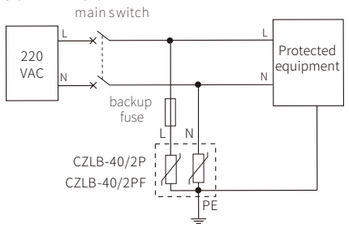


60.0mm×86.0mm×36.0mm

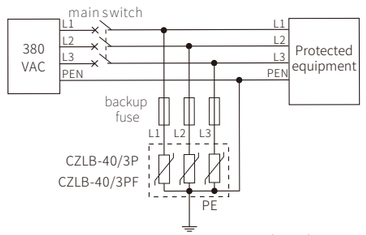
60.0mm×86.0mm×54.0mm

60.0mm×86.0mm×72.0mm

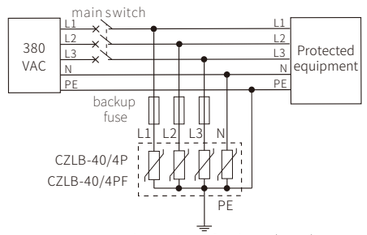
Typical applications



Single phase（TN）



Three-phase four line（TN-C）



Three-phase five line（TN-S）

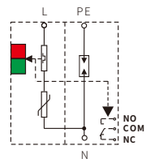
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For AC Power(40kA)

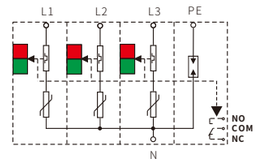
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

CZLB-40/1P+1
CZLB-40/1P+1F

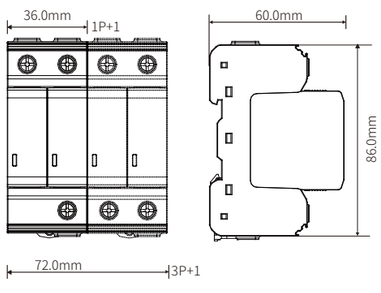


CZLB-40/3P+1
CZLB-40/3P+1F



Technical data	CZLB-40G Module	C2-40 Module	CZLB-40G Module	CZLB-40 Module
Max. continuous operating voltage U_c	255VAC	385VAC	255VAC	385VAC
Nominal discharge current I_n(8/20μs)	20KA	20kA	20KA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	40kA	40kA	40kA
Voltage protection level U_p	1.2kV	1.7kV	1.2kV	1.7kV
Recommended backup fuse		80A gG		80A gG
Short-circuit current rating I_{SCCR}		1000A		1000A
Recommended grounding cable		4~25mm²		4~25mm²
Response time		25ns		25ns
Residual current		<20μA		<20μA
Remote alarm output（model F）		250VAC/0.5A；24VDC/0.5A		250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)		IP 20		IP 20
Housing material/Flammability rating(UL94)		PA66/V0		PA66/V0
Testing standard		GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11
Power supply system		Single phase（TT）		Three-phase four line（TT）
Certification				
Type test	Shanghai Lightning Protection Center		Shanghai Lightning Protection Center	
Order number	CZLB-40/1P+1：7047317		CZLB-40/3P+1：7078829	
	CZLB-40/1P+1F：7054943		CZLB-40/3P+1F：7091611	

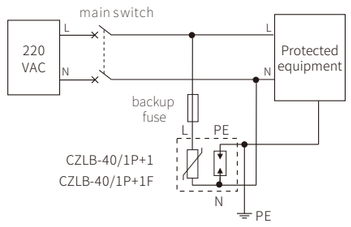
Dimensions（18mm/P）



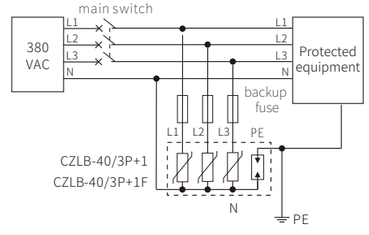
60.0mm×86.0mm×36.0mm

60.0mm×86.0mm×72.0mm

Typical applications



Single phase（TT）



Three-phase four line（TT）

Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

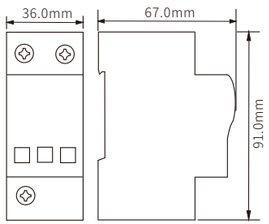
For AC Power(160kA)

Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with “F”

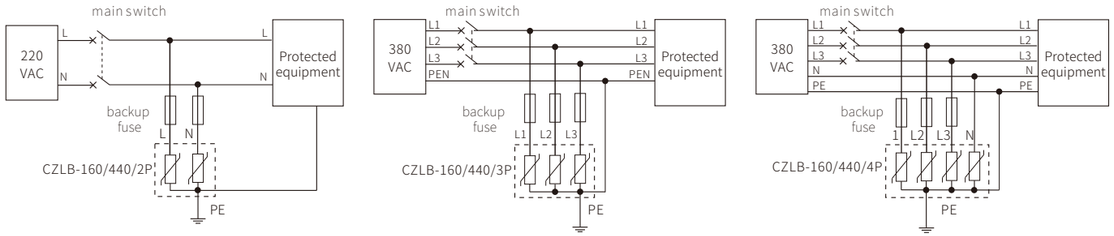
	CZLB-160/440/2P	CZLB-160/440/3P	CZLB-160/440/4P
Technical data			
Max. continuous operating voltage U_c	440VAC	440VAC	440VAC
Nominal discharge current I_n(8/20μs)	80kA	80kA	80kA
Max. discharge current I_{max}(8/20μs)	160kA	160kA	160kA
Impulse current I_{imp} (10/350μs)	15kA	15kA	15kA
Voltage protection level U_p (In)	2.8kV	2.8kV	2.8kV
Recommended backup fuse	200A gG	200A gG	200A gG
Recommended grounding cable	4~35mm²	4~35mm²	4~35mm²
Response time	25ns	25ns	25ns
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Power supply system	Single phase （TN）	hree-phase four line （TN-C） Three-phase three line （IT）	Three-phase five line （TN-S）
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	7024977	7069757	7086079

Dimensions（36mm/P）



67.0mm×91.0mm×72.0mm　67.0mm×91.0mm×108.0mm　67.0mm×91.0mm×144.0mm

Dimensions



Single phase（TN）　Three-phase four line（TN-C）　Three-phase five line（TN-S）

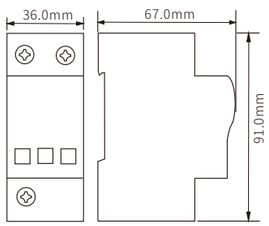
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with “F”

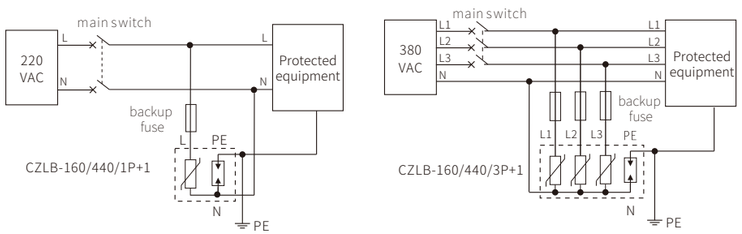
	CZLB-160/440/1P+1		CZLB-160/440/3P+1	
Technical data	CZLB-160/255	CZLB-160/440	CZLB-160/255	CZLB-160/440
Max. continuous operating voltage U_c	255VAC	440VAC	255VAC	440VAC
Nominal discharge current I_n(8/20μs)	80kA	80kA	80kA	80kA
Max. discharge current I_{max}(8/20μs)	160kA	160kA	160kA	160kA
Impulse current I_{imp} (10/350μs)	50kA	15kA	50kA	15kA
Voltage protection level U_p (In)	2.5kV	2.8kV	2.5kV	2.8kV
Recommended backup fuse		200A gG		200A gG
Recommended grounding cable		4~35mm²		4~35mm²
Response time		25ns		25ns
Housing protection grade(IEC60529)		IP 20		IP 20
Housing material/Flammability rating(UL94)		PA66/V0		PA66/V0
Testing standard		GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11
Power supply system		Single phase （TT）		Three-phase four line （TT）
Certification				
Type test		Shanghai Lightning Protection Center		Shanghai Lightning Protection Center
Order number		7053172		7083196

Dimensions （36mm/P）



67.0mm×91.0mm×72.0mm　67.0mm×91.0mm×144.0mm

Dimensions



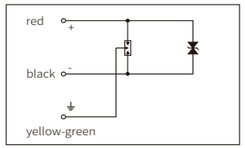
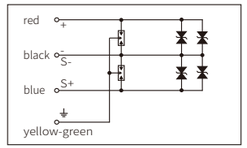
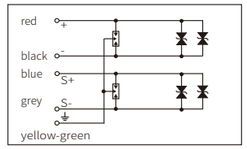
Single phase（TT）　Three-phase four line（TT）

Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

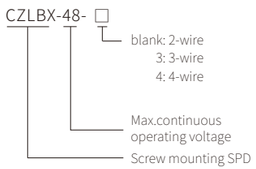
Screw mounting SPD

Features

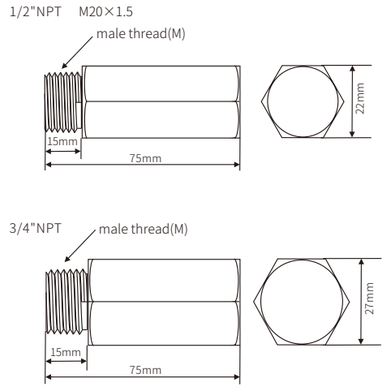
- Intrinsic safety certification;explosion proof electrial product certification
- Available in various of thread specification
- Available in various of housing material

	CZLBX-48	CZLBX-48-3	CZLBX-48-4
			
Technical data	**2-wire**	**3-wire**	**4-wire**
Nominal operating voltage U_n	24V DC	24V DC	24V DC
Max. continuous operating voltage U_c	48V DC	48V DC	48V DC
Nominal discharge current I_n(8/20μs)	10kA	10kA	10kA
Impulse current I_{imp}(10/350μs)	2.5kA	2.5kA	2.5kA
Voltage protection level U_p(8/20μs) L-L	60V	60V	60V
Voltage protection level U_p(1kV/μs) L-G	600V	600V	600V
Bandwidth(-0.5dB)	10MHz	10MHz	10MHz
Response time	L-L:1ns,L-G:200ns	L-L:1ns,L-G:200ns	L-L:1ns,L-G:200ns
Housing protection grade(IEC60529)	IP 67	IP 67	IP 67
Housing material	304 or 316	304 or 316	304 or 316
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification			
Ex marking	Ex ia II C T6...T4 Ga	Ex ia II C T6...T4 Ga	Ex ia II C T6...T4 Ga
Certificate Number	CSANe 21ATEX2011X	CSANe 21ATEX2011X	CSANe 21ATEX2011X
Entity Parameters	Ui=48V;Ii=500mA; Pi=5.32W; Ci=0nF;Li=0mH	Ui=48V;Ii=500mA; Pi=5.32W; Ci=0nF;Li=0mH	Ui=48V;Ii=500mA; Pi=5.32W; Ci=0nF;Li=0mH
Functional safety certification	SIL3	SIL3	SIL3
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number			
	1/2" NPT(304)：7033621	1/2" NPT(304)：7062052	1/2" NPT(304)：7085246
	3/4" NPT(304)：7018843	3/4" NPT(304)：7093235	3/4" NPT(304)：7019671
	M20×1.5(304)：7058541	M20×1.5(304)：7066381	M20×1.5(304)：7053866
	...	...	...

Naming

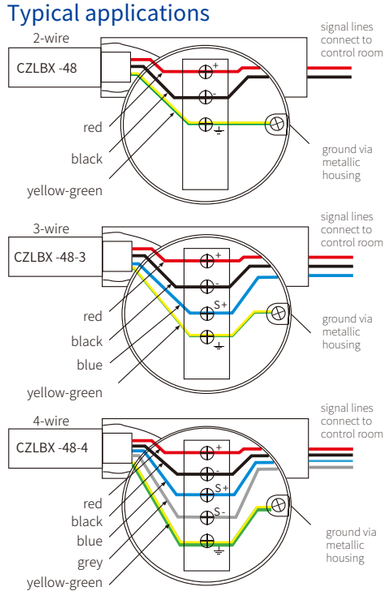


Dimensions



Wire specification：26/0.254
Signal wire is with 18AWG,1mm²
Ground wire is with 16AWG,1.32mm²
Wire length：240mm

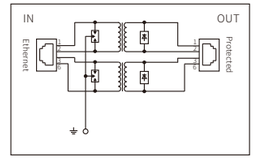
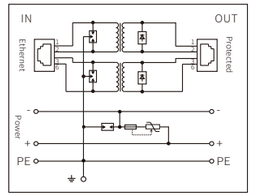
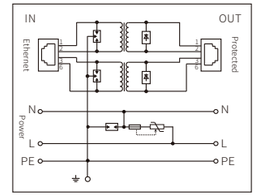
Typical applications



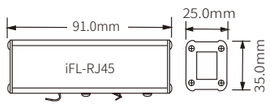
iFL Network SPD

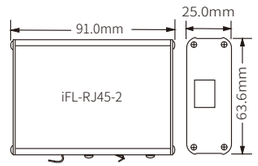
Features

- Fully aluminium alloy housing, good electromagnetic shielding.
- Suitable for various of network cameras.
- Grouned by DIN rail or screw terminals

	iFL-RJ45 Network	iFL-RJ45-2 Network, 24V power 2 in 1	iFL-RJ45-2 Network, 220V power 2 in 1
			
Technical data	**RJ45**	**24VDC**	**220VAC**
Max. continuous operating voltage U_c	8VDC	58VDC/40VAC	270VAC
Nominal discharge current I_n	2kA	10kA	3kA
Voltage protection level U_p (L-L/L-G)	100V/300V	850V/1kV	1kV/1.2kV
Bandwidth	100MHz	-	-
Insertion loss（0.1~50MHz）	0.5dB	-	-
Wires protected	1/2,3/6	+/-	L/N
Interface	RJ45	plug-inwiring	plug-inwiring
Housing protection grade(IEC60529)	IP20	IP20	IP20
Housing material(housing/end face)	Aluminium alloy/304 stainless steel	Aluminium alloy/304 stainless steel	Aluminium alloy/304 stainless steel
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	7079893	7978591	7054623

Dimensions



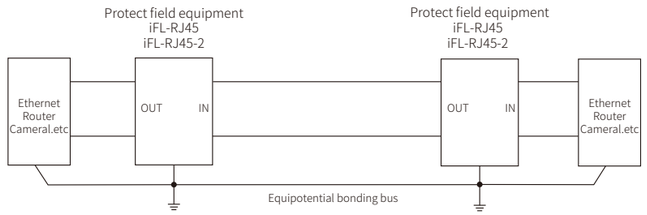



91.0mm×35.0mm×25.0mm


91.0mm×63.6mm×25.0mm


91.0mm×63.6mm×25.0mm

Typical applications

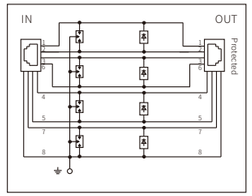


iFL Network SPD

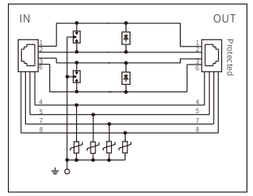
Features

- Fully aluminium alloy housing, good electromagnetic shielding.
- Suitable for various of network cameras.
- Grouped by DIN rail or screw terminals

iFL-RJ45/GigE
GigE

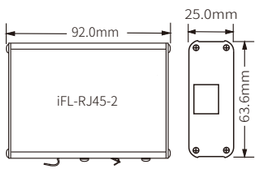


iFL-RJ45/PoE
PoE



Technical data	GigE	PoE power
Max. continuous operating voltage U_c	60VDC	60VDC
Nominal discharge current I_n	2kA	2kA
Voltage protection level U_p (L-L/L-G)	600V/1kV	600V/1kV
Bandwidth	500MHz	-
Insertion loss（0.1~50MHz）	⩽0.5dB	-
Wires protected	1/2,3/6,4/5,7/8	+/-
Interface	RJ45	RJ45
Housing protection grade(IEC60529)	IP20	IP20
Housing material (housing/end face)	Aluminium alloy/304 stainless steel	Aluminium alloy/304 stainless steel
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification		
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	7058560	7069852

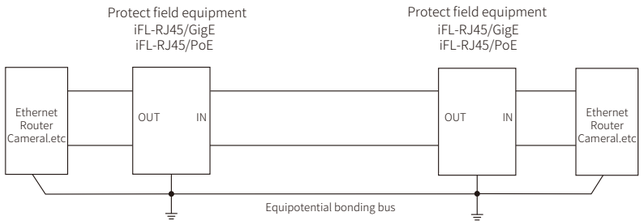
Dimensions



92.0mm×63.6mm×25.0mm

92.0mm×63.6mm×25.0mm

Typical applications

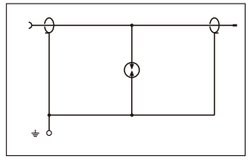


SPD for antennas and feeders

Features

- Fully aluminium alloy housing, good electromagnetic shielding.
- Available in various of thread specification.
- Low insertion loss and standing wave ratio

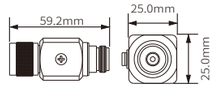
iFL-RF



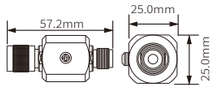
Technical data	
Max. continuous operating voltage U_c	24V
Nominal discharge current I_n(8/20μs)	10kA
Max. discharge current I_{max}(8/20μs)	20kA
Voltage protection level U_p	450V
Frequency range	0~4GHz
Response time	100ns
Interface	SMA、N、F、TNC、BNC
Insertion loss	⩽1.5GHz(0.1dB)/⩽4GHz(2dB)
Characteristic impedance	50Ω(N、TNC、SMA);75Ω(F、BNC)
Housing protection grade(IEC60529)	IP 55
Housing material	aluminium alloy
Testing standard	GB/T 18802.21/IEC 61643-21

Dimensions

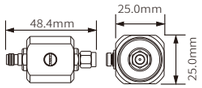
N：iFL-RF/N



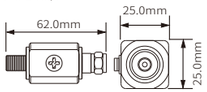
TNC：iFL-RF/TNC



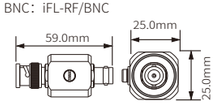
SMA：iFL-RF/SMA



F：iFL-RF/F



BNC：iFL-RF/BNC



N：iFL-RF/N

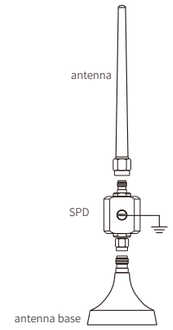
TNC：iFL-RF/TNC

SMA：iFL-RF/SMA

F：iFL-RF/F

BNC：iFL-RF/BNC

Typical applications



CHENZHU

【Factory video @Youtube】

CZYB-E03.04/2023.06

Headquarters

SHANGHAI CHENZHU INSTRUMENT CO.,LTD.

Add: Building 6, 201 Minyi Rd., Shanghai 201612, P.R.China

Tel: +86-21-64360668
E-mail: chenzhu@chenzhu-inst.com
Web: en.chenzhu-inst.com

ASEAN Region

CHENZHU SDN BHD (1314739-P)

Add: 1F-16, IOI Business Park, No. 1, Persiaran Puchong Jaya Selatan, Bandar Puchong Jaya Selatan, 47100 Puchong, Selangor, Malaysia.
Tel: +60-3-80704739
E-mail: sales@chenzhu-asean.com
Web:www.chenzhu-asean.com

CHENZHU

Isolated Barrier

GS8500-EX Series

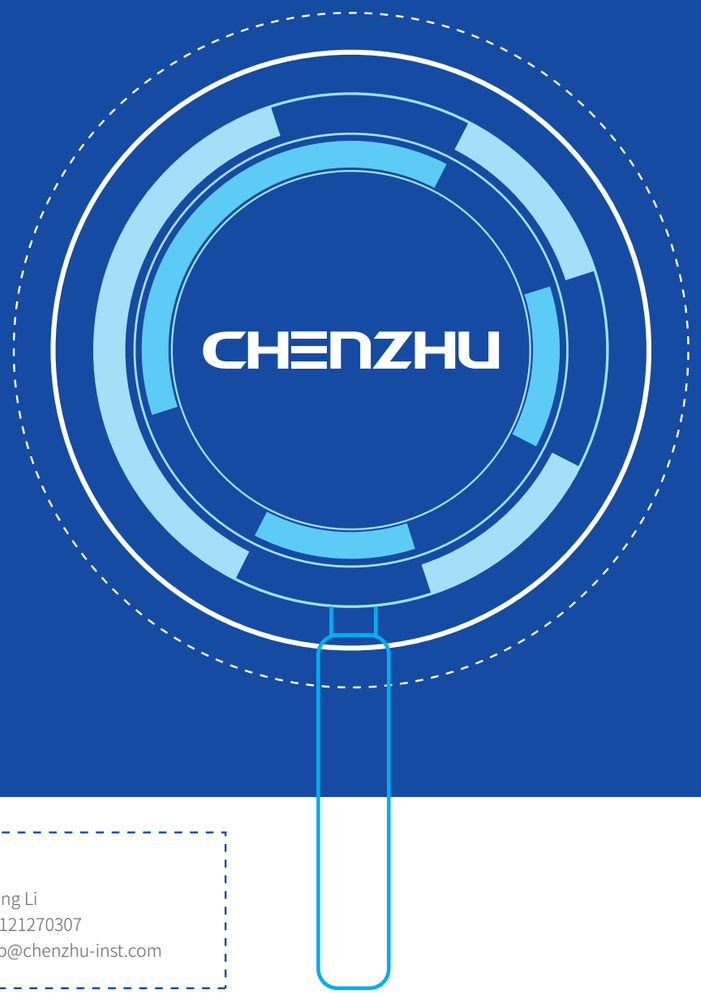
Catalogue (2023)

5 Year WARRANTY

https://en.chenzhu-inst.com

Looking for Agent !

If you are interested to be our agent in your market,
we will be your strong backup.



Contact:

Ms. Danping Li
M: +86-18121270307
Email: lidp@chenzhu-inst.com

Contents

CHENZHU COMPANY OVERVIEW

CHENZHU' s headquarter is located at Shanghai, China, with an area of 10000m².

Shanghai Chenzhu Instrument Co,Ltd. was founded in April, 2002, who was originated from Shanghai Institute of Process Automation Instrumentation. CHENZHU is a professional company with core expertise of R&D, manufacturing and sale service of high quality safety products, such as isolated barriers, signal conditioners, surge protective devices, safety relays etc.

MANAGEMENT SYSTEMS

ISO9001

ISO14001

ISO45001

IECEx QAR

R&D Strength

Based on ISO/IEC/GB standards, CHENZHU has established the professional laboratory which is applied up to 80 test capabilities and verification items in CHENZHU's safety electrical products' development process.

R&D Investment
11%
of Sale Revenue

Innovation
110+
Patents

Testing Facility
80+
Capabilities

Smart Factory

CHENZHU factory is continually driven by lean management and flexible production. By our strict quality examination, CHENZHU ensures the production meets the design specification and satisfies our customers.

Factory
5000m²
In total

Max Cap.
3,000,000pcs
Year

Lean Production
10+
Years' experience

SIL Certification

Certificate

Product Safety
Functional
Safety

TÜVRheinland CERTIFIED
www.tuv.com
ID 0600000000

No.: 968/EZ 531.03/19

Product tested	Isolated Barriers for safety-related applications	**Certificate holder**	SHANGHAI CHENZHU INSTRUMENT CO., LTD. Floor 7~8, Building 6, No. 201, Minyi Road, Songjiang District, Shanghai, 201612, P.R. China
Type designation	GS8512-EX, GS8523-EX, GS8535-EX, GS8536-EX, GS8547-EX, GS8567-EX, GS8568-EX		
Codes and standards	IEC 61508 Parts 1-7:2010 IEC 61326-3-1:2017		IEC 61298 Parts 1-3:2008
Intended application	GS8512-EX and GS8523-EX are intended to be used in safety-related applications and have the safety function to de-energize output(s) on demand. The safe state is the de-energized state. GS8535-EX, GS8536-EX, GS8547-EX, GS8567-EX and GS8568-EX are intended to be used in safety-related applications and have the safety function of repeating 4~20 mA current or converting the 4~20mA into 1~5V output voltage within the accuracy of ±2%. In case of a failure the output current is < 3.6 mA or > 21.5 mA. The barriers comply with the requirements of IEC 61508: GS8512-EX, GS8523-EX, GS8547-EX: IEC 61508 SC 3, SIL 3 GS8535-EX, GS8536-EX, GS8567-EX, GS8568-EX: IEC 61508 SC 3, SIL 2		
Specific requirements	The instructions of the associated Safety Manuals shall be considered.		

Valid until 2024-06-13

The issue of this certificate is based upon an examination, whose results are documented in Report No. 968/EZ 531.03/19 dated 2019-06-13.
This certificate is valid only for products which are identical with the product tested.

TÜV Rheinland Industrie Service GmbH
Bereich Automation
Funktionale Sicherheit
Am Grauen Stein, 51105 Köln

Köln, 2019-06-13 — Certification Body Safety & Security for Automation & Grid — Dipl.-Ing. Gebhard Bouwer

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Tel.: +49 221 806-1791 Fax: +49 221 806-1539, E-Mail: industrie-service-global@tuv.com

TÜVRheinland CERTIFIED
www.tuv.com
ID 0600000000

Code and standards: IEC61508-2010 Functional safety of electrical/electronic /programmable electronic safety-related systems

Certificate authority: TÜV Rheinland

IECEx Certification

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx SIR 21.0022X** — Page 1 of 3 — Certificate history:
Status: **Current** — Issue No: 0
Date of Issue: 2021-06-23
Applicant: **SHANGHAI CHENZHU INSTRUMENT CO., LTD.**
Floor 7~8, Building 6, No. 201, Minyi Road, Songjiang District,
Shanghai 201612
China
Equipment: **GS8500-EX series safety barriers GS8512-EX.11, GS8512-EX.12, GS8512-EX.22, GS8523-EX, GS8523-EX.I, GS8547-EX, GS8567-EX, GS8572-EX, GS8572-EX.RTD, GS8572-EX.R, GS8572-EX.TC.**
Optional accessory:
Type of Protection: **Intrinsically Safe ia**
Marking: [Ex ia Ma] I
[Ex ia Ga] IIC
[Ex ia Da] IIIC

Approved for issue on behalf of the IECEx Certification Body: **Neil Jones**
Position: **Certification Manager**
Signature: (for printed version) PP McAlliwell
Date: 2021-06-23

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

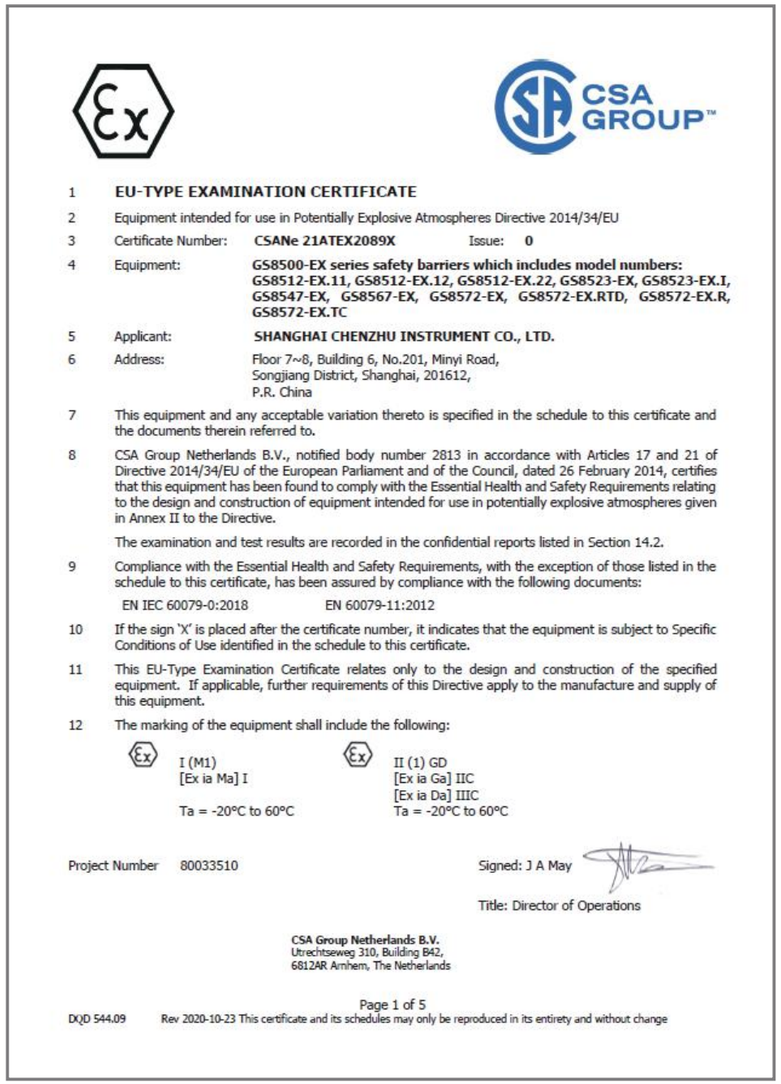
Certificate issued by:
SIRA Certification Service
CSA Group
Unit 6, Hawarden Industrial Park
Hawarden, Deeside, CH5 3US
United Kingdom

CSA GROUP™

IECEx

Code and standards: IEC60079-0 Explosive atmospheres
- Part 0: Equipment - General requirements
IEC60079-11 Explosive atmospheres
- Part 11: Equipment protection by intrinsic safety "i"

Certificate authority: Canadian Standards Association (CSA)



1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **CSANe 21ATEX2089X** Issue: **0**

4 Equipment: **GS8500-EX series safety barriers which includes model numbers: GS8512-EX.11, GS8512-EX.12, GS8512-EX.22, GS8523-EX, GS8523-EX.I, GS8547-EX, GS8567-EX, GS8572-EX, GS8572-EX.RTD, GS8572-EX.R, GS8572-EX.TC**

5 Applicant: **SHANGHAI CHENZHU INSTRUMENT CO., LTD.**

6 Address: Floor 7~8, Building 6, No.201, Minyi Road, Songjiang District, Shanghai, 201612, P.R. China

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-11:2012

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

I (M1)
[Ex ia Ma] I
Ta = -20°C to 60°C

II (1) GD
[Ex ia Ga] IIC
[Ex ia Da] IIIC
Ta = -20°C to 60°C

Project Number 80033510

Signed: J A May

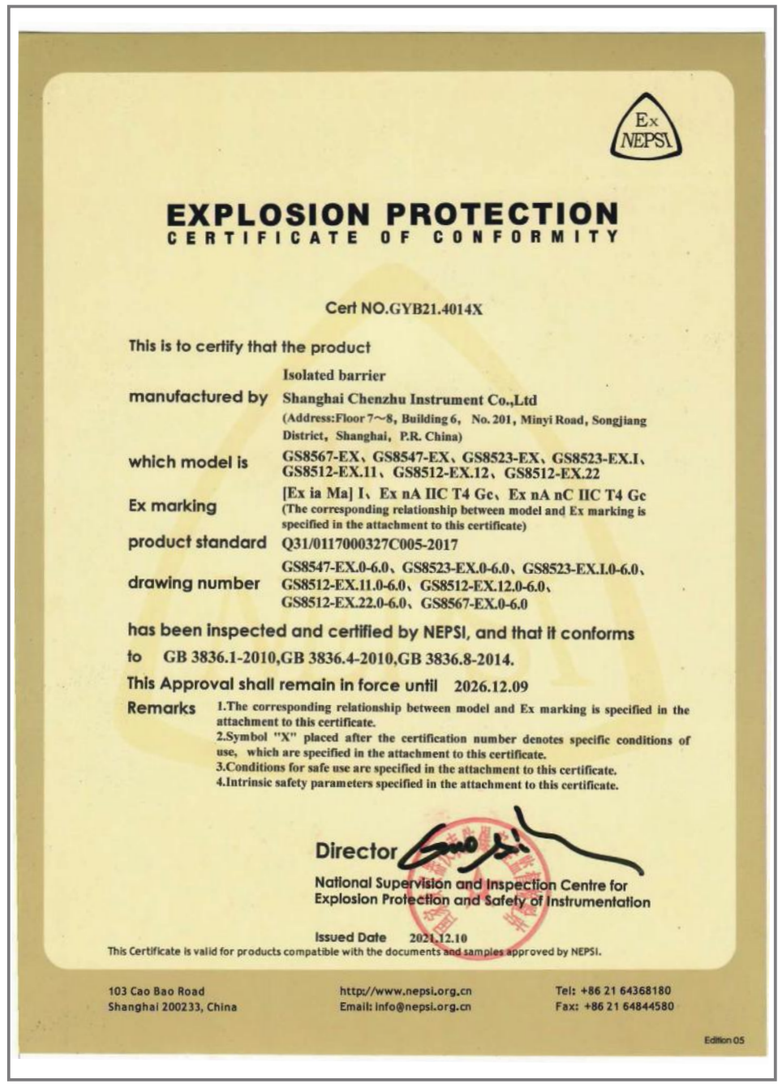
Title: Director of Operations

CSA Group Netherlands B.V.
Utrechtseweg 310, Building B42,
6812AR Arnhem, The Netherlands

Page 1 of 5
DQD 544.09 Rev 2020-10-23 This certificate and its schedules may only be reproduced in its entirety and without change

Code and standards: EN60079-0 Explosive atmospheres
- Part 0: Equipment - General requirements
EN60079-11 Explosive atmospheres
- Part 11: Equipment protection by intrinsic safety "i"

Certificate authority: Canadian Standards Association (CSA)



Ex NEPSI

EXPLOSION PROTECTION
CERTIFICATE OF CONFORMITY

Cert NO.GYB21.4014X

This is to certify that the product

Isolated barrier

manufactured by Shanghai Chenzhu Instrument Co.,Ltd
(Address:Floor 7~8, Building 6, No. 201, Minyi Road, Songjiang District, Shanghai, P.R. China)

which model is GS8567-EX、GS8547-EX、GS8523-EX、GS8523-EX.I、GS8512-EX.11、GS8512-EX.12、GS8512-EX.22

Ex marking [Ex ia Ma] I、Ex nA IIC T4 Ge、Ex nA nC IIC T4 Gc
(The corresponding relationship between model and Ex marking is specified in the attachment to this certificate)

product standard Q31/0117000327C005-2017

drawing number GS8547-EX.0-6.0、GS8523-EX.0-6.0、GS8523-EX.I.0-6.0、GS8512-EX.11.0-6.0、GS8512-EX.12.0-6.0、GS8512-EX.22.0-6.0、GS8567-EX.0-6.0

has been inspected and certified by NEPSI, and that it conforms to GB 3836.1-2010,GB 3836.4-2010,GB 3836.8-2014.

This Approval shall remain in force until 2026.12.09

Remarks
1.The corresponding relationship between model and Ex marking is specified in the attachment to this certificate.
2.Symbol "X" placed after the certification number denotes specific conditions of use, which are specified in the attachment to this certificate.
3.Conditions for safe use are specified in the attachment to this certificate.
4.Intrinsic safety parameters specified in the attachment to this certificate.

Director

National Supervision and Inspection Centre for Explosion Protection and Safety of Instrumentation

Issued Date 2021.12.10

This Certificate is valid for products compatible with the documents and samples approved by NEPSI.

103 Cao Bao Road
Shanghai 200233, China
http://www.nepsi.org.cn
Email: info@nepsi.org.cn
Tel: +86 21 64368180
Fax: +86 21 64844580

Edition 05

Code and standards:
GB3836.1-2010 Explosive atmospheres - Part 1: Equipment - General requirements
GB3836.4-2010 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
GB 3836.8-2014 Explosive atmospheres - Part 8: Equipment protection by type of protection “n”
GB 3836.20-2010 Explosive atmospheres - Part 20:Equipment with equipment protection level(EPL)Ga
GB12476.1-2013 Electrical apparatus for use in the presence of combustible dust
- Part 1: General requirements
GB12476.4-2010 Electrical apparatus for use in the presence of combustible dust
- Part 4: protection by intrinsic safety "iD"

Certificate authority: NEPSI

CCC Certification

CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

SITIIAS Worldwide Access

CERTIFICATE NO: 2020322316000235

APPLICANT:	SHANGHAI CHENZHU INSTRUMENT CO., LTD.
ADDRESS:	Room 702, Building 5, No.518, Xinzhuan Road, Songjiang Hi-tech Park, Caohejing Development Park, Shanghai, P.R. China
MANUFACTURER:	SHANGHAI CHENZHU INSTRUMENT CO., LTD.
ADDRESS:	Room 702, Building 5, No.518, Xinzhuan Road, Songjiang Hi-tech Park, Caohejing Development Park, Shanghai, P.R. China
FACTORY:	SHANGHAI CHENZHU INSTRUMENT CO., LTD.
ADDRESS:	Building 2(26#), No. 301, Minqiang Road, Songjiang District, Shanghai, 201612, P.R. China
PRODUCT:	Isolated Barrier
SERIES,SPECIFICATION,MODEL:	GS8535-EX、GS8536-EX、GS8547-EX、GS8547-EX.L、GS8549-EX
STANDARDS:	GB/T 3836.1-2021、GB/T 3836.3-2021、GB/T 3836.4-2021

Type of Certification: Type test + Initial inspection + Surveillance inspection

This is to certify that the above mentioned product(s)complies with the requirements of implementation rules for compulsory certification (REFNO. CNCA-C23-01:2019).

Refer to the attachment for detailed information.

Valid from: October 18, 2022 **Valid until:**June 15, 2025

Date of original certification: June 16, 2020

The validity of this certificate is subject to positive result of the periodic surveillance by issuing certification body until the expiry date.

This certificate is available through CNCA's website: www.cnca.gov.cn

APPROVAL: Guo AiHua

Shanghai Inspection and Testing Institute of Instruments and Automation Systems Co., Ltd.

http://www.sitlias.com.cn Building 9,103 Cao Bao Road, Shanghai 200233,China Tel: +86 21 64510844

S 0006052

Code and standards:

GB/T 3836.1-2021 Explosive atmospheres - Part 1: Equipment - General requirements

GB/T 3836.4-2021 Explosive atmospheres - Part IV: Equipment protection by intrinsic safety "i"

GB/T 3836.3-2021 Explosive atmospheres - Part III: Equipment protection by increased safety "e"

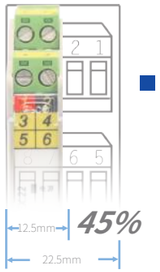
Certificate authority: SITTIAS

Overview

■ High reliability and strong EMC performace MTBF>2,000,000h

SIL IEC61508

■ Could be installed in Zone 2 ★



■ Ultra-thin structure with low power dissipation design for high packing density

0.05%F.S.

■ High-precision while low drift

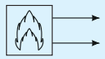
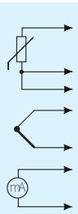
■ Flexible power mode, support DIN bus power and terminal power

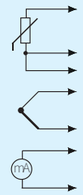
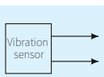
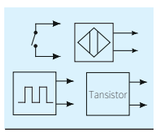
IEC

■ Variety of specifications and models meet the requirement of end user

5 Year WARRANTY

★ Note: Please refer to the user manual for the special requirements of the isolated barrier installed in Zone 2.

Field instrument	Application	Module No.	Channels	Hazardous Side Signal	Control Side Signal	Features	Page
	Digital Input	GS8512-EX.11	1/1	Dry contact switch proximity switch input	Relay contact output	Independent powered SIL3	11
		GS8512-EX.12	1/2				
		GS8512-EX.22	2/2				
		GS8512-EX.33	3/3			Independent powered	12
		GS8114-EX	4/4				13
		GS8519-EX.11	1/1		Transistor output	Independent powered	14
		GS8519-EX.12	1/2				
		GS8519-EX.22	2/2				
		GS8519-EX.12A	1/2			Independent powered LFD output	15
	Electrical Level Input	GS8515-EX	1/2	Electrical level sensors Electrode input	Relay contact output	Independent powered LFD	16
	Digital Output	GS8521-EX	1/1	Drive current at 35mA Output voltage≥12V	Dry contact input	Loop powered	17
		GS8523-EX	1/1	Drive current at 45mA Output voltage≥12V		Loop powered SIL3	18
		GS8523-EX.I	1/1			Independent powered	19
		GS8525-EX	1/1	Drive current at 60mA Output voltage≥12V		Loop powered	20
	Analog Input	GS8531-EX	1/1	2-wire transmitter input HART	4~20mA output HART	Loop powered	21
		GS8532-EX	2/2				
		GS8535-EX	1/2	2-wire or 3-wire transmitter Current source input HART	0/4~20mA 0/1~5V output HART	Independent powered	22
		GS8536-EX	2/2			SIL2	23
		GS8547-EX	1/1			Independent powered SIL3	24
		GS8549-EX	1/1			Independent powered	25
	Analog Output	GS8567-EX	1/1	0/4~20mA output HART	0/4~20mA output HART	Independent powered SIL2	26
		GS8568-EX	2/2				27
	Pulse Input	GS8552-EX.11	1/1	Voltage pulse, transistor Distribution voltage: 12V	5V/12V Voltage pulse, transistor	Independent powered	28
		GS8552-EX.22	2/2				
		GS8554-EX.11	1/1	Voltage pulse, transistor Distribution voltage: 24V	12V/24V Voltage pulse, transistor		29
		GS8554-EX.22	2/2				
		GS8556-EX	3/3	Encoder input	12V Voltage pulse		30
	Fire and Smoke Detector Input	GS8565-EX	1/1	Fire、smoke detector input	0~40mA output	Loop powered	31
		GS8566-EX	2/2				
	Temperature Converters	GS8572-EX	1/1	2-wire or 3-wire RTD TC input	0~20mA，4~20mA 0~5V，1~5V output	Independent powered Configurable	32
		GS8572-EX.RTD	1/1	2-wire or 3-wire RTD input			
		GS8572-EX.R	1/1	Potentiometer input			
		GS8572-EX.TC	1/1	TC input			33
		GS8572-EX.SIL.RTD	1/1	2-wire or 3-wire RTD input	4~20mA 1~5V output	Independent powered Configurable SIL2	34
		GS8572-EX.SIL.TC	1/1	TC input			

Field instrument	Application	Module No.	Channels	Hazardous Side Signal	Control Side Signal	Features	Page
	Temperature Converters	GS8576-EX	1/2	2-wire or 3-wire RTD TC input	0~20mA, 4~20mA 0~5V, 1~5V Output	Independent powered Configurable	35
		GS8576-EX.RTD	1/2	2-wire or 3-wire RTD input			
		GS8576-EX.TC	1/2	TC input			
		GS8576-EX.R	1/2	Potentiometer input			
		GS8579-EX	2/2	2-wire or 3-wire RTD TC input			
		GS8579-EX.RTD	2/2	2-wire or 3-wire RTD input			
		GS8579-EX.TC	2/2	TC input			
		GS8579-EX.R	2/2	Potentiometer input			
		GS8577-EX	1/1	2-wire or 3-wire RTD TC input	4~20mA output	Loop powered Configurable	36
		GS8577-EX.RTD	1/1	2-wire or 3-wire RTD input			
		GS8577-EX.TC	1/1	TC input			
		GS8578-EX	2/2	2-wire or 3-wire RTD TC input			
		GS8578-EX.RTD	2/2	2-wire or 3-wire RTD input			
		GS8578-EX.TC	2/2	TC input			
	Voltage Input	GS8589-EX.11	1/1	0~5V, 1~5V, 0~10V, 2~10V	0~5V, 1~5V, 0~10V, 2~10V	Independant powered	37
		GS8589-EX.22	2/2	Distribution power: 10V/20mA, 15V/20mA, none	0~20mA, 4~20mA		
	Communication Input	GS8592-EX.3	1/1	RS-232	RS-232	Independent powered	38
		GS8595-EX.3	1/1		RS-485 full duplex		39
		GS8599-EX.3	1/1		RS-485 half duplex		40
		GS8591-EX.3	1/1	RS-485 half duplex	RS-485 full duplex		41
		GS8593-EX.3	1/1		RS-485 half duplex		42
		GS8596-EX.3	1/1		RS-232		43
		GS8594-EX.3	1/1	RS-485 full duplex	RS-232		44
		GS8597-EX.3	1/1		RS-485 half duplex		45
		GS8598-EX.3	1/1		RS-485 full duplex		46
		GS8593B-EX	1/1	RS-485 half duplex Distribution power: 9V/140mA	RS-485 half duplex		47
		GS8590-EX.3	1/1	CAN	CAN		48
	Vibration Tansducer Input	GS8557-EX	1/1	-20V~-0.5V	-20V~-0.5V	Independent powered	49
		GS8558-EX	1/1	-10V~+10V	-10V~+10V		50
	Frequency Converter	GS8555-EX	1/1	Dry contact/proximity switch Voltage pulse Transistor input	0~20mA, 4~20mA 0~5V, 1~5V SPST relay	Independent powered Configurable	51

1/1：GS8512-EX.11
1/2：GS8512-EX.12
2/2：GS8512-EX.22

Digital input, relay output isolated barrier, transfers digital signals(dry contact or NAMUR proximity switch) from hazardous area to safe area. Each channel can be provided to select phase reversal and to enable the line fault detection.The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×12.5mm

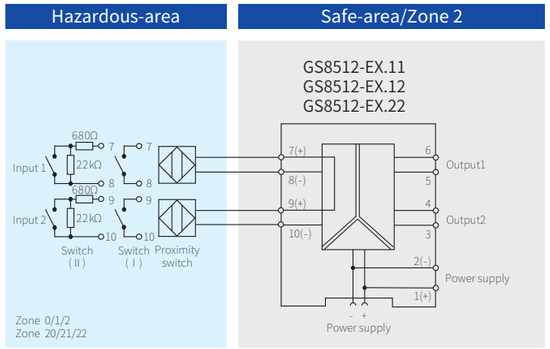
Specification

Supply Voltage：20~35V DC
Current Consumption：(Supply voltage: 24V; Output energized)
⩽30mA(GS8512-EX.11)
⩽40mA(GS8512-EX.12 / GS8512-EX.22)
Safe-area Relay Output：
Response Time：⩽10ms
Contact loading：250V AC,2A or 30V DC,2A
Load Type：resistive load
Hazardous-area Input：
Signal：Dry contact or NAMUR proximity switch
Open-circuit Voltage：≈8V
Short-circuit Current：≈8mA
Input and Output Characteristics(Normal phase)
If field switch closes or input loop current＞2.1mA, output relay will be energized, with yellow LED ON.
If field switch closes or input loop current＜1.2mA, output relay will be de-energized, with yellow LED OFF.
Function of the DIP Switch：

Sta.	K1(OUT1), K3(OUT2)	K2(OUT1), K4(OUT2)
ON	Inverted phase	LFD enabled
OFF	Normal phase	LFD disenabled

Note：Switch input (I) needs the K2 and K4 to be set to OFF state, without line fault (breakage, short-circuit) detection. When using line fault (breakage, short-circuit) detection function, resistances must be fitted: 22kΩ in parallel with switch, 680Ω in series with switch. See Switch (Ⅱ), K2 and K4 are set to ON state.
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268), IEC 61326-3-1
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Between power supply part and output part⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Between power supply part and output part⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 100g
Suitable Location：Mounting in safe area or zone2(for ec protection), and connected to the IS apparatus in hazardous area up to zone 0 IIC and zone 20 IIIC.
Suitable Field Apparatus：Dry contact or DIN19234 standard NAMUR proximity switch input field devices (including the intrinsically safe type pressure switch、temperature switches、liquid level switches, etc.)

Connection



Note: a) GS8512-EX.11 only contains input1、output1;
b) GS8512-EX.12 only contains input1、output1、output2;
c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Ex ec nC II C T4 Gc
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8；9、10 terminals)：
U_o=10.5V，I_o=14mA，P_o=37mW
II C：C_o=2.4μF，L_o=165mH
⋆II B：C_o=16.8μF，L_o=495mH
II A：C_o=75.0μF，L_o=1000mH
I：C_o=95.0μF，L_o=2380mH
⋆II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

3/3：GS8512-EX.33

Digital input, relay output isolated barrier, transfers digital signals(dry contact or NAMUR proximity switch) from hazardous area to safe area. Each channel can be provided to select phase reversal.The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

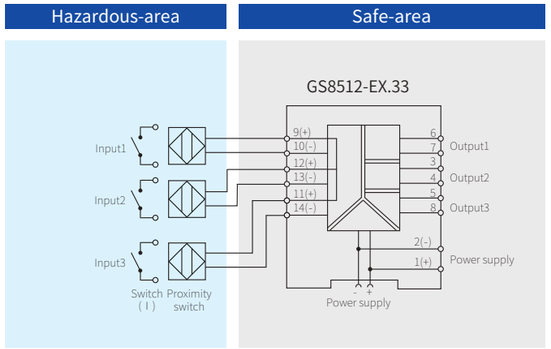
Specification

Supply Voltage：20~35V DC
Current Consumption：⩽65mA(Supply voltage: 24V; Output energized)
Safe-area Relay Output：
Response Time：⩽10ms
Contact loading：250V AC,2A or 30V DC,2A
Load Type：resistive load
Hazardous-area Input：
Signal：Dry contact or NAMUR proximity switch
Open-circuit Voltage：≈8V
Short-circuit Current：≈8mA
Input and Output Characteristics(Normal phase)
If field switch closes or input loop current＞2.1mA, output relay will be energized, with yellow LED ON.
If field switch closes or input loop current＜1.2mA, output relay will be de-energized, with yellow LED OFF.
Function of the DIP Switch：

Sta.	K1(OUT1), K2(OUT2), K3(OUT3)
ON	Inverted phase
OFF	Normal phase

Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Between power supply part and output part⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Between power supply part and output part⩾ 100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 100g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Dry contact or DIN19234 standard NAMUR proximity switch input field devices (including the intrinsically safe type pressure switch、temperature switches、liquid level switches, etc.)

Connection



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10；12、13；11、14 terminals)：
U_o=10.5V，I_o=14mA，P_o=37mW
II C：C_o=2.4μF，L_o=165mH
⋆II B：C_o=16.8μF，L_o=495mH
II A：C_o=75.0μF，L_o=1000mH
⋆II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

4/4：GS8114-EX

Digital input, relay output isolated barrier, transfers digital signals(dry contact or NAMUR proximity switch) from hazardous area to safe area. Each channel can be provided to select phase reversal.The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：114.5mm×99.0mm×22.5mm

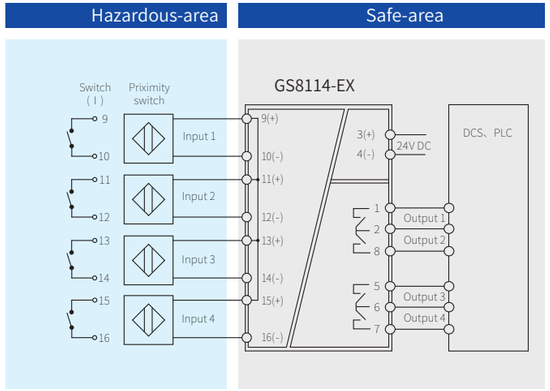
Specification

Supply Voltage：20~35V DC
Current Consumption：⩽75mA(Supply voltage: 24V; Output energized)
Safe-area Relay Output：
Response Time：⩽20ms
Contact loading：250V AC,2A or 30V DC,2A
Load Type：resistive load
Hazardous-area Input：
Signal：Dry contact or NAMUR proximity switch
Open-circuit Voltage：≈8V
Short-circuit Current：≈8mA
Input and Output Characteristics(Normal phase)
If field switch closes or input loop current＞2.1mA, output relay will be energized, with yellow LED ON.
If field switch closes or input loop current＜1.2mA, output relay will be de-energized, with yellow LED OFF.
Function of the DIP Switch：

Sta.	K1(OUT1)	K2(OUT2)	K3(OUT3)	K4(OUT4)
ON	Corresponding channel inverted phase			
OFF	Corresponding channel normal phase			

Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Between power supply part and output part⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Between power supply part and output part⩾100MΩ
Weight：Approx. 150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Dry contact or DIN19234 standard NAMUR proximity switch input field devices (including the intrinsically safe type pressure switch、temperature switches、liquid level switches, etc.)

Connection



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10；11、12；13、14；15、16 terminals)：
U_o=10.5V，I_o=14mA，P_o=37mW
II C：C_o=2.4μF，L_o=165mH
★II B：C_o=16.8μF，L_o=495mH
II A：C_o=75.0μF，L_o=1000mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8519-EX.11
1/2：GS8519-EX.12
2/2：GS8519-EX.22

Digital input, transistor output isolated barriers, transfer digital signals(dry contact or NAMUR proximity switch) from hazardous area to safe area. Each channel can be provided to select phase reversal and to enable the line fault detection. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×12.5mm

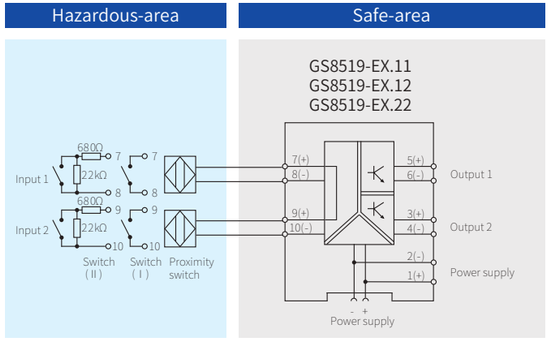
Specification

Supply Voltage：20~35V DC
Current Consumption：(Supply voltage：24V, transistor energized)
⩽40mA(GS8519-EX.11)
⩽60mA(GS8519-EX.12 / GS8519-EX.22)
Safe-area Output：
Digital Output：4.5V⩽V_H⩽12V，V_L⩽0.5V
Drive current⩽10mA, Load resistance⩾1kΩ
Transistor Collector Output：
V_H=V_{CC}; V_L⩽2.5V(On-state current=10mA,Vcc=24V)
Max.Rated Current⩽40mA, Load resistance: 2kΩ⩽RL⩽20kΩ
Transistor Emitter Output：
V_H⩾V_{CC}-2.5V; V_L⩽0.5V(On-state current=10mA,Vcc=24V)
Max.Rated Current⩽40mA，Load resistance：2kΩ⩽R_L⩽10kΩ
Note：“V_{CC}”refers to the supply voltage at the output，V_{CC}⩽40V
Hazardous-area Input：
Signal：Dry contact or NAMUR proximity switch input, frequency⩽5kHz
Open-circuit Voltage：≈8V
Short-circuit Current：≈8mA
Input and Output Characteristics(Normal phase)：
If field switch closes or input loop current＞2.1mA, output transistor will be energized, with yellow LED ON.
If field switch closes or input loop current＜1.2mA, output transistor will be de-energized, with yellow LED OFF.

Sta.	K1(OUT1), K3(OUT2)	K2(OUT1), K4(OUT2)
ON	Inverted phase	LFD enabled
OFF	Normal phase	LFD disenabled

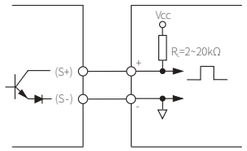
Note：Switch input (I) needs the K2 and K4 to be set to OFF state, without line fault (breakage, short-circuit) detection. When using line fault (breakage, short-circuit) detection function, resistances must be fitted：22kΩ in parallel with switch, 680Ω in series with switch. See Switch (II), K2 and K4 are set to ON state.
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Between power supply part and output part⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Between power supply part and output part⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Dry contact or DIN19234 standard NAMUR proximity switch input field devices (including the intrinsically safe type pressure switch、temperature switches、liquid level switches, etc.)

Connection

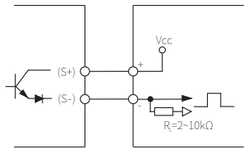


Note: a) GS8519-EX.11 only contains input2 and output2；
b) GS8519-EX.12 only contains input1、output1、output2;
c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Application 1：
Transistor Collector Output



Application 2：
Transistor Emitter Output



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8；9、10 terminals)：
U_o=10.5V，I_o=14mA，P_o=37mW
II C：C_o=2.4μF，L_o=165mH
★II B：C_o=16.8μF，L_o=495mH
II A：C_o=75.0μF，L_o=1000mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/2：GS8519-EX.12A
With LFD function

Digital input, transistor output isolated barriers, transfer digital signals (dry contact or NAMUR proximity switch) from hazardous area to safe area. Switches can be provided to select phase reversal and to enable the line fault detection. Line faults are signalled through separated relay. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×12.5mm

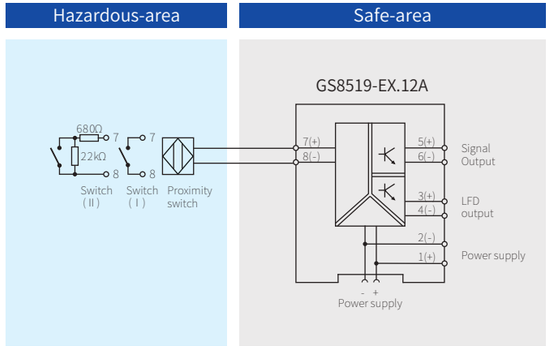
Specification

Supply Voltage：20~35V DC
Current Consumption：≤40mA(Supply voltage: 24V, transistor energized)
Safe-area Output：
Digital Output：4.5V≤V_H≤12V, V_L≤0.5V
Drive current≤10mA, Load resistance≥1kΩ
Transistor Collector Output：
V_H=V_{CC}; V_L≤2.5V(On-state current=10mA, V_{CC}=24V)
Max.Rated Current≤40mA, Load resistance: 2kΩ≤R_L≤20kΩ
Transistor Emitter Output：
V_H≥V_{CC}-2.5V; V_L≤0.5V(On-state current=10mA, V_{CC}=24V)
Max.Rated Current≤40mA, Load resistance: 2kΩ≤R_L≤10kΩ
Note： "Vcc" refers to the supply voltage at the output, V_{CC}≤40V
LFD Alarm：
If input loop current ≤50uA(line break) or ≥6.5mA(line short-circuit), LFD output transistor will be energized, with red LED ON.
Hazardous-area Input：
Signal：Dry contact or NAMUR proximity switch input, frequency≤5kHz
Open-circuit Voltage：≈8V; Short-circuit Current：≈8mA
Input and Output Characteristics(Normal phase)：
If field switch closes or input loop current＞2.1mA, signal output transistor will be energized, with yellow LED ON
If field switch closes or input loop current＜1.2mA, signal output transistor will be de-energized, with yellow LED OFF.

Sta.	K1	K2
ON	Inverted phase	LFD enabled
OFF	Normal phase	LFD disenabled

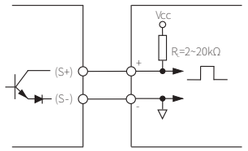
Note： Switch input (I) needs the K2 to be set to OFF state,without line fault (breakage, short-circuit) detection；When using line fault (breakage, short-circuit) detection function, resistances must be fitted： 22kΩ in parallel with switch, 680Ω in series with switch. See Switch (II), K2 are set to ON state.
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Between power supply part and output part≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Between power supply part and output part≥ 100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 100g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Dry contact or DIN19234 standard NAMUR proximity switch input field devices (including the intrinsically safe type pressure switch、temperature switches、liquid level switches, etc.)

Connection

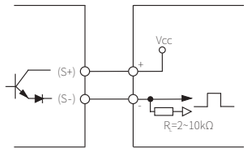


Note： Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Application 1：
Transistor Collector Output



Application 2：
Transistor Emitter Output



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8 terminals)：
U_O=10.5V，I_O=14mA，P_O=37mW
II C：C_O=2.4μF， L_O=165mH
★II B：C_O=16.8μF， L_O=495mH
II A：C_O=75.0μF， L_O=1000mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/2：GS8515-EX

Isolated barriers provide an AC detection voltage to the electrode sensor. When the conductive medium contacts the electrode, an AC will be generated in the input measurement loop. The change of the AC signal detected will be transmitted to the Safe area via the isolated barrier and will output via relay contacts. This product has the Line Fault (breakage) Detection function. If we select the LFD, output2 will output alarm signal. If we do not select LFD, output2 and output1 will output same signal.

Note： Dimensions： 118.9mm×106.0mm×17.5mm

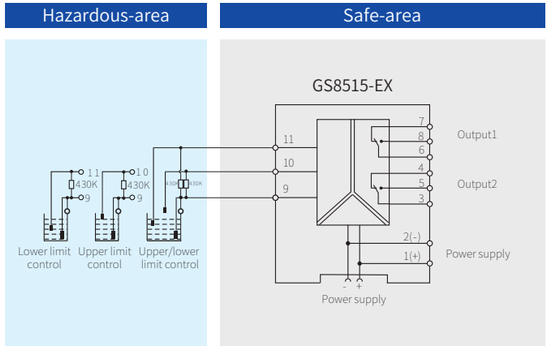
Specification

Supply Voltage：20~35V DC
Current Consumption：≤50mA(Supply voltage: 24V, relay energized)
Safe-area Relay Output：
Contact loading：250V AC,2A or 24V DC,2A
Load Type：resistive load
Delay Time： 0.5s or 10s(Adjustable via the switch K3)
Hazardous-area Input：
Control Input：ON/OFF control(9，10)
Upper limit/lower limit control(9，10，11)
Sensitivity：1kΩ~150kΩ(Adjustable via the potentiometer)
Input and Output Characteristics：
If liquid level exceeds limit：
When the DIP switch is set to NO state, the output relay will be energized, with yellow LED on.
When the DIP switch is set to NC state, the output relay will be de-energized, with yellow LED OFF.
When LFD enabled, output relay 1 wille be de-energized, with yellow LED OFF and red LED flashing; output relay 2 will be energized, with yellow LED ON.
Function of the DIP Switch：

Switch	Sta.	Function
K1	OFF	Relay contact(6,8 and 3,5): Nomal open
	ON	Nomal close
K2	OFF	LFD Disenabled
	ON	LFD Enabled
K3	OFF	Delay 0.5s
	ON	Delay 10s

Note：430kΩ resistance should be paralleled between electrodes when using LFD.
Relay contact teminals 6,8 and 3,5 are NO(nomal open)teminals
Relay contact teminals 6,7 and 3,4 are NC(nomal close)teminals
Response Time：≤20ms
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Between power supply part and output part≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Between power supply part and output part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Electrical level detect instrument

Connection



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11 terminals)：
U_O=6.6V，I_O=2.5mA，P_O=4.2mW
II C：C_O=22μF， L_O=100mH
★II B：C_O=500μF， L_O=300mH
II A：C_O=1000μF， L_O=800mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8521-EX

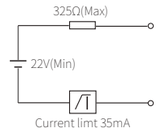
Digital output isolated barriers, control the 12V/35mA power supply to hazardous area. This product is suitable for driving IS devices such as solenoid valves, LED and some other low-power loads located in the hazardous area. The input and output are each galvanically isolated, and allow the control switch to directly connect to the either side of 24V DC power supply loop circuit.

Dimensions：118.9mm×106.0mm×12.5mm

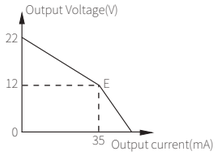
Specification

Loop Supply Voltage（Ue)：20~35V DC
Current Consumption：≤65mA(Supply voltage：24V,output：35mA)
Hazardous-area Output：
Open-circuit Voltage：22V~24V
Output Voltage at 35mA：≥12V

Equivalent Output Circuit：

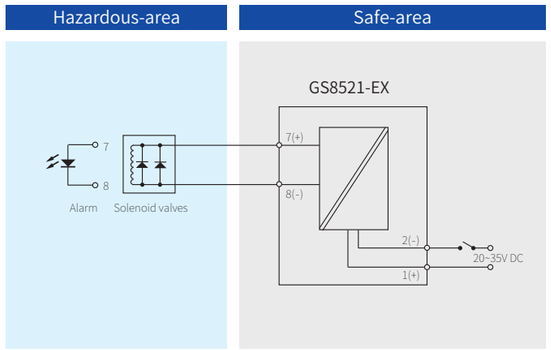


Output Characteristic：



Response Time：≤20ms
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 100g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：solenoid valves, LED.

Connection



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8 terminals)：
U_o=28V，I_o=93mA，P_o=651mW
II C：C_o=0.083μF，L_o=4.2mH
★II B：C_o=0.65μF，L_o=12.6mH
II A：C_o=2.15μF，L_o=33.6mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8523-EX

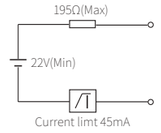
Digital output isolated barriers, control the 12V/45mA power supply to hazardous area. This product is suitable for driving IS devices such as solenoid valves, LED and some other low-power loads located in the hazardous area. The input and output are each galvanically isolated, and this product is loop powered.

Dimensions：118.9mm×106.0mm×12.5mm

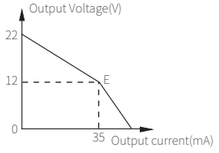
Specification

Loop Supply Voltage(Ue)：20~35V DC
Current Consumption：≤75mA(Supply voltage: 24V; output: 45mA)
Hazardous-area Output：
Open-circuit Voltage：22V~24V
Output voltage at 45mA：≥12V

Equivalent Output Circuit：

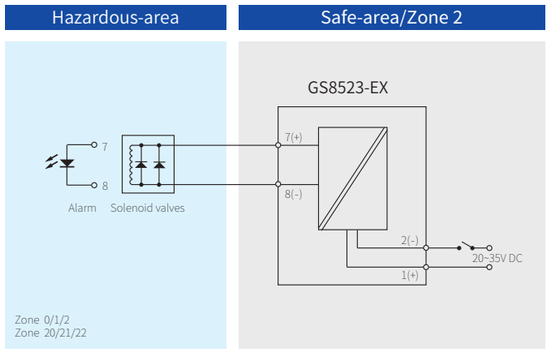


Output Characteristic：



Response Time：≤20ms
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)，IEC 61326-3-1
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 100g
Suitable Location：Mounting in safe area or zone2(for ec protection), and connected to the IS apparatus in hazardous area up to zone 0 IIC and zone 20 IIIC.
Suitable Field Apparatus：solenoid valves, LED.

Connection



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Ex ec II C T4 Gc
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8 terminals)：
U_o=25V，I_o=140mA，P_o=875mW
II C：C_o=0.11μF，L_o=1.5mH
★II B：C_o=0.84μF，L_o=4.5mH
II A：C_o=2.97μF，L_o=12.0mH
I：C_o=4.87μF，L_o=23mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8523-EX.I

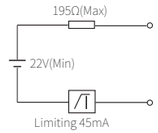
Digital output isolated barrier, with 12V/45mA output to hazardous area, is controlled by switches and logic signal in the safe area. This product is suitable for driving IS devices such as solenoid valves, LED and some other low-power loads located in the hazardous area. This product needs independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×12.5mm

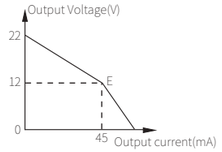
Specification

Supply Voltage：20~35V DC
Current Consumption：≤80mA(Supply voltage: 24V; output: 45mA)
Safe-area Input：
If input switch or transistor is close, power the devices located in hazardous area.
If input switch or transistor is open, stop powering the devices located in hazardous area.
Hazardous-area Output：
Open-circuit Voltage：22V~24V
Output voltage at 45mA：≥12V

Equivalent Output Circuit：

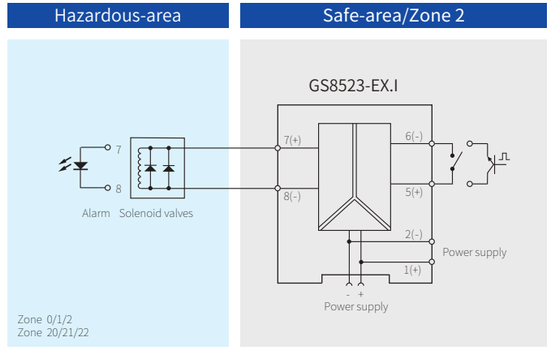


Output Characteristic：



Response Time：≤20ms
Power Supply Protection：Power supply reverse protection
EMC：According to IC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Between power supply part and input part≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Between power supply part and input part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 100g
Suitable Location：Mounting in safe area or zone2(for ec protection), and connected to the IS apparatus in hazardous area up to zone 0 IIC and zone 20 IIIC.
Suitable Field Apparatus：solenoid valves, LED.

Connection



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Ex ec II C T4 Gc
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8 terminals)：
U_O=25V，I_O=140mA，P_O=875mW
II C：C_O=0.11μF，L_O=1.5mH
*II B：C_O=0.84μF，L_O=4.5mH
II A：C_O=2.97μF，L_O=12.0mH
I：C_O=4.87μF，L_O=23mH
* II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8525-EX

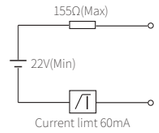
Digital output isolated barriers, control the 12V/60mA power supply to hazardous area. This product is suitable for driving IS devices such as solenoid valves, LED and some other low-power loads located in the hazardous area. The input and output are each galvanically isolated, and allow the control switch to directly connect to the either side of 24V DC power supply loop circuit.

Dimensions：118.9mm×106.0mm×12.5mm

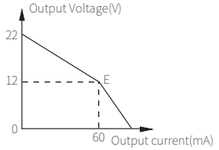
Specification

Loop Supply Voltage（Ue）：20~35V DC
Current Consumption：≤95mA(Supply voltage: 24V; output: 60mA)
Hazardous-area Output：
Open-circuit Voltage：22V~24V
Output Voltage at 60mA：≥12V

Equivalent Output Circuit：

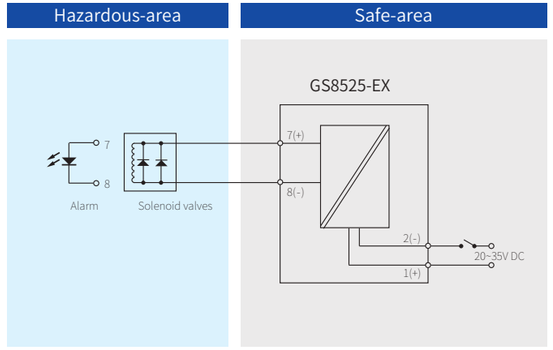


Output Characteristic：



Response Time：≤20ms
Power Supply Protection：Power supply reverse protection
EMC：According to IC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 100g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIB and zone20 IIIC.
Suitable Field Apparatus：solenoid valves, LED.

Connection



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II B
[Ex ia Da] III B
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8 terminals)：
U_O=25V，I_O=185mA，P_O=1157mW
*II B：C_O=0.84μF，L_O=4.5mH
II A：C_O=1.36μF，L_O=10.56mH
* II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

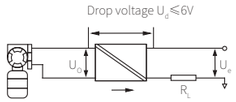
1/1：GS8531-EX
2/2：GS8532-EX

These products can work as an AI isolated barrier to provide a separate power to the transmitter located in the hazardous area and transfer the current from hazardous area to safe area. It can also work as an AO isolated barrier to transfer current signal from the safe area to the hazardous area and drive devices like actuator in field. It allows bi-directional transmission of HART communication signals. The input and output are each galvanically isolated, and these products are loop powered.

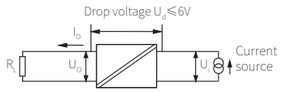
Dimensions：118.9mm×106.0mm×12.5mm

Specification

Loop Supply Voltage（Ue）： 20~30V DC
Application 1(AI)：
Safe-area Output：
Current：4~20mA, HART digital signal
HART Communication Load Resistance R_L ⩾250Ω
Hazardous-area Input：
Current：4~20mA, HART digital signal
Supply Voltage：U_o⩾Ue-R_L×0.02-6



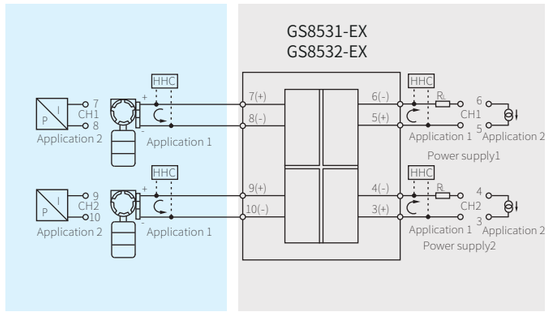
Output Accuracy： 0.4%F.S.
Application 2(AO)：
Safe-area Input：
Current：4~20mA, HART digital signal
Hazardous-area Output：
Current：4~20mA, HART digital signal
Load Resistance：R_L⩽(U_i-6)/0.02
HART Communication Load Resistance R_L⩾250Ω



Output Accuracy： 0.2%F.S.
Temperature Drift： 0.01%F.S./℃
EMC： According to IEC 61326-1(GB/T 18268)
Ambient Temperature： -20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Structure： GS8500 range structure customized by Phoenix Contact.
Weight： Approx. 150g
Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone1 IIC and zone21 IIIC.
Suitable Field Apparatus：
2-wire (HART) transmitter(Application 1)
2-wire valve positioner, electrical converter(Application 2)

Connection

Hazardous-area	Safe-area



Note: a) GS8531-EX only contains CH1;
b) Can't use HHC (HART Hand Held Communicator) in hazardous area and safe area at the same time;
c) HHC(HART Hand Held Communicator)used in the hazardous area must get the explosion-proof certificate.

Explosion-proof Certificate

Certifying Authority： NEPSI(China)
Ex Marking： [Ex ib Gb] II C
[Ex ib Db] III C
Maximum Voltage： Um=250V
Intrinsic Safety Parameters(7、8；9、10 terminals)：
U_o=23.1V，I_o=29mA，P_o=670mW
II C：C_o=0.096μF，L_o=0.5mH
⋆II B：C_o=0.288μF，L_o=1.5mH
II A：C_o=0.528μF，L_o=4.0mH
⋆II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ib Db] III C

1/2：GS8535-EX

2-wire (HART) transmitter, 3-wire transmitter, current source input isolated barrier, provide isolated power supplies for transmitters which located in hazardous area. Transfer 4~20mA signal from hazardous area to safe area.It also allows bi-directional transmission of HART communication signals.The product needs an independent power supply and galvanic isolation among power supply, input and output.

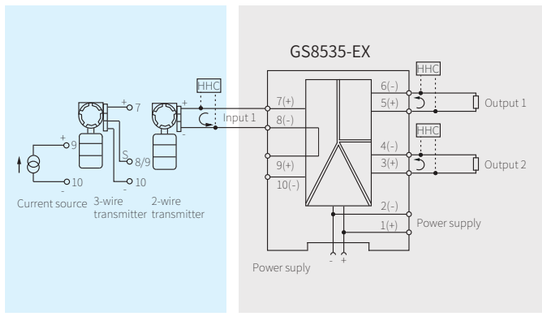
Dimensions：118.9mm×106.0mm×12.5mm

Specification

Supply Voltage： 20~35V DC
Current Consumption： ⩽75mA(Supply voltage: 24V; output: 20mA)
Safe-area Output：
Current：0/4~20mA, HART digital signal
Load Resistance：R_L⩽300Ω
HART Communication Load Resistance：R_L⩾250Ω
Voltage：0/1~5V
Load Resistance：R_L⩾330kΩ
Output loop powered voltage Ue：12~30V DC
Note：Customers need specify current(active or passive) or voltage output when ordering.
Hazardous-area Input：
Current：0/4~20mA, HART digital signal
Distribution：
Open-circuit Voltage：⩽28V
Voltage at 20mA：⩾15.5V
Normal working current：⩽25mA
Output Accuracy： 0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift： 0.005%F.S./℃
Response Time(0~90%)： ⩽2ms
Power Supply Protection： Power supply reverse protection
EMC： According to IEC 61326-1(GB/T 18268)，IEC 61326-3-1
Ambient Temperature： -20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Between power supply part and output part⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Between power supply part and output part⩾100MΩ
Structure： GS8500 range structure customized by Phoenix Contact.
Weight： Approx. 110g
Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus： 2-wire (HART) transmitter, 3-wire transmitter, current source

Connection

Hazardous-area	Safe-area



Note: a) Can't use HHC (HART Hand Held Communicator) in hazardous area and safe area at the same time;
b) HHC(HART Hand Held Communicator)used in the hazardous area must get the explosion-proof certificate;
c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority： NEPSI(China)
Ex Marking： [Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage： Um=250V
Intrinsic Safety Parameters(7、8 / 9、10 terminals)：
U_o=28V，I_o=93mA，P_o=651mW
II C：C_o=0.083μF，L_o=4.2mH
⋆II B：C_o=0.65μF，L_o=12.6mH
II A：C_o=2.15μF，L_o=33.6mH
⋆II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C
(9、10 terminals)：
U_o=3.5V，C_o=100μF
U_i=20V，I_i=110mA

2/2：GS8536-EX

2-wire (HART) transmitter, 3-wire transmitter, current source input isolated barrier, provide isolated power supplies for transmitters which located in hazardous area.Transfer 4~20mA signal from hazardous area to safe area.It also allows bi-directional transmission of HART communication signals.The product needs an independent power supply and galvanic isolation among power supply, input and output.

SIL2 IEC61508

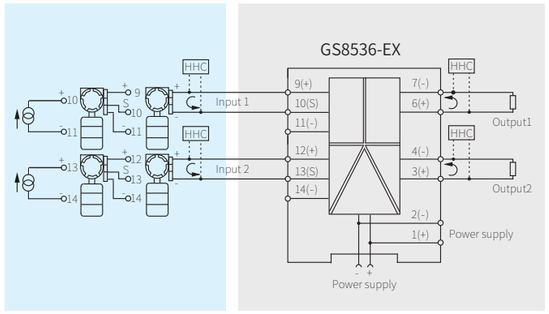
Dimensions：118.9mm×106.0mm×17.5mm

Specification

Supply Voltage：20~35V DC
Current Consumption：≤100mA(Supply voltage: 24V; output: 20mA)
Safe-area Output：
Current：0/4~20mA, HART digital signal
Load Resistance：R_L≤300Ω
HART Communication Load Resistance：R_L≥250Ω
Voltage：0/1~5V
Load Resistance：R_L≥330kΩ
Output loop powered voltage Ue：12~30V DC
Load Resistance：R_L≤(Ue-5)/0.02
Note：Customers need specify current(active or passive) or voltage output when ordering.
Hazardous-area Input：
Current：0/4~20mA, HART digital signal
Distribution：
Open-circuit Voltage：≤28V
Voltage at 20mA：≥15.5V
Normal working current：≤25mA
Output Accuracy：0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift：0.005%F.S./℃
Response Time(0~90%)：≤2ms
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)，IEC 61326-3-1
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Between power supply part and output part≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Between power supply part and output part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 135g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：2-wire (HART) transmitter, 3-wire transmitter, current source.

Connection

Hazardous-area | Safe-area



Note: a) Can't use HHC (HART Hand Held Communicator) in hazardous area and safe area at the same time.;
b) HHC(HART Hand Held Communicator)used in the hazardous area must get the explosion-proof certificate.
c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11；12、13、14 terminals)：
U_O=28V，I_O=93mA，P_O=651mW
II C：C_O=0.083μF，L_O=4.2mH
★II B：C_O=0.65μF，L_O=12.6mH
II A：C_O=2.15μF，L_O=33.6mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C
(10、11；13、14 terminals)：
U_O=1.2V，C_O=100μF
U_i=20V，I_i=110mA

1/1：GS8547-EX

2-wire (HART) transmitter, 3-wire transmitter, current source input isolated barrier, provide isolated power supplies for transmitters which located in hazardous area.Transfer 4~20mA signal from hazardous area to safe area. It also allows bi-directional transmission of HART communication signals. The product needs an independent power supply and galvanic isolation among power supply, input and output.

SIL3 IEC61508

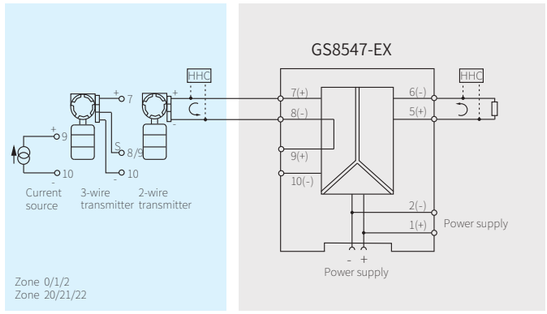
Dimensions：118.9mm×106.0mm×12.5mm

Specification

Supply Voltage：20~35V DC
Current Consumption：≤65mA(Supply voltage: 24V; output: 20mA)
Safe-area Output：
Current：0/4~20mA, HART digital signal
Load Resistance：R_L≤550Ω
HART Communication Load Resistance：R_L≥250Ω
Voltage：0/1~5V
Load Resistance：R_L≥330kΩ
Note：Customers need specify current output or voltage output when ordering.
Hazardous-area Input：
Current：0/4~20mA, HART digital signal
Distribution：
Open-circuit Voltage：≤28V
Voltage at 20mA：≥15.5V
Normal working current：≤25mA
Output Accuracy：0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift：0.005%F.S./℃
Response Time(0~90%)：≤2ms
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)，IEC 61326-3-1
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Between power supply part and output part≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Between power supply part and output part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 110g
Suitable Location：Mounting in safe area or zone2(for ec protection), and connected to the IS apparatus in hazardous area up to zone 0 IIC and zone 20 IIIC.
Suitable Field Apparatus：2-wire (HART) transmitter, 3-wire transmitter, current source

Connection

Hazardous-area | Safe-area/Zone 2



Note: a) Can't use HHC (HART Hand Held Communicator) in hazardous area and safe area at the same time.;
b) HHC(HART Hand Held Communicator)used in the hazardous area must get the explosion-proof certificate.
c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Ex ec II C T4 Gc
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8 / 9、10 terminals)：
U_O=28V，I_O=93mA，P_O=651mW
II C：C_O=0.083μF，L_O=4.2mH
★II B：C_O=0.65μF，L_O=12.6mH
II A：C_O=2.15μF，L_O=32.8mH
I：C_O=3.76μF，L_O=53.9mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8549-EX

2-wire (HART) transmitter, 3-wire transmitter, current source input isolated barrier, provide isolated power supplies for transmitters which located in hazardous area. Transfer the 4~20mA signal from hazardous area to safe area. It also allows bi-directional transmission of HART communication signals. The product needs an independent power supply and galvanic isolation among power supply, input and output.

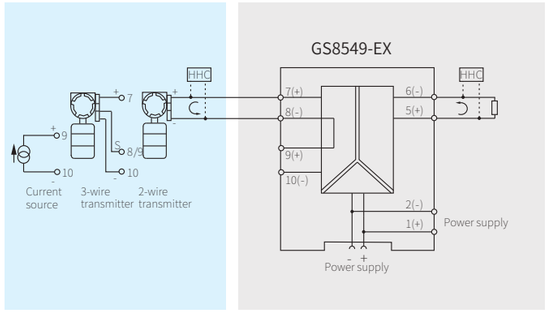
Dimensions：118.9mm×106.0mm×12.5mm

Specification

Supply Voltage： 20~35V DC
Current Consumption： ⩽70mA(Supply voltage: 24V; output: 20mA)
Safe-area Output：
Current：0/4~20mA, HART digital signal
Load Resistance：R_L⩽550Ω
HART Communication Load Resistance：R_L⩾250Ω
Voltage：0/1~5V
Load Resistance：R_L⩾330kΩ
Note： Customers need specify current output or voltage output when ordering.
Hazardous-area Input：
Current：0/4~20mA, HART digital signal
Distribution：
Open-circuit Voltage：⩽28V
Voltage at 20mA：⩾19V
Normal working current：⩽25mA
Output Accuracy： 0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift： 0.005%F.S./℃
Response Time(0~90%)： ⩽2ms
Power Supply Protection： Power supply reverse protection
EMC： According to IEC 61326-1(GB/T 18268)
Ambient Temperature： -20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Between power supply part and output part⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Between power supply part and output part⩾100MΩ
Structure： GS8500 range structure customized by Phoenix Contact.
Weight： Approx. 110g
Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIB and zone20 IIIC.
Suitable Field Apparatus： 2-wire (HART) transmitter, 3-wire transmitter, current source

Connection

Hazardous-area | Safe-area



Note: a) Can't use HHC (HART Hand Held Communicator) in hazardous area and safe area at the same time.;
b) HHC(HART Hand Held Communicator)used in the hazardous area must get the explosion-proof certificate.
c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority： NEPSI(China)
Ex Marking： [Ex ia Ga] II B
[Ex ia Da] III B
Maximum Voltage： Um=250V
Intrinsic Safety Parameters(7、8 / 9、10 terminals)：
U_O=28V，I_O=187mA，P_O=1310mW
*II B：C_O=0.65μF， L_O=4.5mH
II A：C_O=2.15μF， L_O=12.0mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III B

1/1：GS8567-EX

Analog output isolated barrier transfer the 4~20mA signal from safe area to hazardous area to drive excecutive devices. It also allows bi-directional transmission of HART communication signals. The product needs an independent power supply and galvanic isolation among power supply, input and output.

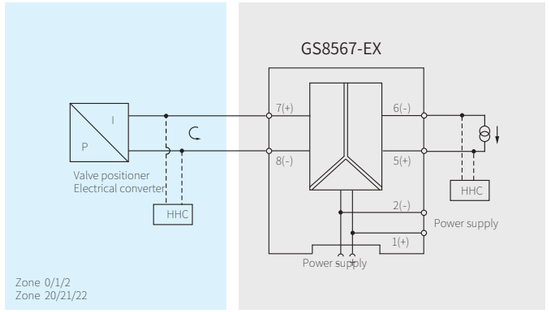
Dimensions：118.9mm×106.0mm×12.5mm

Specification

Supply Voltage： 20~35V DC
Current Consumption： ⩽55mA(Supply voltage: 24V; output: 20mA)
Safe-area Input：
Current：0/4~20mA, HART digital signal
Voltage drop：⩽6V
Hazardous-area Output：
Current：0/4~20mA, HART digital signal
Load Resistance：R_L⩽800Ω
HART Communication Load Resistance：R_L⩾250Ω
Output Accuracy： 0.1%F.S.
Temperature Drift： 0.005%F.S./℃
Response Time(0~90%)： ⩽2ms
Power Supply Protection： Power supply reverse protection
Output short-circuit Alarm：
When output load ⩽80Ω, short-circuit alarm active, and output 0mA
EMC： According to IEC 61326-1(GB/T 18268)，IEC 61326-3-1
Ambient Temperature： -20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Between power supply part and input part⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Between power supply part and input part⩾100MΩ
Structure： GS8500 range structure customized by Phoenix Contact.
Weight： Approx. 100g
Suitable Location： Mounting in safe area or zone2(for ec protection), and connected to the IS apparatus in hazardous area up to zone 0 IIC and zone 20 IIIC.
Suitable Field Apparatus： 2-wire valve positioner, electrical converter, etc.

Connection

Hazardous-area | Safe-area/Zone 2



Note: a) Can't use HHC (HART Hand Held Communicator) in hazardous area and safe area at the same time.;
b) HHC(HART Hand Held Communicator)used in the hazardous area must get the explosion-proof certificate.
c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority： NEPSI(China)
Ex Marking： [Ex ia Ga] II C
[Ex ia Da] III C
Ex ec II C T4 Gc
Maximum Voltage： Um=250V
Intrinsic Safety Parameters(7、8 terminals)：
U_O=28V，I_O=93mA，P_O=651mW
II C：C_O=0.083μF， L_O=4.2mH
*II B：C_O=0.65μF， L_O=12.6mH
II A：C_O=2.15μF， L_O=32.8mH
I：C_O=3.76μF， L_O=53.9mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

Analog Output

2/2：GS8568-EX

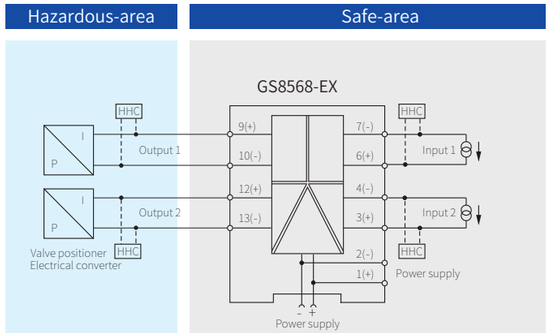
Analog output isolated barrier transfer the 4~20mA signal from safe area to hazardous area to drive excecutive devices. It also allows bi-directional transmission of HART communication signals. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

Supply Voltage：20~35V DC
Current Consumption：≤80mA(Supply voltage: 24V; output: 20mA)
Safe-area Input：
Current：0/4~20mA, HART digital signal
Voltage drop：≤6V
Hazardous-area Output：
Current：0/4~20mA, HART digital signal
Load Resistance：R_L≤800Ω
HART Communication Load Resistance：R_L≥250Ω
Output Accuracy：0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift：0.005%F.S./℃
Response Time(0~90%)：≤2ms
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)，IEC 61326-3-1
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Between power supply part and input part≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part≥100MΩ
Between power supply part and input part≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 135g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：2-wire valve positioner, electrical converter, etc.

Connection



Note: a) Can't use HHC (HART Hand Held Communicator) in hazardous area and safe area at the same time.;
b) HHC(HART Hand Held Communicator)used in the hazardous area must get the explosion-proof certificate.
c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10；12、13 terminals)：
U_O=28V，I_O=93mA，P_O=651mW
II C：C_O=0.083μF，L_O=4.2mH
★II B：C_O=0.65μF，L_O=12.6mH
II A：C_O=2.15μF，L_O=33.6mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

Pulse Input

1/1：GS8552-EX.11
2/2：GS8552-EX.22

Pulse input isolated barriers, provide isolated power supply for field instruments. The isolated barrier transfer the pulse signal generated by the hazardous-area device to the safe area. The input adopts hysteresis comparison circuit and has high anti-interference performance. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

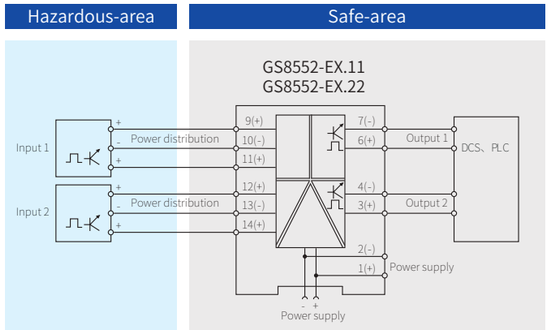
Specification

Supply Voltage：20~35V DC
Current Consumption：(Supply voltage: 24V; output: 12V voltage pulse)
≤80mA(GS8552-EX.22，12V Distribution volatge)
≤45mA(GS8552-EX.11，12V Distribution volatge)
Safe-area Output：
Transistor Output：Supply voltage V_{CC}≤40V, Rated current≤40mA
Transistor Collector Output：
V_H=V_{CC}; V_L≤2.5V(On-state current=10mA, Vcc=24V)
Load Resistance：2kΩ≤R_L≤20kΩ
Transistor Emitter Output：
V_H≥V_{CC}-2.5V; V_L≤0.5V(On-state current=10mA, Vcc=24V)
Load Resistance：2kΩ≤R_L≤20kΩ
Voltage pulse Output：
12V Range PLC/DCS：High Voltage 9V≤V_H≤12V
5V range PLC/DCS：High Voltage 4.5V≤V_H≤5.5V
Low Voltage：V_L≤0.5V
Load Resistance：R_L≥1kΩ，Rated current≤10mA
Hazardous-area Input：
Voltage pulse Input：High Voltage V_H≥4V; Low Voltage V_L≤1V
Frequency at voltage pulse output≤50kHz
Frequency at transistor output≤20kHz
Transistor Input：NPN/PNP
Frequency at voltage pulse output≤20kHz
Frequency at transistor output≤10kHz
(Input signal Vh≤12V，Duty ratio≥30%)
The input signal type can be set by the DIP switches：

Sta.	Input 1		Input 2	
	K4	K3	K2	K1
Voltage pulse Input	OFF	OFF	OFF	OFF
Emitter (PNP) Input	OFF	ON	OFF	ON
Collector (NPN) Input	ON	OFF	ON	OFF

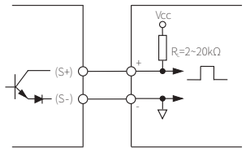
12V distribution power：Open-voltage:≤15V; Rated voltage:≥9V at 20mA
5V distribution power：Open-voltage:≤5.5V; Rated voltage:≥4.5V at 20mA
Note：a) K3 and K4, K1 and K2 cannot be ON at the same time;
b) Customers must specify distribution power voltage when ordering.
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part≥2500V AC
Between power supply part and output part≥1500V AC
Structure：GS8500 range structure customized by Phoenix Contact.
Weight：Approx. 150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：2-wire or 3-wire pulse signal source

Connection

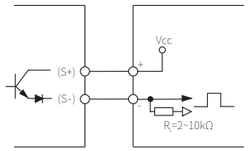


Note: a) GS8522-EX.11 only contains input1, output1;
b) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Application 1:
Transistor Collector Output



Application 2:
Transistor Emitter Output



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11；12、13、14 terminals)：
U_O=15.5V，I_O=110mA，P_O=427mW，C_i=25nF
II C：C_O=0.50μF，L_O=2.0mH
★II B：C_O=3.1μF，L_O=6.0mH
II A：C_O=12.5μF，L_O=16.0mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8554-EX.11
2/2：GS8554-EX.22

Dimensions：118.9mm×106.0mm×17.5mm

Pulse input isolated barriers, provide isolated power supply(24V) for field instruments. The pulse signal generated in the hazardous-area device is transmitted to the safe-area through the isolated barrier to output. The input adopts hysteresis comparison circuit which has high anti-interference performance. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

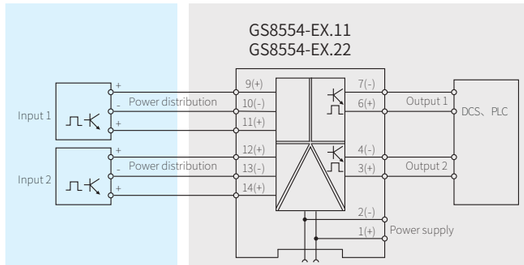
Supply Voltage： 20~35V DC
Current Consumption： (Supply voltage: 24V; output: 12V voltage pulse)
⩽160mA(GS8554-EX.22，24V distribution volatge)
⩽90mA(GS8554-EX.11，24V distribution volatge)
Safe-area Output：
Transistor Output：Supply voltage V_{CC}⩽40V, Rated current⩽40mA
Transistor Collector Output：
V_H=V_{CC}; V_L⩽2.5V(On-state current=10mA, Vcc=24V)
Load Resistance：2kΩ⩽R_L⩽20kΩ
Transistor Emitter Output：
V_H⩾V_{CC}-2.5V; V_L⩽0.5V(On-state current=10mA, Vcc=24V)
Load Resistance：2kΩ⩽R_L⩽20kΩ
Voltage pulse Output：
24V Range PLC/DCS：High Voltage 16V⩽V_H⩽24V
12V Range PLC/DCS：High Voltage 9V⩽V_H⩽12V
Low Voltage：V_L⩽0.5V
Load Resistance：R_L⩾1kΩ, Rated current⩽10mA
Hazardous-area Input：
Voltage pulse Input：High voltage V_H⩾4V; Low voltage V_L⩽1V
Frequency at oltage pulse output⩽50kHz
Frequency at transistor output⩽20kHz
Transistor Input：NPN/PNP
Frequency at voltage pulse output⩽20kHz
Frequency at transistor output⩽10kHz
(Input signal Vh⩽12V，Duty ratio⩾30%)
The input signal type can be set by the DIP switches：

Sta.	Input 1		Input 2	
	K4	K3	K2	K1
Voltage pulse Input	OFF	OFF	OFF	OFF
Emitter (PNP) Input	OFF	ON	OFF	ON
Collector (NPN) Input	ON	OFF	ON	OFF

Distribution power：Open-voltage: ⩽26V ; Rated voltage: ⩾16V at 20mA
Note：a) K1 and K2 cannot be ON at the same time；
b) K3 and K4 cannot be ON at the same time。
Power Supply Protection： Power supply reverse protection
EMC： According to IEC 61326-1(GB/T 18268)
Ambient Temperature： -20°C~+60°C
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part⩾2500V AC
Between power supply part and output part⩾1500V AC
Structure： GS8500 range structure customized by Phoenix Contact.
Weight： Approx. 150g
Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus： 2-wire or 3-wire pulse signal source

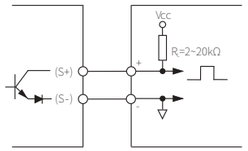
Connection

Hazardous-area | Safe-area

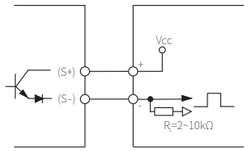


Note: a) GS8554-EX.11 only contains input1、output1;
b) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Application 1:
Transistor Collector Output



Application 2:
Transistor Emitter Output



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11；12、13、14 terminals)：
U_0=28V，I_0=93mA，P_0=651mW
II C：C_0=0.083μF， L_0=4.2mH
★II B：C_0=0.65μF， L_0=12.6mH
II A：C_0=2.15μF， L_0=33.6mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

3/3：GS8556-EX

Dimensions：118.9mm×106.0mm×17.5mm

Pulse input and output isoltaed barriers transfer the voltage (V type), the complementary (F type) and the open collector (C type) output from the encoder in the hazardous area to safe area. Meanwhile, this product supplies power to the encoder in hazardous area. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

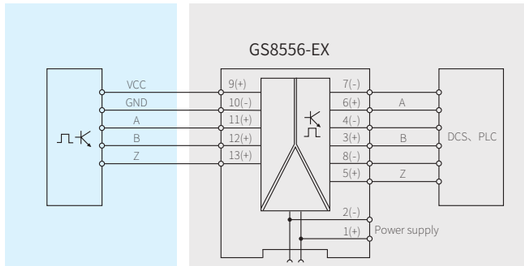
Supply Voltage： 20~35V DC
Current Consumption： ⩽120mA (Supply voltage: 24V; Output: 12V voltage pulse; distribution voltage: 24V)
Safe-area Output：
Transistor Output：Supply voltage V_{CC}⩽40V，Rated current⩽40mA
Transistor Collector Output：
V_H=V_{CC}; V_L⩽2.5V(On-state current=10mA, Vcc=24V)
Load Resistance：2kΩ⩽R_L⩽20kΩ
Transistor Emitter Output：
V_H⩾V_{CC}-2.5V; V_L⩽0.5V(On-state current=10mA, Vcc=24V)
Load Resistance：2kΩ⩽R_L⩽20kΩ
Voltage pulse Output：
High Voltage：9V⩽V_H⩽12V
Low Voltage：V_L⩽0.5V
Load Resistance：R_L⩾1kΩ, Rated current⩽10mA
Hazardous-area Input：
Voltage pulse Input：High voltage V_H⩾4V; Low voltage V_L⩽1V
Frequency at voltage pulse output⩽50kHz
Frequency at transistor output⩽20kHz
Transistor Input：NPN/PNP
Frequency at voltage pulse output⩽20kHz
Frequency at transistor output⩽10kHz
(Input signal Vh⩽12V，Duty ratio⩾30%)
The input signal type can be set by the DIP switches：

Sta.	Input 1		Input 2		Input 3	
	K1	K2	K3	K4	K5	K6
Voltage pulse Input	OFF	OFF	OFF	OFF	OFF	OFF
Emitter (PNP) Input	ON	OFF	ON	OFF	ON	OFF
Collector (NPN) Input	OFF	ON	OFF	ON	OFF	ON

Distribution power：Open-voltage: ⩽26V; Rated voltage: ⩾15.5V at 20mA
Note：a) K1 and K2 cannot be ON at the same time；
b) K3 and K4 cannot be ON at the same time；
c) K5 and K6 cannot be ON at the same time。
Power Supply Protection： Power supply reverse protection
EMC： According to IEC 61326-1(GB/T 18268)
Ambient Temperature： -20°C~+60°C
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾1500V AC
Structure： GS8500 range structure customized by Phoenix Contact
Weight： Approx.150g
Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus： 2-wire or 3-wire pulse signal source,encoder

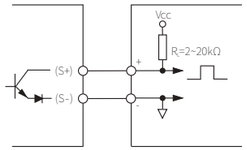
Connection

Hazardous-area | Safe-area

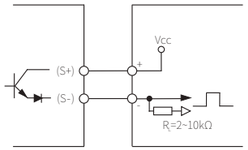


Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Application 1:
Transistor Collector Output



Application 2:
Transistor Emitter Output



Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11 terminals)：
U_0=28V，I_0=111mA，P_0=777mW
II C：C_0=0.083μF， L_0=2.5mH
★II B：C_0=0.65μF， L_0=7.5mH
II A：C_0=2.15μF， L_0=20.0mH
(11、10；12、10；13、10 terminals)：
U_0=13.65V，I_0=7.5mA，P_0=26mW
II C：C_0=0.7μF， L_0=100mH
★II B：C_0=5.0μF， L_0=300mH
II A：C_0=18.1μF， L_0=800mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

Fire and Smoke Dectector Input(Loop Powered)

1/1：GS8565-EX
2/2：GS8566-EX

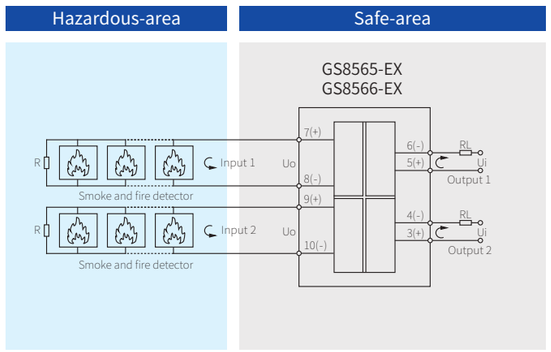
Fire detector input isolated barriers provide the fire and smoke detectors in hazardous area isolated power and transfer 0~40mA signal generated by detectors in the hazardous area to the safe area. This product acts as an smoke alarm and it is suitable for loop-powered DCS/PLC system.

Dimensions：118.9mm×106.0mm×12.5mm

Specification

Loop Supply Voltage（Ui）：20~30V DC
Safe-area output：
Current：0~40mA
Hazardous-area input：
Current：0~40mA
Distribution Voltage：
$U_o \geqslant U_i-(280+R_L)I-6 (U_i \leqslant 24V)$
$U_o \geqslant 18-(280+R_L)I (U_i > 24V)$
Short-circuit Current：≤65mA(Supply voltage： 24V)
Transmission Accuracy：0.2%F.S.
Temperature Drift：0.01%F.S./℃(0℃~60℃)
0.02%F.S./℃(-20℃~0℃)
Response Time(0~90%)：≤2ms
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between channels ⩾1500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between channels ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.100g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Smoke, fire detector

Connection



Note：GS8565-EX only contains input1, output1；

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8；9、10 terminals)：
U_o=25.2V，I_o=93mA，P_o=586mW
II C：C_o=0.107μF， L_o=4.2mH
*II B：C_o=0.82μF， L_o=12.6mH
II A：C_o=2.9μF， L_o=33.6mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

Temperature Input

1/1：GS8572-EX(RTD, TC input)
GS8572-EX.RTD(RTD input)
GS8572-EX.R(Potentiometer input)

Temperature input isolated barriers, converter potentiometer/RTD/TC signals in hazardous area into current or voltage signals and output to safe area. It can be configured by computer. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：
118.9mm×106.0mm×17.5mm(GS8572-EX)
118.9mm×106.0mm×12.5mm(GS8572-EX.RTD/GS8572-EX.R)

Specification

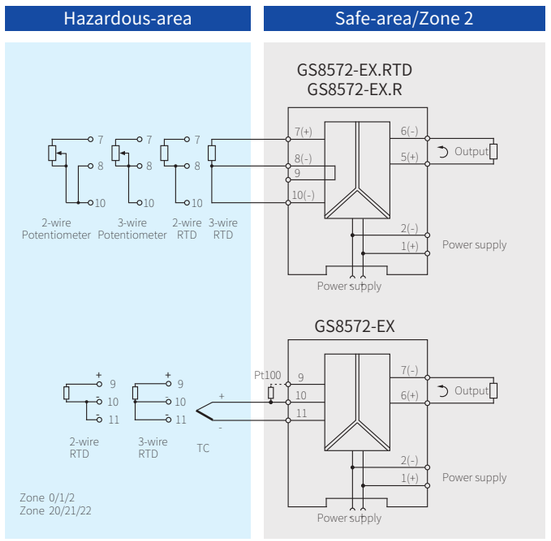
Supply Voltage：20~35V DC
Current Consumption：≤40mA(Supply voltage: 24V; Output: 20mA)
Safe-area Output：
Output Current：0~20mA/4~20mA; Load resistance: R_L≤300Ω
Output Voltage：0~5V/1~5V; Load resistance: R_L⩾35kΩ
(Customers need specify current output or voltage output when ordering)
Hazardous-area Input：
Input Signal：please see the table 'Input Signal and Range'.
Temperature Drift：0.01%F.S./℃
CJC：±1℃(Compensation range：-20℃~+60℃)
Response Time(0~90%)：≤1s
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area or zone2(for ec protection), and connected to the IS apparatus in hazardous area up to zone 0 IIC and zone 20 IIIC.
Suitable Field Apparatus：2-wire or 3-wire RTD, TC, Potentiometer

Input Signal and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200℃~+400℃	50℃	0.5℃ / 0.1%
	E	-200℃~+900℃	50℃	0.5℃ / 0.1%
	J	-200℃~+1200℃	50℃	0.5℃ / 0.1%
	K	-200℃~+1372℃	50℃	0.5℃ / 0.1%
	N	-200℃~+1300℃	50℃	0.5℃ / 0.1%
	R	-40℃~+1768℃	500℃	1.5℃ / 0.1%
	S	-40℃~+1768℃	500℃	1.5℃ / 0.1%
	B	+320℃~+1820℃	500℃	1.5℃ / 0.1%
RTD	Pt100	-200℃~+850℃	20℃	0.2℃ / 0.1%
	Cu50	-50℃~+150℃	20℃	0.2℃ / 0.1%
	Cu100	-50℃~+150℃	20℃	0.2℃ / 0.1%
Potentiometer		0kΩ~5kΩ		0.1%
		0kΩ~10kΩ		0.1%

Note：1、The "%" of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.
2、Allow a maximum wire resistance of 50Ω/line for RTD input(3-wire).
3、When the thermocouple is input, the conversion accuracy does not include the CJC. For every 100Ω increase in the compensation wire, the cold junction error increases by 0.2℃.
4、When the Type B thermocouple is input, the temperature range is required to be greater than 680 ℃ to ensure the accuracy index.
5、When the Type S thermocouple is input, the temperature measurement accuracy is 0.6% below 10℃.

Connection



Note: a) 2-wire connection cannot eliminate conductor resistance and error will increase
b) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Ex ec II C T4 Gc
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8、9、10 terminals)：
U_o=5.4V，I_o=23mA，P_o=32mW
II C：C_o=65μF， L_o=65mH
*II B：C_o=1000μF， L_o=265mH
II A：C_o=1000μF， L_o=535mH
I：C_o=1000μF， L_o=880mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8572-EX.TC

Temperature input isolated barriers, converter TC/mV signals in hazardous area into current or voltage signals and output to safe area. It can be configured by computer. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：
118.9mm×106.0mm×12.5mm(TC input)
118.9mm×106.0mm×17.5mm(mV input)

Specification

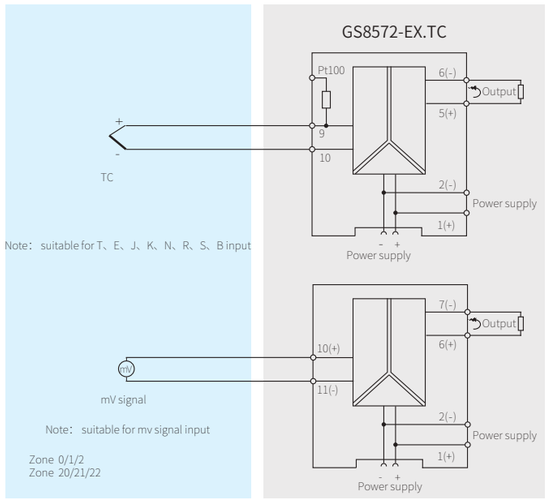
Supply Voltage：20~35V DC
Current Consumption：≤40mA (Supply voltage: 24V; Output: 20mA)
Safe-area Output：
Output Current：0~20mA/4~20mA; Load resistance: R_L≤300Ω
Output Voltage：0~5V/1~5V; Load resistance: R_L≥35kΩ
(Customers need specify current output or voltage output when ordering)
Hazardous-area Input：
Input Signal： please see the table 'Input Signal and Range'.
Temperature Drift：0.01%F.S./℃
CJC：±1℃(Compensation range：-20℃~+60℃)
Response Time(0~90%)：≤1s
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ≥2500V AC
Between power supply part and output part ≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ≥100MΩ
Between power supply part and output part ≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area or zone2(for ec protection), and connected to the IS apparatus in hazardous area up to zone 0 IIC and zone 20 IIIC.
Suitable Field Apparatus：TC, mV signal

Input Signal and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200℃~+400℃	50℃	0.5℃ / 0.1%
	E	-200℃~+900℃	50℃	0.5℃ / 0.1%
	J	-200℃~+1200℃	50℃	0.5℃ / 0.1%
	K	-200℃~+1372℃	50℃	0.5℃ / 0.1%
	N	-200℃~+1300℃	50℃	0.5℃ / 0.1%
	R	-40℃~+1768℃	500℃	1.5℃ / 0.1%
	S	-40℃~+1768℃	500℃	1.5℃ / 0.1%
	B	+320℃~+1820℃	500℃	1.5℃ / 0.1%
mV signal		-100mV~+100mV	10mV	20uV / 0.1%

Note：1、The "%" of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.
2、When the thermocouple is input, the conversion accuracy does not include the CJC. For every 100Ω increase in the compensation wire, the cold junction error increases by 0.2℃.
3、When the Type B thermocouple is input, the temperature range is required to be greater than 680 ℃ to ensure the accuracy index.
4、When the Type S thermocouple is input, the temperature measurement accuracy is 0.6% below 10℃.
5、mV signal input needs to be customized.

Connection



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Ex ec II C T4 Gc
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11 terminals)：
U_O=5.4V，I_O=23mA，P_O=32mW
II C：C_O=65μF， L_O=65mH
★II B：C_O=1000μF， L_O=265mH
II A：C_O=1000μF， L_O=535mH
I：C_O=1000μF， L_O=880mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8572-EX.SIL.RTD(RTD input)
GS8572-EX.SIL.TC(TC input)

Temperature input isolated barriers, converter RTD/TC signals in hazardous area into 4~20mA or 0/1~5V signals and output to safe area. It can be configured by computer. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×12.5mm

Specification

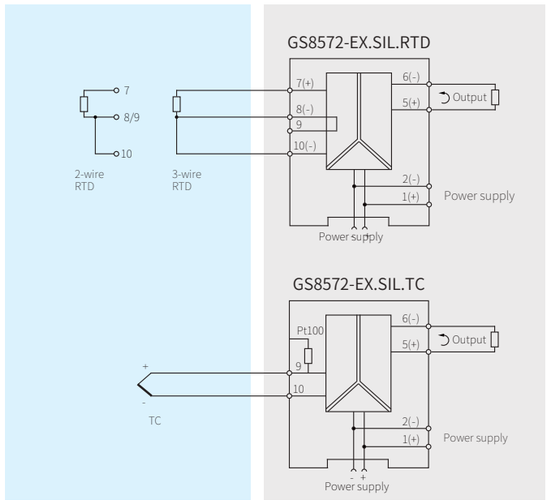
Supply Voltage：20~35V DC
Current Consumption：≤45mA(Supply voltage: 24V; Output: 20mA)
Safe-area Output：
Output Current：4~20mA； Load resistance：R_L≤300Ω
Output Voltage：1~5V； Load resistance：R_L≥35kΩ
(Customers need specify current output or voltage output when ordering)
Hazardous-area Input：
Input Signal： please see the table 'Input Signal and Range'.
Temperature Drift：0.01%F.S./℃
CJC：±1℃(Compensation range：-20℃~+60℃)
Response Time(0~90%)：≤1.2s
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268), IEC 61326-3-1
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ≥2500V AC
Between power supply part and output part ≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ≥100MΩ
Between power supply part and output part ≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：2-wire or 3-wire RTD, TC

Input Signal and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200℃~+400℃	50℃	0.5℃ / 0.1%
	E	-200℃~+900℃	50℃	0.5℃ / 0.1%
	J	-200℃~+1200℃	50℃	0.5℃ / 0.1%
	K	-200℃~+1372℃	50℃	0.5℃ / 0.1%
	N	-200℃~+1300℃	50℃	0.5℃ / 0.1%
	R	-40℃~+1768℃	500℃	1.5℃ / 0.1%
	S	-40℃~+1768℃	500℃	1.5℃ / 0.1%
	B	+320℃~+1820℃	500℃	1.5℃ / 0.1%
RTD	Pt100	-200℃~+850℃	20℃	0.2℃ / 0.1%
	Cu50	-50℃~+150℃	20℃	0.2℃ / 0.1%
	Cu100	-50℃~+150℃	20℃	0.2℃ / 0.1%

Note：1、The "%" of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.
2、Allow a maximum wire resistance of 50Ω/line for RTD input(3-wire).
3、When the thermocouple is input, the conversion accuracy does not include the CJC.
4、When the Type B thermocouple is input, the temperature range is required to be greater than 680 ℃ to ensure the accuracy index.
5、When the Type S thermocouple is input, the temperature measurement accuracy is 0.6% below 10℃.

Connection



Note: a) 2-wire connection cannot eliminate conductor resistance and error will increase
b) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8、9、10 terminals)：
U_O=6.6V，I_O=10mA，P_O=16.5mW
II C：C_O=6.5μF， L_O=3.6mH
★II B：C_O=60μF， L_O=10.8mH
II A：C_O=1000μF， L_O=28.8mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

Temperature Input

1/2：GS8576-EX / GS8576-EX.RTD
GS8576-EX.TC / GS8576-EX.R
2/2：GS8579-EX / GS8579-EX.RTD
GS8579-EX.TC / GS8579-EX.R

Temperature input isolated barriers, converter RTD/TC/mV/potentiometer signals in hazardous area into 0/4~20mA or 0/1~5V signals and output to safe area. It can be configured by computer. The product needs an independent power supply and galvanic isolation among power supply, input and output.

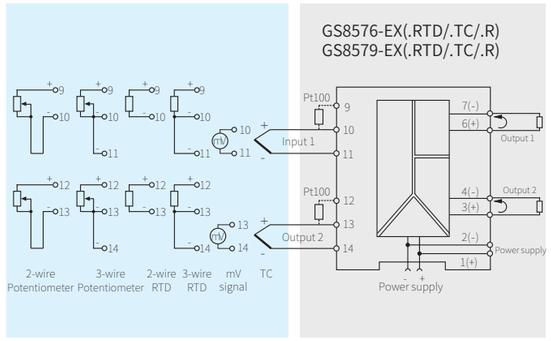
Dimensions：118.9mm×106.0mm×17.5mm

Specification

Supply Voltage：20~35V DC
Current Consumption：⩽70mA(Supply voltage：24V;Output：20mA)
Safe-area Output：
Output Current：0~20mA/4~20mA；Load resistance：R_L⩽300Ω
Output Voltage：0~5V/1~5V；Load resistance：R_L⩾35kΩ
(Customers need specify current output or voltage output when ordering.)
Hazardous-area Input：
Input Signal： please see the table 'Input Signal and Range'.
Temperature Drift：0.01%F.S./℃
CJC：±1℃(Compensation range：-20℃~+60℃)
Response Time(0~90%)：⩽1s
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：2-wire or 3-wire RTD、TC, mV signal、Potentiometer

Connection

Hazardous-area | Safe-area



Note: a) GS8576-EX only contains input1, output1, output2;
b) GS8576-EX/GS8579-EX：RTD, TC input;
c) GS8576-EX.RTD/GS8579-EX.RTD：RTD input;
d) GS8576-EX.TC/GS8579-EX.TC：TC, mV input;
e) GS8576-EX.R/GS8579-EX.R：Potentiometer input;
f) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Input Signal and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200℃~+400℃	50℃	0.5℃ / 0.1%
	E	-200℃~+900℃	50℃	0.5℃ / 0.1%
	J	-200℃~+1200℃	50℃	0.5℃ / 0.1%
	K	-200℃~+1372℃	50℃	0.5℃ / 0.1%
	N	-200℃~+1300℃	50℃	0.5℃ / 0.1%
	R	-40℃~+1768℃	500℃	1.5℃ / 0.1%
	S	-40℃~+1768℃	500℃	1.5℃ / 0.1%
	B	+320℃~+1820℃	500℃	1.5℃ / 0.1%
	C	0℃~+2200℃	500℃	1.5℃ / 0.1%
	D	0℃~+2200℃	500℃	1.5℃ / 0.1%
mV signal		-100mV~+100mV	10mV	20uV / 0.1%
RTD	Pt100	-200℃~+850℃	20℃	0.2℃ / 0.1%
	Pt1000	-200℃~+300℃	20℃	0.2℃ / 0.1%
	Cu50	-50℃~+150℃	20℃	0.2℃ / 0.1%
	Cu100	-50℃~+150℃	20℃	0.2℃ / 0.1%
Potentiometer		0kΩ~400Ω	50Ω	0.2Ω / 0.1%
		0kΩ~2.5kΩ	250Ω	1.25Ω / 0.1%
		0kΩ~10kΩ	1000Ω	5Ω / 0.1%

Note：1、The "%" of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.
2、Allow a maximum wire resistance of 50Ω/line for RTD input(3-wire).
3、When the thermocouple is input, the conversion accuracy does not include the CJC. For every 100Ω increase in the compensation wire, the cold junction error increases by 0.2℃.
4、When the Type B thermocouple is input, the temperature range is required to be greater than 680 ℃ to ensure the accuracy index.
5、When the Type S thermocouple is input, the temperature measurement accuracy is 0.6% below 10℃.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11；12、13、14 terminals)：
U_0=8.5V，I_0=20mA，P_0=43mW
II C：C_0=6.5μF， L_0=3.6mH
★II B：C_0=60μF， L_0=10.8mH
II A：C_0=1000μF， L_0=28.8mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

Temperature Input(Loop Powered)

1/1：GS8577-EX
GS8577-EX.RTD / GS8577-EX.TC
2/2：GS8578-EX
GS8578-EX.RTD / GS8578-EX.TC

Temperature input isolated barriers, converter RTD/TC/mV signals in hazardous area into 0/4~20mA or 0/1~5V signals and output to safe area. It can be configured by computer. The input and output are each galvanically isolated, and this product is loop powered.

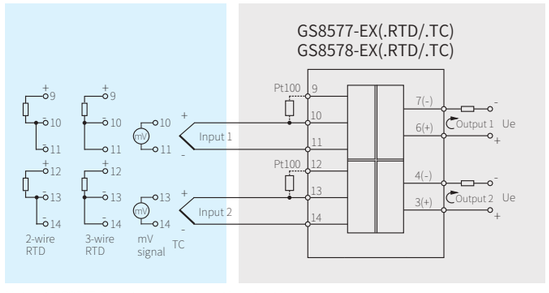
Dimensions：118.9mm×106.0mm×17.5mm

Specification

Loop Supply Voltage（Ue）：12~30V DC
Safe-area Output：
Output Current：4~20mA
Load Resistance：R_L⩽(Ue-12)/0.021Ω
Hazardous-area Input：
Input Signal：please see the table 'Input Signal and Range'.
Temperature Drift：0.01%F.S./℃
CJC：±1℃(Compensation range：-20℃~+60℃)
Response Time(0~90%)：⩽1s
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：2-wire or 3-wire RTD, TC, mV signal

Connection

Hazardous-area | Safe-area



Note: a) GS8577-EX only contains input1, output1.;
b) GS8577-EX/GS8578-EX：RTD, TC input;
c) GS8577-EX.RTD/GS8578-EX.RTD：RTD input;
d) GS8577-EX.TC/GS8578-EX.TC：TC, mV input.

Input Signal and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200℃~+400℃	50℃	0.5℃ / 0.1%
	E	-200℃~+900℃	50℃	0.5℃ / 0.1%
	J	-200℃~+1200℃	50℃	0.5℃ / 0.1%
	K	-200℃~+1372℃	50℃	0.5℃ / 0.1%
	N	-200℃~+1300℃	50℃	0.5℃ / 0.1%
	R	-40℃~+1768℃	500℃	1.5℃ / 0.1%
	S	-40℃~+1768℃	500℃	1.5℃ / 0.1%
	B	+320℃~+1820℃	500℃	1.5℃ / 0.1%
mV signal		-100mV~+100mV	10mV	20uV / 0.1%
RTD	Pt100	-200℃~+850℃	20℃	0.2℃ / 0.1%
	Cu50	-50℃~+150℃	20℃	0.2℃ / 0.1%
	Cu100	-50℃~+150℃	20℃	0.2℃ / 0.1%

Note：1、The "%" of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.
2、Allow a maximum wire resistance of 50Ω/line for RTD input(3-wire).
3、When the thermocouple is input, the conversion accuracy does not include the CJC. For every 100Ω increase in the compensation wire, the cold junction error increases by 0.2℃.
4、When the Type B thermocouple is input, the temperature range is required to be greater than 680 ℃ to ensure the accuracy index.
5、When the Type S thermocouple is input, the temperature measurement accuracy is 0.6% below 10℃.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11；12、13、14 terminals)：
U_0=8.5V，I_0=20mA，P_0=43mW
II C：C_0=6.5μF， L_0=3.6mH
★II B：C_0=60μF， L_0=10.8mH
II A：C_0=1000μF， L_0=28.8mH
★II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

Voltage Input

1/1：GS8589-EX.11
2/2：GS8589-EX.22

Voltage signal input isolated barriers; provide the isolated power to the field instrument, and transfer DC voltage in hazardous area to safe-area. The product needs an independent power supply and galvanic isolation among power supply, input and output.

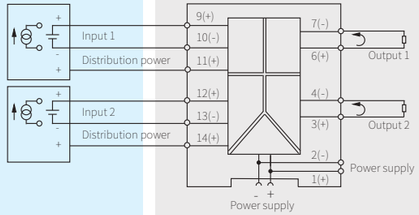
Dimensions：118.9mm×106.0mm×17.5mm

Specification

Supply Voltage：20~35V DC
Current Consumption：(Supply voltage: 24V; Distribution power: 15V/20mA)
⩽100mA(GS8589-EX.11)
⩽130mA(GS8589-EX.22)
Safe-area Output：
Current：0~20mA, 4~20mA
Load Resistance: R_L⩽300Ω
Voltage：0~5V, 1~5V, 0~10V, 2~10V
Load resistance: R_L⩾35kΩ
Hazardous-area Input：
Voltage：0~5V, 1~5V, 0~10V, 2~10V
Load Resistance：⩾300kΩ
Distribution power：10V/20mA or 15V/20mA or none
Note：When the output of GS8589-EX.22 is current, the module do not support distribution power.
Transmission Accuracy：0.1%F.S.
Temperature Drift：0.01%F.S./℃
Response Time(0~90%)：⩽0.1s
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structre customized by Phoenix contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Voltage. current source output device

Connection

Hazardous-area | Safe-area



Note: a) GS8589-EX.11 only contains input1 and output1
b) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10；12、13 terminals)：
U_O=13.7V，I_O=8mA，P_O=28mW
II C：C_O=0.79μF，L_O=250mH
*II B：C_O=5.0μF，L_O=750mH
II A：C_O=18.1μF，L_O=1000mH
(10、11；13、14 terminals)：
U_O=24.2V，I_O=143.8mA，P_O=870mW
II C：C_O=0.09μF，L_O=1.5mH
*II B：C_O=0.70μF，L_O=4.5mH
II A：C_O=2.33μF，L_O=12mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

Communication Input

1/1：GS8592-EX.3

Communication signals input isolated barriers, realize the bi-direction communication of RS-232 digital signals between hazardous area and safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

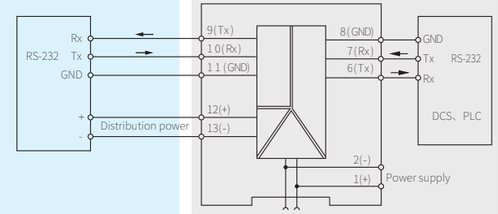
Supply Voltage：20~35V DC
Current Consumption：
⩽175mA(Supply voltage: 24V, distribution current: 100mA)
⩽120mA(Supply voltage: 24V, distribution current: 50mA)
Safe-area：
Signal：RS-232
Transmission delay：⩽10μs
Transmission rate：⩽56kbps
Hazardous-area：
Signal：RS-232
Distribution Power：5V/100mA, 6V/100mA, 8V/50mA, 9V/50mA, 12V/50mA
Distribution Voltage Deviation：±10%
Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-25℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：With RS-232 communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、11；10、11 terminals)：
U_O=11.7V，I_O=4.0mA，P_O=12mW
(9、10、11 terminals)：
U_O=23.5V，I_O=8.5mA，P_O=50mW
II C：C_O=0.12μF，L_O=100mH
*II B：C_O=0.97μF，L_O=300mH
II A：C_O=3.52μF，L_O=800mH
(12、13 terminals)：
U_O=23.1V，I_O=187mA，P_O=1.08W
II C：C_O=0.1μF，L_O=0.8mH
*II B：C_O=1.0μF，L_O=2.4mH
II A：C_O=3.6μF，L_O=6.4mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8595-EX.3

Dimensions：118.9mm×106.0mm×17.5mm

Communication signals input isolated barriers, realize the bi-direction communication between the RS-232 digital signals generated by the field instrument and the RS-485(full duplex) / RS-422 digital signals in the safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

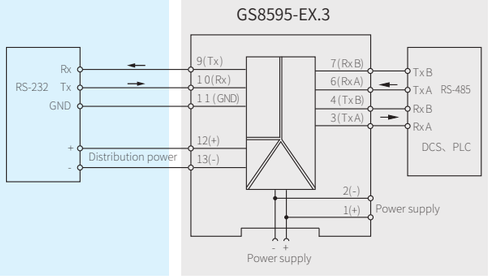
Supply Voltage：20~35V DC
Current Consumption：
⩽160mA(Supply voltage: 24V, distribution current: 100mA)
⩽120mA(Supply voltage: 24V, distribution current: 50mA)
Safe-area：
Signal：RS-485(full duplex) / RS-422 digital signals
Transmission delay：⩽10μs
Signal transmission rate：⩽56kbps
Drive ability：up to 32 transceivers
Hazardous-area：
Signal：RS-232
Distribution power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA
Distribution Voltage Deviation：±10%
Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-25℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：With RS-232 communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、11；10、11 terminals)：
U_o=11.7V，I_o=4.0mA，P_o=12mW
(9、10、11 terminals)：
U_o=23.5V，I_o=8.5mA，P_o=50mW
II C：C_o=0.12μF，L_o=100mH
*II B：C_o=0.97μF，L_o=300mH
II A：C_o=3.52μF，L_o=800mH
(12、13 terminals)：
U_o=23.1V，I_o=187mA，P_o=1.08W
II C：C_o=0.1μF，L_o=0.8mH
*II B：C_o=1.0μF，L_o=2.4mH
II A：C_o=3.6μF，L_o=6.4mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8599-EX.3

Dimensions：118.9mm×106.0mm×17.5mm

Communication signals input isolated barriers, realize the bi-direction communication between the RS-232 digital signals generated by the field instrument and the RS-485(half duplex) digital signals in the safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

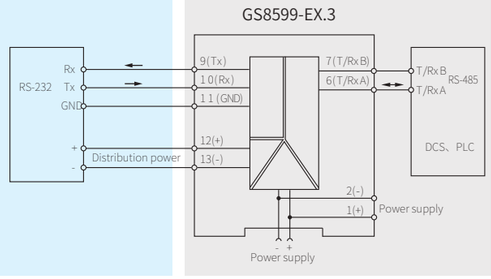
Supply Voltage：20~35V DC
Current Consumption：
⩽180mA(Supply voltage: 24V, distribution current: 100mA)
⩽120mA(Supply voltage: 24V, distribution current: 50mA)
Safe-area：
Signal：RS-485(half duplex)
Transmission delay：⩽10μs
Signal transmission rate：⩽56kbps
Drive ability：up to 32 transceivers
Hazardous-area：
Signal：RS-232
Distribution Power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA
Distribution Voltage Deviation：±10%
Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-25℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：With RS-232 communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、11；10、11 terminals)：
U_o=11.7V，I_o=4.0mA，P_o=12mW
(9、10、11 terminals)：
U_o=23.5V，I_o=8.5mA，P_o=50mW
II C：C_o=0.12μF，L_o=100mH
*II B：C_o=0.97μF，L_o=300mH
II A：C_o=3.52μF，L_o=800mH
(12、13 terminals)：
U_o=23.1V，I_o=187mA，P_o=1.08W
II C：C_o=0.1μF，L_o=0.8mH
*II B：C_o=1.0μF，L_o=2.4mH
II A：C_o=3.6μF，L_o=6.4mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8591-EX.3

Dimensions：118.9mm×106.0mm×17.5mm

Communication signals input isolated barriers, realize the bi-direction communication between the RS-485(half duplex) digital signals generated by the field instrument and the RS-485(half duplex) /RS-422 digital signals in the safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

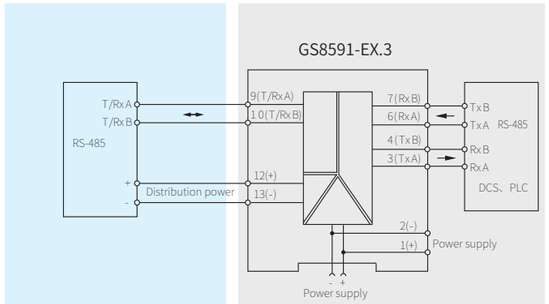
Supply Voltage：20~35V DC
Current Consumption：
⩽175mA(Supply voltage: 24V, Distribution current: 100mA)
⩽120mA(Supply voltage: 24V, distribution current: 50mA)
Safe-area：
Signal：RS-485(full duplex) /RS-422 digital signals
Transmission delay：⩽10μs
Signal transmission rate：⩽56kbps
Drive Ability：up to 32 transceivers
Hazardous-area：
Signal：RS-485(half duplex)
Distribution Power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA
Distribution Voltage Deviation：±10%
Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-25℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：With RS-485 half duplex communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10 terminals)：
U_o=6.6V，I_o=65mA，P_o=110mW
II C：C_o=22μF，L_o=8mH
*II B：C_o=500μF，L_o=24mH
II A：C_o=1000μF，L_o=64mH
(12、13 terminals)：
U_o=23.1V，I_o=187mA，P_o=1.08W
II C：C_o=0.1μF，L_o=0.8mH
*II B：C_o=1.0μF，L_o=2.4mH
II A：C_o=3.6μF，L_o=6.4mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8593-EX.3

Dimensions：118.9mm×106.0mm×17.5mm

Communication signals input isolated barriers, realize the bi-direction communication of RS-485(half duplex) digital signals between hazardous area and safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

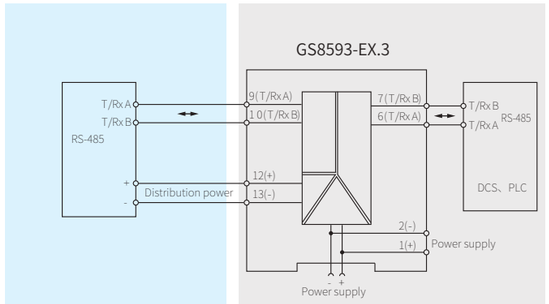
Supply Voltage：20~35V DC
Current Consumption：
⩽160mA(Supply voltage: 24V, Distribution current: 100mA)
⩽120mA(Supply voltage: 24V, Distribution current: 50mA)
Safe-area：
Signal：RS-485(half duplex)
Transmission delay：⩽10μs
Signal transmission rate：⩽56kbps
Drive Ability：up to 32 transceivers
Hazardous-area：
Signal：RS-485(half duplex)
Distribution Power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA
Distribution Voltage Deviation：±10%
Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-25℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：With RS-485 half duplex communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10 terminals)：
U_o=6.6V，I_o=65mA，P_o=110mW
II C：C_o=22μF，L_o=8mH
*II B：C_o=500μF，L_o=24mH
II A：C_o=1000μF，L_o=64mH
(12、13 terminals)：
U_o=23.1V，I_o=187mA，P_o=1.08W
II C：C_o=0.1μF，L_o=0.8mH
*II B：C_o=1.0μF，L_o=2.4mH
II A：C_o=3.6μF，L_o=6.4mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8596-EX.3

Communication signals input isolated barriers, realize the bi-direction communication between the RS-485(half duplex) digital signals generated by the field instrument and the RS-232 digital signals in the safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

Supply Voltage： 20~35V DC

Current Consumption：

⩽160mA(Supply voltage: 24V, Distribution current: 100mA)

⩽120mA(Supply voltage: 24V, Distribution current: 50mA)

Safe-area：

Signal：RS-232

Transmission delay：⩽10μs

Signal transmission rate：⩽56kbps

Hazardous-area：

Signal：RS-485(half duplex)

Distribution Power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA

Distribution Voltage Deviation：±10%

Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection： Power supply reverse protection

EMC： According to IEC 61326-1(GB/T 18268)

Ambient Temperature： -25℃~+60℃

Dielectric Strength：

Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC

Between power supply part and output part ⩾500V AC

Insulation Resistance：

Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ

Between power supply part and output part ⩾100MΩ

Structure： GS8500 range structure customized by Phoenix Contact

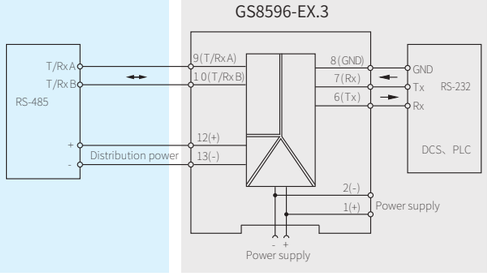
Weight： Approx.150g

Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.

Suitable Field Apparatus： With RS-485 half duplex communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority： NEPSI(China)

Ex Marking： [Ex ia Ga] II C

[Ex ia Da] III C

Maximum Voltage： Um=250V

Intrinsic Safety Parameters(9、10 terminals)：

U_O=6.6V，I_O=65mA，P_O=110mW

II C：C_O=22μF，L_O=8mH

*II B：C_O=500μF，L_O=24mH

II A：C_O=1000μF，L_O=64mH

(12、13 terminals)：

U_O=23.1V，I_O=187mA，P_O=1.08W

II C：C_O=0.1μF，L_O=0.8mH

*II B：C_O=1.0μF，L_O=2.4mH

II A：C_O=3.6μF，L_O=6.4mH

*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8594-EX.3

Communication signals input isolated barriers, realize the bi-direction communication between the RS-485(full duplex) / RS-422 digital signals generated by the field instrument and the RS-232 digital signals in the safe area. It also provides isolated power supply for field instruments.The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

Supply Voltage： 20~35V DC

Current Consumption：

⩽160mA(Supply voltage: 24V, Distribution current: 100mA)

⩽120mA(Supply voltage: 24V, Distribution current: 50mA)

Safe-area：

Signal：RS-232

Transmission delay：⩽10μs

Signal transmission rate：⩽56kbps

Hazardous-area：

Signal：RS-485(full duplex) / RS-422 digtial signals

Distribution Power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA

Distribution Voltage Deviation：±10%

Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection： Power supply reverse protection

EMC： According to IEC 61326-1(GB/T 18268)

Ambient Temperature： -25℃~+60℃

Dielectric Strength：

Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC

Between power supply part and output part ⩾500V AC

Insulation Resistance：

Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ

Between power supply part and output part ⩾100MΩ

Structure： GS8500 range structure customized by Phoenix Contact

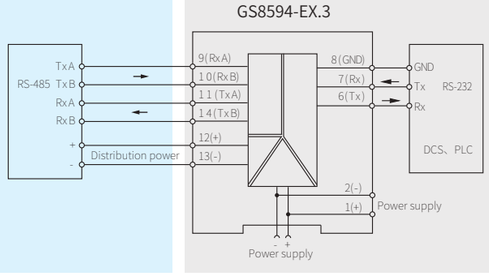
Weight： Approx.150g

Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.

Suitable Field Apparatus： With RS-485 full duplex/RS-422 communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority： NEPSI(China)

Ex Marking： [Ex ia Ga] II C

[Ex ia Da] III C

Maximum Voltage： Um=250V

Intrinsic Safety Parameters(9、10；11、14 terminals)：

U_O=6.6V，I_O=65mA，P_O=110mW

II C：C_O=22μF，L_O=8mH

*II B：C_O=500μF，L_O=24mH

II A：C_O=1000μF，L_O=64mH

(12、13 terminals)：

U_O=23.1V，I_O=187mA，P_O=1.08W

II C：C_O=0.1μF，L_O=0.8mH

*II B：C_O=1.0μF，L_O=2.4mH

II A：C_O=3.6μF，L_O=6.4mH

*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8597-EX.3

Communication signals input isolated barriers, realize the bi-direction communication between the RS-485(full duplex) / RS-422 digital signals generated by the field instrument and the RS-485(half duplex) digital signals in the safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

Supply Voltage： 20~35V DC

Current Consumption：

⩽160mA(Supply voltage: 24V, Distribution current: 100mA)

⩽120mA(Supply voltage: 24V, Distribution current: 50mA)

Safe-area：

Signal：RS-485(half duplex)

Transmission delay：⩽10μs

Signal transmission rate：⩽56kbps

Drive Ability：up to 32 transceivers

Hazardous-area：

Signal：RS-485(full duplex) / RS-422 digtial signals

Distribution Power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA

Distribution Voltage Deviation：±10%

Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection： Power supply reverse protection

EMC： According to IEC 61326-1(GB/T 18268)

Ambient Temperature： -25℃~+60℃

Dielectric Strength：

Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC

Between power supply part and output part ⩾500V AC

Insulation Resistance：

Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ

Between power supply part and output part ⩾100MΩ

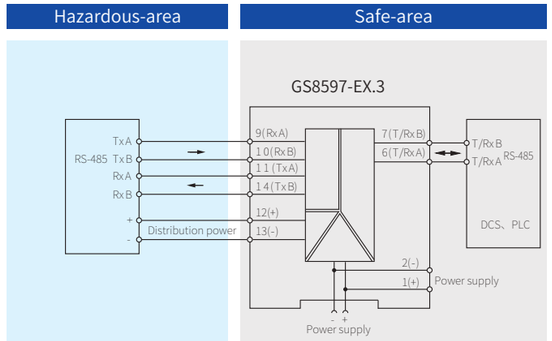
Structure： GS8500 range structure customized by Phoenix Contact

Weight： Approx.150g

Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.

Suitable Field Apparatus： With RS-485 full duplex/RS-422 communication interface device

Connection



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority： NEPSI(China)

Ex Marking： [Ex ia Ga] II C

[Ex ia Da] III C

Maximum Voltage： Um=250V

Intrinsic Safety Parameters(9、10；11、14 terminals)：

U_O=6.6V，I_O=65mA，P_O=110mW

II C：C_O=22μF，L_O=8mH

*II B：C_O=500μF，L_O=24mH

II A：C_O=1000μF，L_O=64mH

(12、13 terminals)：

U_O=23.1V，I_O=187mA，P_O=1.08W

II C：C_O=0.1μF，L_O=0.8mH

*II B：C_O=1.0μF，L_O=2.4mH

II A：C_O=3.6μF，L_O=6.4mH

*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8598-EX.3

Communication signals input isolated barriers, realize the bi-direction communication of RS-485(full duplex) / RS-422 digital signals between hazardous area and safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

Supply Voltage： 20~35V DC

Current Consumption：

⩽160mA(Supply voltage: 24V, Distribution current: 100mA)

⩽120mA(Supply voltage: 24V, Distribution current: 50mA)

Safe-area：

Signal：RS-485(full duplex) / RS-422 digital signals

Transmission delay：⩽10μs

Signal transmission rate：⩽56kbps

Drive Ability：up to 32 transceivers

Hazardous-area：

Signal：RS-485(full duplex) / RS-422 digital signals

Distribution Power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA

Distribution Voltage Deviation：±10%

Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection： Power supply reverse protection

EMC： According to IEC 61326-1(GB/T 18268)

Ambient Temperature： -20℃~+60℃

Dielectric Strength：

Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC

Between power supply part and output part ⩾500V AC

Insulation Resistance：

Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ

Between power supply part and output part ⩾100MΩ

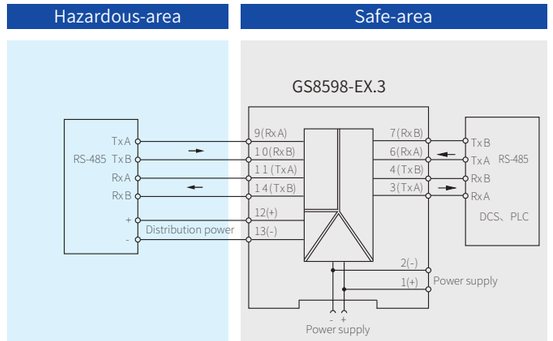
Structure： GS8500 range structure customized by Phoenix Contact

Weight： Approx.150g

Suitable Location： Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.

Suitable Field Apparatus： With RS-485 full duplex/RS-422 communication interface device

Connection



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority： NEPSI(China)

Ex Marking： [Ex ia Ga] II C

[Ex ia Da] III C

Maximum Voltage： Um=250V

Intrinsic Safety Parameters(9、10；11，14 terminals)：

U_O=6.6V，I_O=65mA，P_O=110mW

II C：C_O=22μF，L_O=8mH

*II B：C_O=500μF，L_O=24mH

II A：C_O=1000μF，L_O=64mH

(12、13 terminals)：

U_O=23.1V，I_O=187mA，P_O=1.08mW

II C：C_O=0.1μF，L_O=0.8mH

*II B：C_O=1.0μF，L_O=2.4mH

II A：C_O=3.6μF，L_O=6.4mH

*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8593B-EX

Communication signals input isolated barriers, realize the bi-direction communication of RS-485(half duplex) digital signals between hazardous area and safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

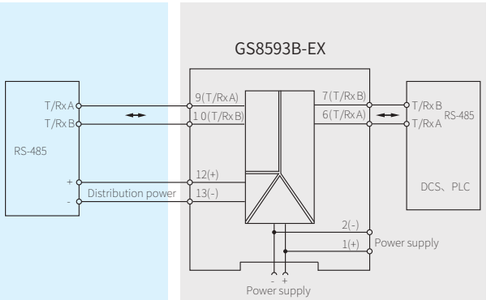
Dimensions：118.9mm×106.0mm×17.5mm

Specification

Supply Voltage：20~35V DC
Current Consumption：
⩽160mA(Supply voltage: 24V, Distribution power: 9V/140mA)
Safe-area：
Signal：RS-485(half duplex)
Transmission delay：⩽10μs
Signal transmission rate：⩽56kbps
Drive Ability：up to 32 transceivers
Hazardous-area：
Signal：RS-485(half duplex)
Distribution Power：Open- circuit voltage⩽17V
Distribution voltage：9V±10% at 140mA
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-25℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：With RS-485 half duplex communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10 terminals)：
U_O=6.6V，I_O=65mA，P_O=110mW
II C：C_O=22μF，L_O=8mH
*II B：C_O=500μF，L_O=24mH
II A：C_O=1000μF，L_O=64mH
(12、13 terminals)：
U_O=17.22V，I_O=430mA，P_O=2.1mW
II C：C_O=0.333μF，L_O=151.7μH
*II B：C_O=1.93μF，L_O=455.1μH
II A：C_O=8.1μF，L_O=1213.6μH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8590-EX.3

Communication signals input isolated barriers, realize the bi-direction communication of CAN digital signals between hazardous area and safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Dimensions：118.9mm×106.0mm×17.5mm

Specification

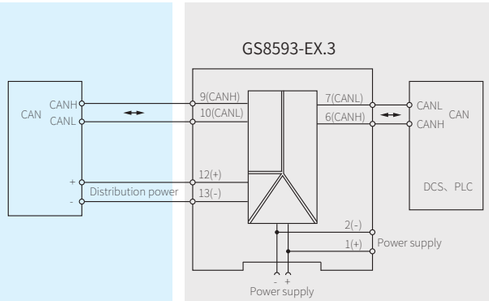
Supply Voltage：20~35V DC
Current Consumption：
⩽100mA(Supply voltage: 24V, Distribution power: 50mA)
⩽140mA(Supply voltage: 24V, Distribution power: 5V/100mA or 6V/90mA)
Safe-area：
Signal：CAN digital signal
Transmission delay：⩽10μs
Signal transmission rate：⩽250kbps
Drive Ability：up to 8 transceivers
Hazardous-area：
Signal：CAN digital signal
Distribution Power：5V/100mA、6V/100mA、8V/50mA、9V/50mA、12V/50mA
Distribution Voltage Deviation：±10%
Function of the DIP Switches：

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：With CAN communication interface device

Connection

Hazardous-area | Safe-area



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

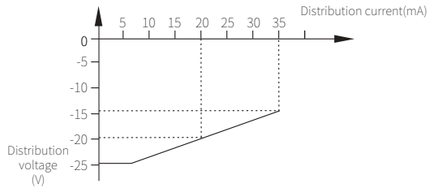
Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10 terminals)：
U_O=6.6V，I_O=334mA，P_O=551mW
II C：C_O=22μF，L_O=0.25mH
*II B：C_O=500μF，L_O=0.75mH
II A：C_O=1000μF，L_O=2.0mH
(12、13 terminals)：
U_O=23.1V，I_O=187mA，P_O=1.08W
II C：C_O=0.1μF，L_O=0.8mH
*II B：C_O=1.0μF，L_O=2.4mH
II A：C_O=3.6μF，L_O=6.4mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8557-EX

Vibration transducer input isolated barriers, provide isolated power supply for the transmitters in hazardous area and transfer the 1: 1 negative voltage signals, which vibration transducer outputs in hazardous area, to safe area. It can transmit AC and DC signals. This product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

Supply Voltage：20~35V DC
Current Consumption：
⩽65mA(Supply voltage: 24V, distribution current: 20mA)
Safe-area Output：
Signal：-20V~-0.5V
Load Resistance：RL⩾20kΩ
Hazardous-area Input：
Signal：-20V~-0.5V
Input impedance：10kΩ
Distribution Power：Open- circuit voltage＞-25V
Distribution Voltage：⩽-19.5V at 20mA



DC Transmissiton accuracy：＜±50mV
AC Transmissiton accuracy：

0Hz~1kHz	±1%
1kHz~10kHz	-2%~＋1%
10kHz~20kHz	-5%~＋1%

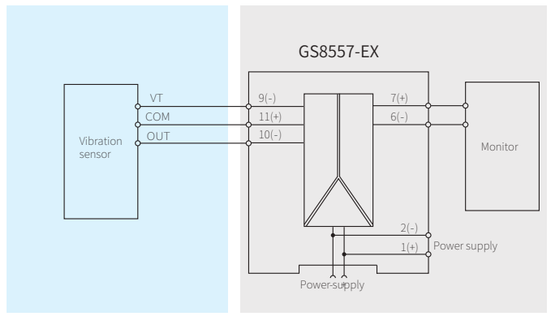
Phase response： Less than 1us is equals to

-0.72°	200Hz
-2°	600Hz
-3.6°	1kHz
-36°	10kHz
-72°	20kHz

Bandwidth(-3dB)：⩾50kHz
Temperature Drift：0.01%/°C(-20°C~+60°C)
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20°C~+60°C
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.100g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Vibration transducer、Negative voltage generator

Dimensions：118.9mm×106.0mm×17.5mm

Connection



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10、11 terminals)：
U_O=26.5V，I_O=93mA，P_O=687mW
II C：C_O=0.095μF，L_O=4.2mH
⋆II B：C_O=0.73μF，L_O=12.6mH
II A：C_O=2.45μF，L_O=33.6mH
⋆II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8558-EX

Vibration transducer input isolated barriers, transfer the 1: 1 voltage signals, which vibration transducer outputs in hazardous area, to safe area. It can transmit AC and DC signals. This product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

Supply Voltage：20~35V DC
Current Consumption：⩽40mA
Safe-area Output：
Signal：-10V~+10V
Load Resistance：RL⩾20kΩ
Hazardous-area Input：
Signal：-10V~+10V
Internal impedance：10kΩ
DC Transmissiton accuracy：＜±0.2%F.S.
AC Transmissiton accuracy：

0Hz~600Hz	±0.2%F.S.
600Hz~10kHz	-1.5%~＋0.2%F.S.

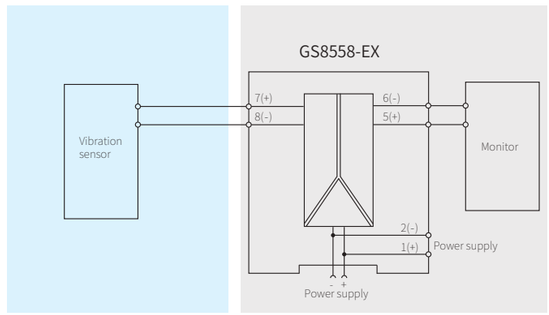
Phase response： Less than 1us is equals to

-0.72°	200Hz
-2°	600Hz
-3.6°	1kHz
-36°	10kHz

Bandwidth(-3dB)：⩾40kHz
Temperature Drift：0.005%/°C(-20°C~+60°C)
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20°C~+60°C
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ⩾2500V AC
Between power supply part and output part ⩾500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ⩾100MΩ
Between power supply part and output part ⩾100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.100g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Vibration transducer

Dimensions：118.9mm×106.0mm×12.5mm

Connection



Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(7、8 terminals)：
U_O=1.2V，I_O=0.2mA，P_O=0.06mW
II C：C_O=100μF，L_O=100mH
⋆II B：C_O=300μF，L_O=300mH
II A：C_O=800μF，L_O=800mH
⋆II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

1/1：GS8555-EX

Frequency converter isolated barrier, change the digital input signal in the hazardous area into a proportional free adjustable 0/4~20mA(or 0/1~5V) analog output signal and function as a trip alarm.The product needs an independent power supply and galvanic isolation among power supply, input and output.

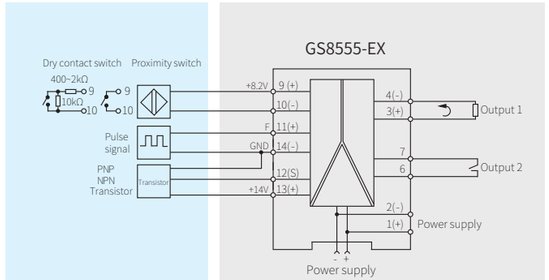
Specification

Supply Voltage：20~35V DC
Current Consumption：≤60mA(Supply voltage: 24V, Output current: 20mA, Relay: energized)
Safe-area Output：
Current：0~20mA，4~20mA
Load resistance≤400Ω
Voltage：0~5V，1~5V
Load resistance≥330kΩ
(Note：Customers need to specify current output or voltage output when ordering)
Safe-area Relay Characteristics：
Response Time：≤20ms
Contact Loading：250V AC,2A or 30V DC,2A
Load Type：Resistive load
Hazardous-area Input：
Signal Type：
1)3-wire PNP/NPN Sensor Input：
Sensor Distribution：14V，current＜20mA
Input Frequency：0.1Hz~100kHz
2)Frequency Signal Input：
Input Frequency：0.1Hz~100kHz
Max. Input Voltage：30Vp-p
Min.Input voltage:∿2V,(2Hz~100KHz)
⎍2V,(0.1Hz~100KHz)
3)Dry Contact or Proximity Switch Input：
Distribution Voltage：≈8V，Short-circuit current：≈8mA
Input Frequency：0.1Hz~100kHz
Pulse Width：≥2μs
Temperature Drift：0.1%F.S.
Temperature Drift：0.01%F.S./℃
Power Supply Protection：Power supply reverse protection
EMC：According to IEC 61326-1(GB/T 18268)
Ambient Temperature：-20℃~+60℃
Dielectric Strength：
Between non-intrinsically safe part and intrinsically safe part ≥2500V AC
Between power supply part and output part ≥500V AC
Insulation Resistance：
Between non-intrinsically safe part and intrinsically safe part ≥100MΩ
Between power supply part and output part ≥100MΩ
Structure：GS8500 range structure customized by Phoenix Contact
Weight：Approx.150g
Suitable Location：Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.
Suitable Field Apparatus：Dry contact or DIN19234 standard NAMUR proximity switch input field devices (including the intrinsically safe type pressure switch、temperature switches、liquid level switches, etc.), voltage pulse, 3-wire PNP/NPN sensor output, incremental encoder.

Dimensions：118.9mm×106.0mm×17.5mm

Connection

Hazardous-area	Safe-area

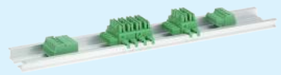
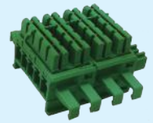


Note：Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority：NEPSI(China)
Ex Marking：[Ex ia Ga] II C
[Ex ia Da] III C
Maximum Voltage：Um=250V
Intrinsic Safety Parameters(9、10 terminals)：
U_O=10.5V，I_O=14mA，P_O=37mW
II C：C_O=2.4μF，L_O=165mH
*II B：C_O=16.8μF，L_O=495mH
II A：C_O=75.0μF，L_O=1000mH
(11、14 terminals)：
U_O=14V，I_O=8mA，P_O=28mW
II C：C_O=0.73μF，L_O=150mH
*II B：C_O=4.60μF，L_O=450mH
II A：C_O=17.0μF，L_O=1000mH
(12、13、14 terminals)：
U_O=17V，I_O=330mA，P_O=1.4W
II C：C_O=0.375μF，L_O=0.22mH
*II B：C_O=2.20μF，L_O=0.66mH
II A：C_O=9.0μF，L_O=1.76mH
*II B Intrinsic Safety Parameters are also suitable for dust explosion protection [Ex ia Da] III C

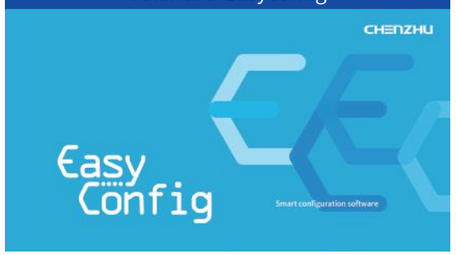
Bus Connector

	Suitable for 12.5mm Isolated Barrier	Suitable for 17.5mm Isolated Barrier
	Bus connector (CZBPS-C-12.5) 	Bus connector (CZBPS-C-17.5) 
Number of Positions	5	5
Pitch	3.81mm	3.81mm
Normal voltage Un	150V	150V
Normal current In	8A	8A
Rated Surge Voltage	2500V	2500V

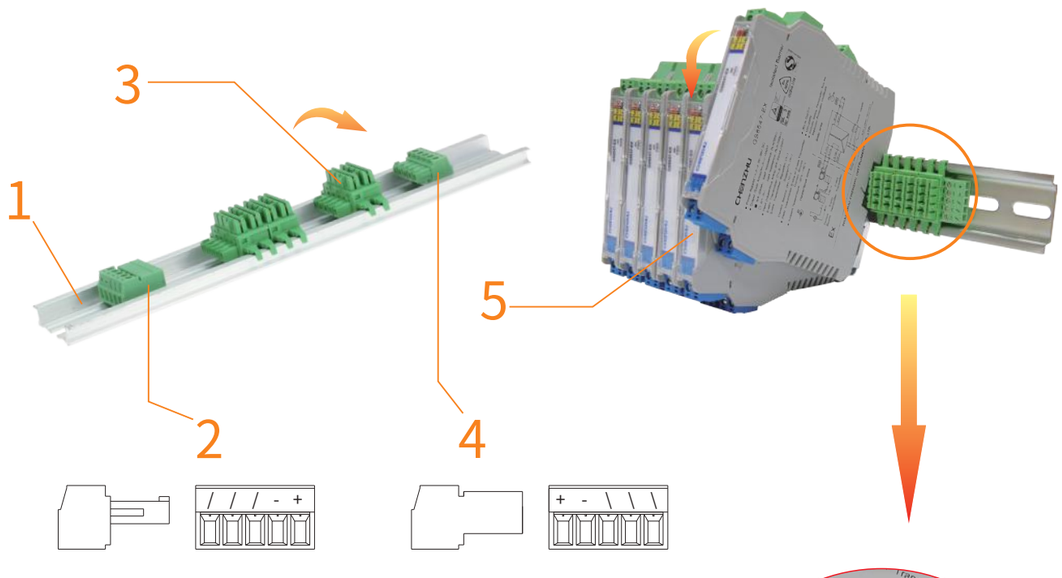
Bus Connector Plug

	Suitable for GS8500-EX Range	
	Male plug (CZBPS-F1) 	Female plug (CZBPS-B1) 
Number of Positions	5	5
Pitch	3.81mm	3.81mm
Normal Voltage Un	160V	160V
Normal Current In	8A	8A
Rated Surge Voltage	2500V	2500V
Conductor Cross Section	0.14~1.5mm²	0.14~1.5mm²
Conductor Cross Section with Ferrules	0.25~1.5mm²(without plastic sleeve) 0.25~0.5mm²(with plastic sleeve)	0.25~1.5mm²(without plastic sleeve) 0.25~0.5mm²(withplastic sleeve)

Configuration Accessory

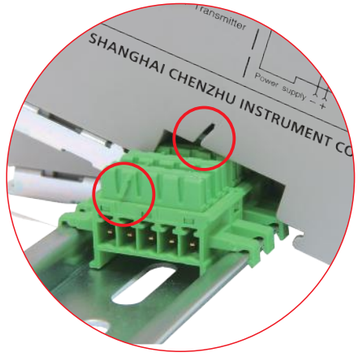
Configuration Tool: USBCOM-MINI	Software: Easyconfig
	

Bus Powered Description



Component：

1、DIN 35mm rail
2、Female plug
3、Bus connector
4、Male plug
5、Isolated barrier



Instruction for Use：

1. Each isolated barrier is matched with a bus connector. The connectors can be spliced together. It is recommended to connect 8-16 connectors in a group.
2. A male plug and a female plug are required at the head and tail of each group of connectors.
3. The wire used in the bus power supply module has a length of about 8 mm for the ferrules or exposed wire. The exposed wires or ferrules should be fixed by M2 screws in the plug.
4. Bus connector has a pluggable error-proof function. Pay attention to the direction of the error-proof slot on the barrier housing when installing the isolated barrier to the bus connector.

CHENZHU

【Factory video @Youtube】

CZYB-E13.02/2023.06

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Tel: +60-3-80704739
E-mail: sales@chenzhu-asean.com
Web:www.chenzhu-asean.com

CHENZHU

Signal Conditioner

Catalogue (2023)

5 Year WARRANTY

https://en.chenzhu-inst.com

CHENZHU COMPANY OVERVIEW

CHENZHU' s headquarter is located at Shanghai, China, with an area of 10000m².

Shanghai Chenzhu Instrument Co,Ltd. was founded in April, 2002, who was originated from Shanghai Institute of Process Automation Instrumentation. CHENZHU is a professional company with core expertise of R&D, manufacturing and sale service of high quality safety products, such as isolated barriers, signal conditioners, surge protective devices, safety relays etc.

MANAGEMENT SYSTEMS

ISO9001

ISO14001

ISO45001

IECEx QAR

R&D Strength

Based on ISO/IEC/GB standards, CHENZHU has established the professional laboratory which is applied up to 80 test capabilities and verification items in CHENZHU's safety electrical products' development process.

R&D Investment
11%
of Sale Revenue

Innovation
110+
Patents

Testing Facility
80+
Capabilities

Smart Factory

CHENZHU factory is continually driven by lean management and flexible production. By our strict quality examination, CHENZHU ensures the production meets the design specification and satisfies our customers.

Factory
5000m²
In total

Max Cap.
3,000,000pcs
Year

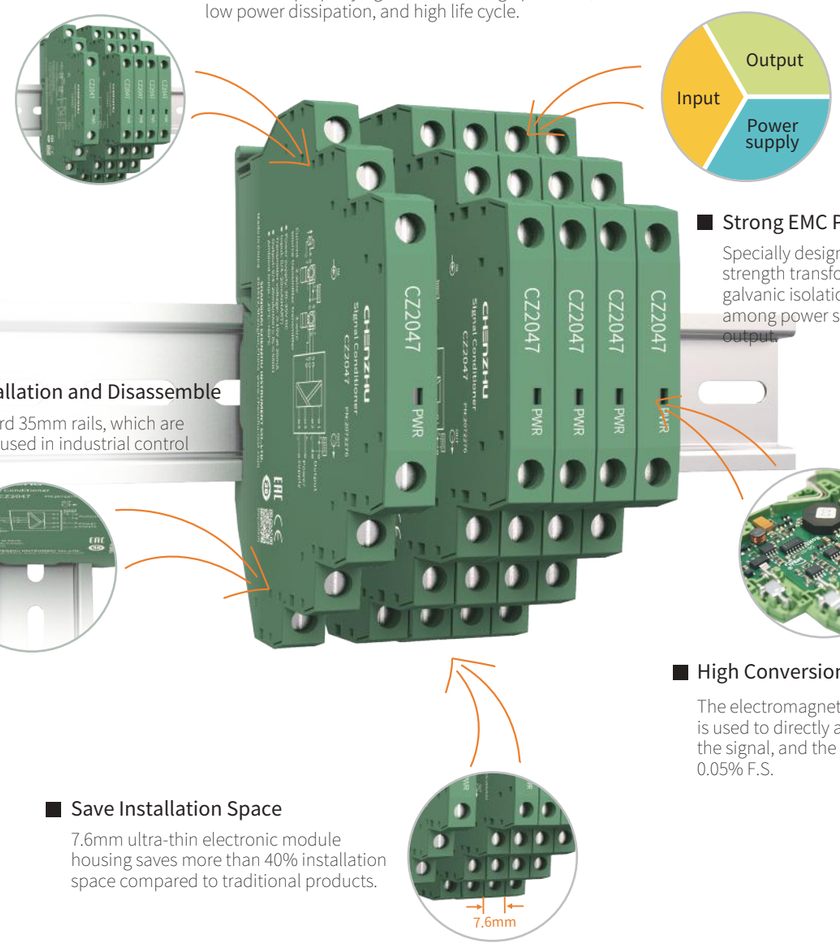
Lean Production
10+
Years' experience

CZ2000 Range

CZ2000 range signal conditioners use high-efficiency electromagnetic isolation technology to achieve reliable galvanic isolation among power supply, input and output, which effectively solves the problem of field interference in industrial automation control systems. This ensures a stable and reliable operation of the system. By using the advanced low power dissipation technology, it achieves low-power dissipation, low-heat, high-precision signal conversion under 7.6mm ultra-thin housing, ensuring long-term reliability in the high-density installation, saving the cabinet installation space.

High-density Installation

Isolation conversion technology, with independent intellectual property rights, achieves high precision, low power dissipation, and high life cycle.



Strong EMC Performance

Specially designed high dielectric strength transformer achieves reliable galvanic isolation and anti-interference among power supply, input, and output.

Easy Installation and Disassemble

Use standard 35mm rails, which are commonly used in industrial control cabinets.

High Conversion Accuracy

The electromagnetic isolation technology is used to directly and efficiently convert the signal, and the precision is better than 0.05% F.S.

Save Installation Space

7.6mm ultra-thin electronic module housing saves more than 40% installation space compared to traditional products.

Selection Guide

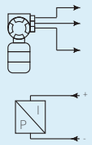
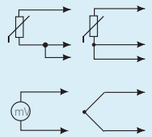
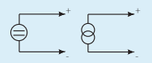
Field Instrument	Application	Module No.	Channels	Input	Output	Features	Page
	Analog Input / Analog Output	CZ2031	1/1	4~20mA (HART)	4~20mA (HART)	Loop powered	6
		CZ2047	1/1	0/4~20mA	0/4~20mA 0/1~5V	Independent powered	7
		CZ2067	1/1				
	Temperature Converters	CZ2071	1/1	RTD	0~20mA，4~20mA 0~5V，1~5V	Independent powered Configurable via software	8
		CZ2171	1/1	TC mV			
		CZ2271	1/1	RTD TC			
		CZ2077	1/1	RTD	4~20mA	Loop powered Configurable via software	9
		CZ2177	1/1	TC mV			
		CZ2277	1/1	RTD TC			
	Voltage/Current Converters	CZ2083	1/1	0~20mA，4~20mA 0~5V，1~5V 0~10V，2~10V	0~20mA，4~20mA 0~5V，1~5V 0~10V，2~10V	Independent powered	10
		CZ2083.A	1/1			Independent powered Configurable via DIP switches	

Table 1 Input Signal Type and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200°C~+400°C	50°C	1°C / 0.2%
	E	-200°C~+900°C	50°C	1°C / 0.2%
	J	-200°C~+1200°C	50°C	1°C / 0.2%
	K	-200°C~+1372°C	50°C	1°C / 0.2%
	N	-200°C~+1300°C	50°C	1°C / 0.2%
	R	-40°C~+1768°C	500°C	3°C / 0.2%
	S	-40°C~+1768°C	500°C	3°C / 0.2%
	B	+320°C~+1820°C	500°C	3°C / 0.2%
RTD	Pt100	-200°C~+850°C	20°C	0.4°C / 0.2%
	Cu50	-50°C~+150°C	20°C	0.4°C / 0.2%
	Cu100	-50°C~+150°C	20°C	0.4°C / 0.2%
mV		-100mV~+100mV	10mV	40μV / 0.2%

Note:
1. The "%" of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.
2. Allow a maximum wire resistance of 50Ω/line for RTD input(3-wire).
3. When the thermocouple is input, the conversion accuracy does not include the CJC. For every 100Ω increase in the compensation wire, the cold junction error increases by 0.2°C.
4. When the Type B thermocouple is input, the lower limit of temperature range is required to be greater than 680 °C to ensure the accuracy index.
5. mV signal input needs to be customized.

Configuration Accessory

Configuration Tool: USBCOM-MINI

Software: Easyconfig

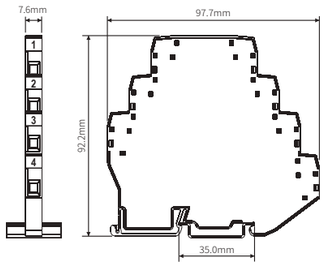
Analog Input /Analog Output (Loop Powered)

Features

1-channel signal conditioner
24V DC loop powered
Suitable for analog input and analog output
Support HART communication
Ultra-slim housing width 7.6mm

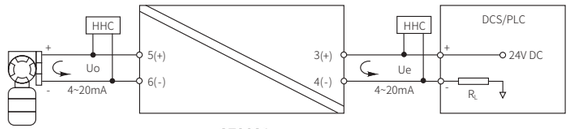
	CZ2031 Application 1: Analog Input	CZ2031 Application 2: Analog Output
Input		
Input Current	4~20mA(HART)	4~20mA(HART)
Distribution Voltage	$U_o \geqslant U_e - R_L \times 0.02$-6	
Loop Current	⩽25mA	⩽25mA
Output		
Output Current	4~20mA(HART)	4~20mA(HART)
Load Resistance	$R_L \geqslant 250\Omega$(HART)	$R_L \leqslant (U_t - 6)/\ 0.02$
Loop Current	⩽25mA	⩽25mA
General Parameters		
Loop Supply Voltage(U_e)	20~30V DC	20~30V DC
Power Reverse Protection	Support	Support
Transmission Accuracy	0.4%F.S.	0.3%F.S.
Temperature Drift	0.03%F.S./°C	0.03%F.S./°C
Response Time (0~90%)	⩽0.5 ms	⩽0.5 ms
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C	-20°C~+60°C
Suitable Field Apparatus	2-wire transmitter	2-wire Valve positioner， Electrical converter

Dimensions



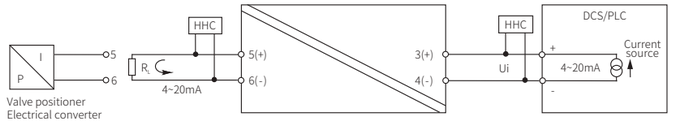
Connection

Application 1: Analog input



CZ2031

Application 2: Analog output



CZ2031

Note: HHC (HART Hand Held Communicator) cannot be used simultaneously on the input side and output side

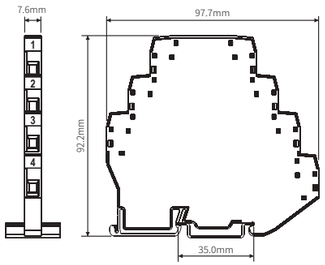
Analog Input / Analog Output

Features

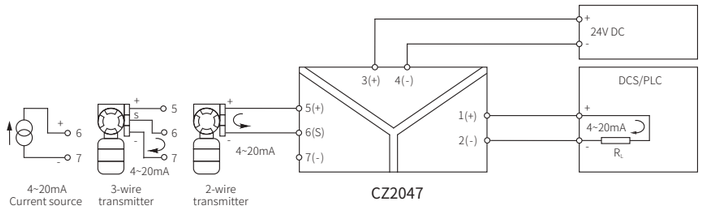
1-channel signal conditoner
24V DC supply
0/4~20mA current input/output
Ultra-slim housing width 7.6mm

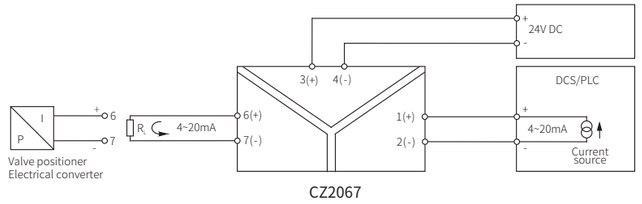
	CZ2047 Analog Input	CZ2067 Analog Output
Input		
Input Current	0/4~20mA	0/4~20mA
Distribution Voltage	⩾19V	
Input Voltage Drop		⩽7V@20mA
Max. Input Current	＜50mA	＜50mA
Output		
Output Current/Load Resistance	0(4)~20mA / R_L⩽550Ω	0(4)~20mA / R_L⩽800Ω
Max. Output Current	＜50mA	＜50mA
Output Voltage/Load Resistance	0(1)~5V / R_L⩾330kΩ	0(1)~5V / R_L⩾330kΩ
General Parameters		
Supply Voltage	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support
Current Consumption(Supply voltage:24V)	⩽65mA	⩽40mA
Transmission Accuracy	0.1%F.S.(Typical：0.05%F.S.)	0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift	0.005%F.S./℃	0.005%F.S./℃
Response Time (0~90%)	⩽0.5 ms	⩽0.5ms
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire transmitter，current source	2-wire valve positioner，electrical converter

Dimensions



Connection





RTD / TC Input

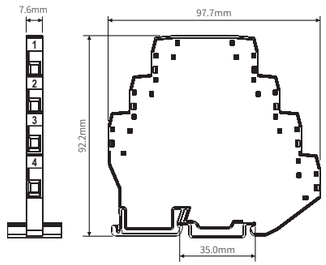
Features

1-channel signal conditioner
24V DC supply
Line fault detection(LFD)
Configurable by software
Ultra-slim housing width 7.6mm

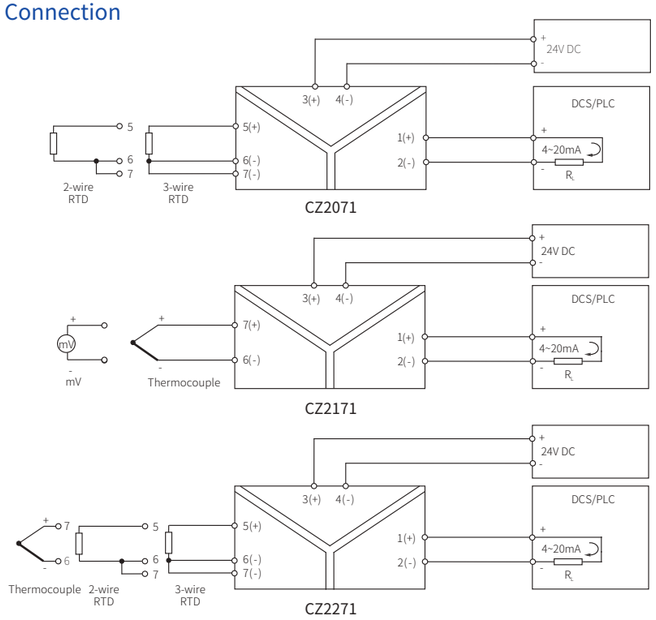
	CZ2071 RTD Input	CZ2171 TC Input	CZ2271 RTD/TC Input
Input			
Input Signal	Pt100，Cu100，Cu50	T、E、J、K、N、R、S、B (Customized mV signal)	Pt100，Cu100，Cu50 T、E、J、K、N、R、S、B
Internal CJC Temperature Range		-20℃~+60℃	-20℃~+60℃
CJC Precision		±1℃	±1℃
Output			
Output Current/Load Resistance	0~20mA，4~20mA / R_L⩽300Ω	0~20mA，4~20mA / R_L⩽300Ω	0~20mA，4~20mA / R_L⩽300Ω
Output Voltage/Load Resistance	0~5V，1~5V / R_L⩾2kΩ	0~5V，1~5V / R_L⩾2kΩ	0~5V，1~5V / R_L⩾2kΩ
Fault Current of Overrange/Underrange	I_H≈20.8mA/I_L≈3.8mA	I_H≈20.8mA/I_L≈3.8mA	I_H≈20.8mA/I_L≈3.8mA
Fault Current of Line Break	I≈20.8mA	I≈20.8mA	I≈20.8mA
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	⩽45mA	⩽45mA	⩽45mA
Conversion Accuracy	0.2%	0.2%	0.2%
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	⩽1s	⩽1s	⩽1s
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire RTD sensor	TC sensor，mV signal	2-or 3-wire RTD，TC sensor

Note: Fault current of line break <4mA or other special requirements, need to be customized.

Dimensions



Connection



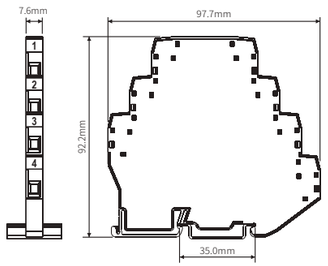
RTD / TC Input (Loop Powered)

Features

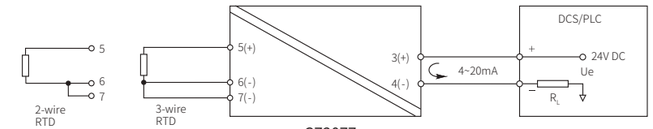
1-channel signal conditoner
24V DC loop powered
Line fault detection(LFD)
Configurable by software
Ultra-slim housing width 7.6mm

	CZ2077 RTD Input	CZ2177 TC Input	CZ2277 RTD/TC Input
Input			
Signal type	Pt100，Cu100，Cu50	T、E、J、K、N、R、S、B (Customized mV signal)	Pt100，Cu100，Cu50 T、E、J、K、N、R、S、B
Internal CJC Temperature Range		-20°C~+60°C	-20°C~+60°C
CJC Precision		±1°C	±1°C
Output			
Output Current	4~20mA	4~20mA	4~20mA
Load Resistance	$R_L \leqslant (U_e-9)/0.021\Omega$	$R_L \leqslant (U_e-9)/0.021\Omega$	$R_L \leqslant (U_e-9)/0.021\Omega$
Fault Current of Overrange/Underrange	$I_H \approx 20.8mA / I_L \approx 3.8mA$	$I_H \approx 20.8mA / I_L \approx 3.8mA$	$I_H \approx 20.8mA / I_L \approx 3.8mA$
Fault Current of Line Break	I≈20.8mA	I≈20.8mA	I≈20.8mA
General Parameters			
Loop Supply Voltage(U_e)	9~30V DC	9~30V DC	9~30V DC
Power Reverse Protection	Support	Support	Support
Power Dissipation	⩽0.5W	⩽0.5W	⩽0.5W
Conversion Accuracy	0.2%	0.2%	0.2%
Temperature Drift	0.01%F.S./°C	0.01%F.S./°C	0.01%F.S./°C
Response Time (0~90%)	⩽1s	⩽1s	⩽1s
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C
Suitable Field Apparatus	2-or 3-wire RTD sensor	TC sensor，mV signal	RTD，TC sensor

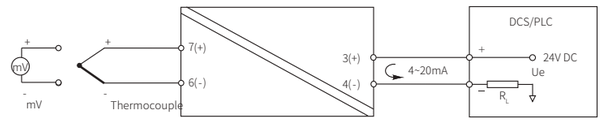
Dimensions



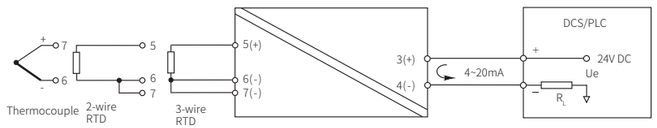
Connection



CZ2077



CZ2177



CZ2277

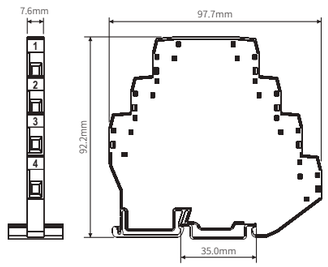
Voltage / Current Converters

Features

1-chanel signal conditioner
24V DC supply
Configurable by DIP switches (CZ2083.A)
Ultra-slim housing width 7.6mm

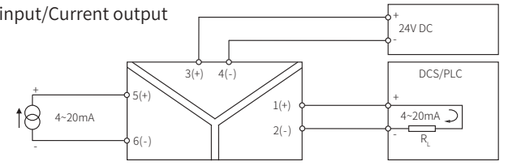
	CZ2083	CZ2083.A DIP configurable
Input		
Configuration	Not support	Via DIP switches
Input Signal	0~20mA，4~20mA 0~5V，1~5V，0~10V，2~10V	0~20mA，4~20mA 0~5V，1~5V，0~10V，2~10V
Output		
Configuration	Not support	Via DIP switches
Output Signal	0~20mA，4~20mA 0~5V，1~5V，0~10V，2~10V	0~20mA，4~20mA 0~5V，1~5V，0~10V，2~10V
General Parameters		
Supply Voltage	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support
Current Consumption(Supply voltage:24V)	⩽45mA	⩽45mA
Transmission Accuracy	0.1%F.S.	0.1%F.S.
Temperature Drift	0.01%F.S./°C	0.01%F.S./°C
Response Time (0~90%)	⩽100ms	⩽100ms
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ	⩾100MΩ
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C	-20°C~+60°C
Suitable Field Apparatus	current source，voltage source	current source，voltage source

Dimensions

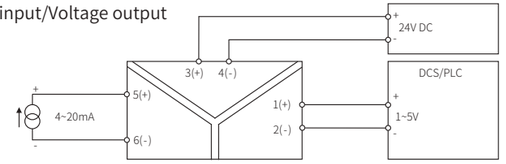


Connection

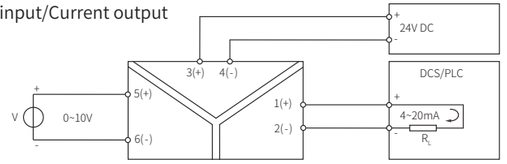
Application 1：Current input/Current output



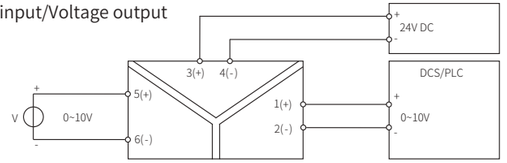
Application 2：Current input/Voltage output



Application 3：Voltage input/Current output

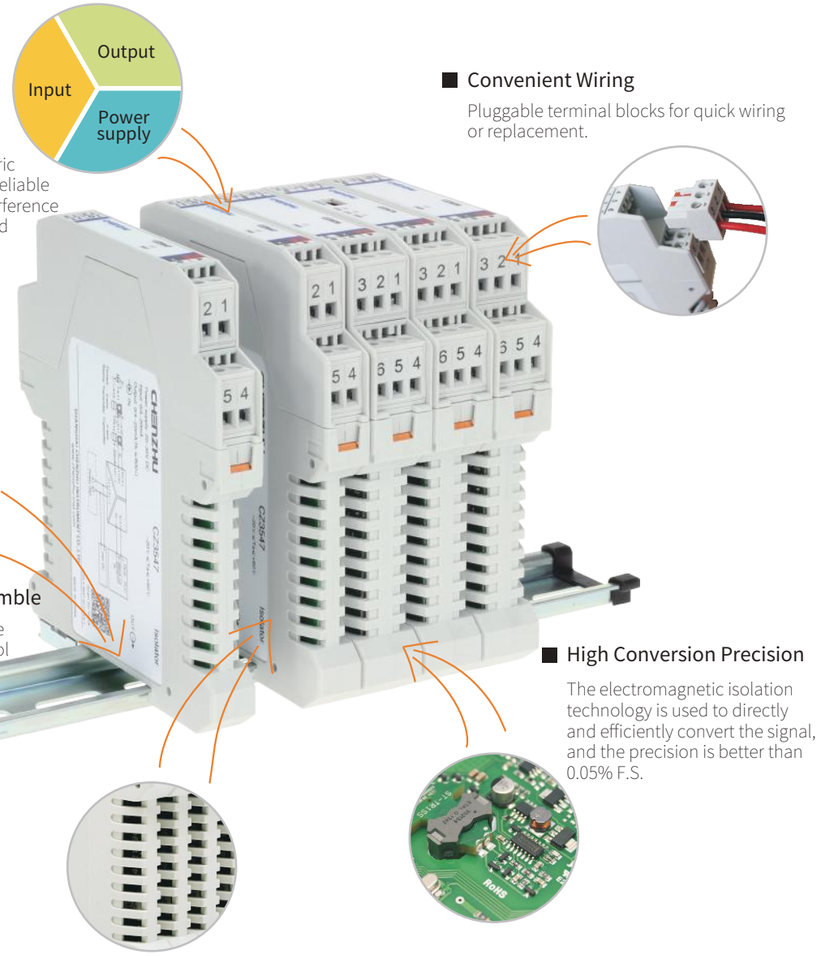


Application 4：Voltage input/Voltage output



CZ3000 Range

CZ3000 range signal conditioners are electrical devices, which are connected between the industrial field instrument and the control room. They effectively solve the field interference of industrial automation control systems and ensure stable and reliable operation of the system through reliable galvanic isolation among the power supply, input, and output. The product model is rich, and basically covers various signal isolation, conversion, distribution and other functional requirements in the automatic control system.



■ Strong EMC Performance

Specially designed high dielectric strength transformer achieves reliable galvanic isolation and anti-interference among power supply, input, and output.

■ Convenient Wiring

Pluggable terminal blocks for quick wiring or replacement.

■ Easy Installation and Disassemble

Use standard 35mm rails, which are commonly used in industrial control cabinets.

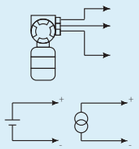
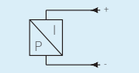
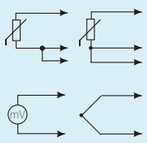
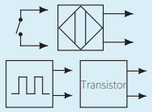
■ High Conversion Precision

The electromagnetic isolation technology is used to directly and efficiently convert the signal, and the precision is better than 0.05% F.S.

■ Good Heat Dissipation

Ventilation grid design for good heat dissipation.

CE

Field Instrument	Application	Module No.	Channels	Input	Output	Features	Page
	Digital Input	CZ3011.C	1/1	Dry-contact switch	Relay contact output	Independent powered	14
		CZ3012.S	2/2	Proximity switch input		Configurable via DIP switches	
	Analog Input	CZ3031	1/1	4~20mA (HART)	4~20mA (HART)	Loop powered	15
		CZ3032	2/2				
		CZ3047	1/1	0/4~20mA	0/4~20mA 0/1~5V	Independent powered Current/voltage source output	16
		CZ3035	1/2				
		CZ3036	2/2				
		CZ3047T	1/1		0/4~20mA	Independent powered Sink mode output	17
		CZ3035T	1/2				
		CZ3036T	2/2				
		CZ3065T	1/1	4~20mA	4~20mA	Loop powered	18
		CZ3066T	2/2				
	Analog Output	CZ3067	1/1	0/4~20mA	0/4~20mA 0/1~5V	Independent powered	19
		CZ3038	2/2				
	Temperature Converters	CZ3071	1/1	RTD	0~20mA，4~20mA 0~5V，1~5V	Independent powered Configurable via software	20
		CZ3076	1/2				
		CZ3079	2/2				
		CZ3072	1/1	TC mV			21
		CZ3074	1/2				
		CZ3079.TC	2/2				
		CZ3077	1/1	RTD	4~20mA	Loop powered Configurable via software	22
		CZ3078	2/2				
		CZ3177	1/1	TC mV			
		CZ3178	2/2				
		CZ3277	1/1	RTD，TC			
		CZ3278	2/2				
		CZ3075	1/1	0~5kΩ 0~10kΩ	0~20mA，4~20mA 0~5V，1~5V	Independent powered Configurable via software	23
		CZ3076.R	1/2				
		CZ3079.R	2/2				
	Pulse Input	CZ3051	1/1	Voltage pulse 0~10kHz	Voltage pulse, transistor 0~10kHz	Indepentent powered	24
		CZ3052	2/2				
		CZ3053	1/2				
	Frequency Converters	CZ3055	1/2	Dry contact Proximity switch Voltage pulse, transistor 0.1~100kHz	0~20mA，4~20mA 0~5V，1~5V SPST relay contact	Independent powered Configurable via software	25

Selection Guide

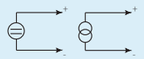
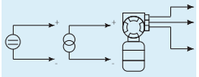
Field Instrument	Application	Module No.	Channels	Input	Output	Features	Page
	Vibration Tansducer Input	CZ3058	1/1	Vibration transducer -10V~10V	-10V~10V	Independent powered	26
	Voltage Input	CZ3083 CZ3088 CZ3089	1/1 2/2 1/2	0~5V，1~5V 0~10V	0~20mA，4~20mA 0~5V，1~5V 0~10V	Independent powered	27
	Communication Input	CZ3093	1/1	RS-485 half duplex	RS-485 half duplex	Independent powered	28
	Signal Spliter	CZ3383.11 CZ3383.13 CZ3383	1/1 1/3 1/4	0~20mA，4~20mA 0~5V，1~5V 0~10V，2~10V	0~20mA，4~20mA 0~5V，1~5V 0~10V，2~10V	Independent powered	29 30

Table 2 Input Signal Type and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200°C~+400°C	50°C	0.5°C/0.1%
	E	-200°C~+900°C	50°C	0.5°C/0.1%
	J	-200°C~+1200°C	50°C	0.5°C/0.1%
	K	-200°C~+1372°C	50°C	0.5°C/0.1%
	N	-200°C~+1300°C	50°C	0.5°C/0.1%
	R	-40°C~+1768°C	500°C	1.5°C/0.1%
	S	-40°C~+1768°C	500°C	1.5°C/0.1%
	B	+320°C~+1820°C	500°C	1.5°C/0.1%
	C	0°C~+2200°C	500°C	1.5°C/0.1%
	D	0°C~+2200°C	500°C	1.5°C/0.1%
RTD	Pt100	-200°C~+850°C	20°C	0.2°C/0.1%
	Pt1000	-200°C~+300°C	20°C	0.2°C/0.1%
	Cu50	-50°C~+150°C	20°C	0.2°C/0.1%
	Cu100	-50°C~+150°C	20°C	0.2°C/0.1%
mV		-100mV~+100mV	10mV	20μV/0.1%
Potentiometer		0kΩ~400Ω	50Ω	0.2Ω/0.1%
		0kΩ~2.5kΩ	250Ω	1.25Ω/0.1%
		0kΩ~10kΩ	1000Ω	5Ω/0.1%

Note：
1. The "%" of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.
2. Allow a maximum wire resistance of 50Ω/line for RTD input(3-wire).
3. When the thermocouple is input, the conversion accuracy does not include the CJC. For every 100Ω increase in the compensation wire, the cold junction error increases by 0.2°C.
4. When the Type B thermocouple is input, the lower limit of temperature range is required to be greater than 680 °C to ensure the accuracy index.

Configuration Accessory

Configuration Tool: USBCOM-MINI

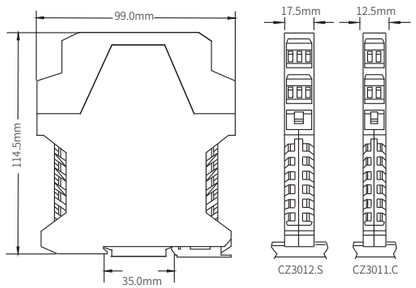
Software: Easyconfig

Features

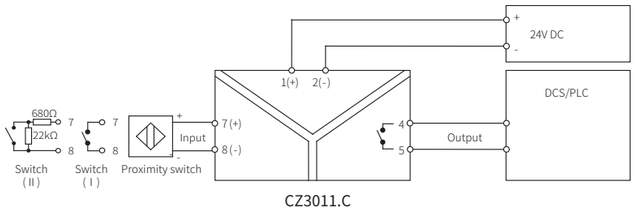
24V DC independent power supply
Dry contact or proximity switch input
Relay contact output
Line fault detection(LFD)
Configurable by DIP switches

	CZ3011.C 1/1	CZ3012.S 2/2
Input		
Open-circuit Voltage	Approx.8V	Approx.8V
Short-circuit Current	Approx.8mA	Approx.8mA
Input and output characteristics(Phase noninverting)	If field switch is in the status of 'close' or input loop current＞2.1mA, output relay will be energized, with yellow LED ON If field switch is in the status of 'close' or input loop current＜1.2mA, output relay will be de-energized, with yellow LED OFF	
Output		
Contact Rating	250V AC,2A or 30V DC,2A	250V AC,2A or 30V DC,2A
Load Type	Resistive load	Resistive load
Response Time (0~90%)	⩽10ms	⩽10ms
Input/Output Inverting(See the manual for details)	Via switch K1	Via switch K1、K3
Line Fault Detection(See the manual for details)	Via switch K2	Via switch K2、K4
General Parameters		
Supply Voltage	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support
Current Consumption(Supply voltage:24V)	⩽30mA	⩽40mA
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C	-20°C~+60°C
Suitable Field Apparatus	Dry contact, NAMUR proximity switch according to DIN 19234 standards (including: pressure switches, temperature switches, liquid level switches, etc.)	

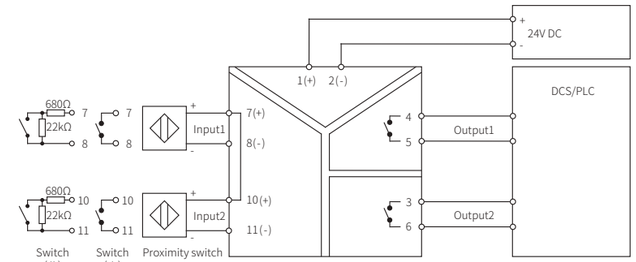
Dimensions



Connection



CZ3011.C



CZ3012.S

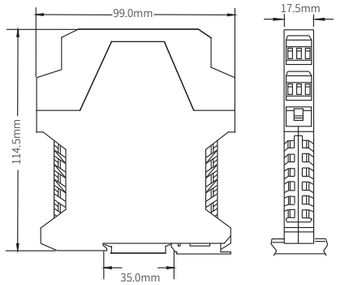
Analog Input / Analog Output (Loop Powered)

Features

24V DC Loop powered
Suitable for analog input and analog output
Support HART communication

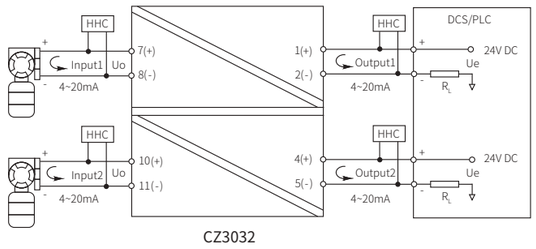
	1/1：CZ3031 2/2：CZ3032 Application 1: Analog Input	1/1：CZ3031 2/2：CZ3032 Application 2: Analog Output
Input		
Input Current	4~20mA(HART)	4~20mA(HART)
Voltage Drop	U_d≤6V	U_d≤6V
Distribution Voltage	U_o≥U_e-R_L×0.02-6	
Output		
Output Current	4~20mA(HART)	4~20mA(HART)
Load Resistance	R_L≥250Ω(HART)	R_L≤(U_i-6)/0.02
General Parameters		
Loop Supply Voltage(U_e)	20~30V DC	20~30V DC
Power Reverse Protection	Support	Support
Power Dissipation	0.1W	0.1W
Transmission Accuracy	0.4%F.S.	0.2%F.S.
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	≤0.5 ms	≤0.5 ms
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	≥100MΩ	≥100MΩ
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-wire transmitter	2-wire Valve positioner/ Electrical converter

Dimensions



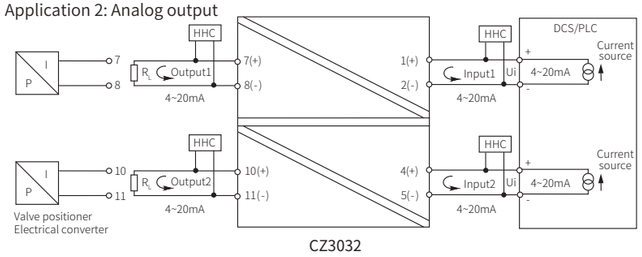
Connection

Application 1: Analog input



CZ3032

Application 2: Analog output



CZ3032

Note:

1. HHC (HART Hand Held Communicator) cannot be used simultaneously on the input side and output side
2. CZ3031 refers to the CZ3032 channel 1 to wire.

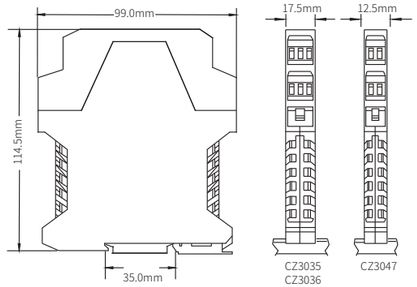
Analog Input(Current Source Output)

Features

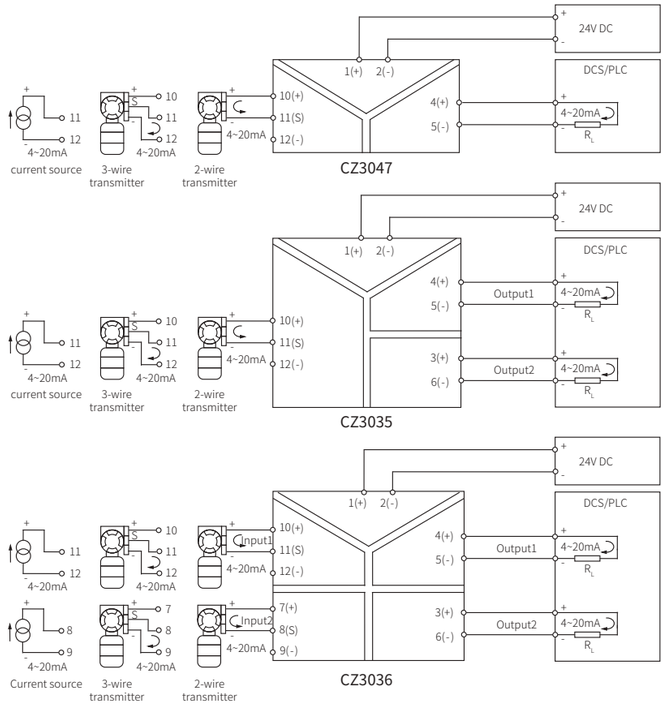
24V DC independent power supply
0/4~20mA current input
0/4~20mA current source output

	CZ3047 1/1	CZ3035 1/2	CZ3036 2/2
Input			
Input Current	0/4~20mA	0/4~20mA	0/4~20mA
Input Impedance	≤50Ω	≤50Ω	≤50Ω
Distribution Voltage/Max. Current	17.5~25V/＜35mA	17.5~25V/＜35mA	17.5~25V/＜35mA
Output			
Output Current	0/4~20mA	0/4~20mA	0/4~20mA
Load Resistance(Current output)	R_L≤800Ω	R_L≤300Ω	R_L≤300Ω
Output Voltage	0/1~5V，0/2~10V	0/1~5V，0/2~10V	0/1~5V，0/2~10V
Load Resistance(Voltage output)	R_L≥330kΩ(0/1~5V) R_L≥660kΩ(0/2~10V)	R_L≥330kΩ(0/1~5V) R_L≥660kΩ(0/2~10V)	R_L≥330kΩ(0/1~5V) R_L≥660kΩ(0/2~10V)
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	≤60mA	≤75mA	≤100mA
Transmission Accuracy	0.1%F.S.(Typical：0.05%F.S.)	0.1%F.S.(Typical：0.05%F.S.)	0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift	0.005%F.S./℃	0.005%F.S./℃	0.005%F.S./℃
Response Time (0~90%)	≤0.5 ms	≤0.5 ms	≤0.5 ms
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	≥100MΩ; 500V DC	≥100MΩ; 500V DC	≥100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire transmitter，current source	2-or 3-wire transmitter，current source	2-or 3-wire transmitter，current source

Dimensions



Connection



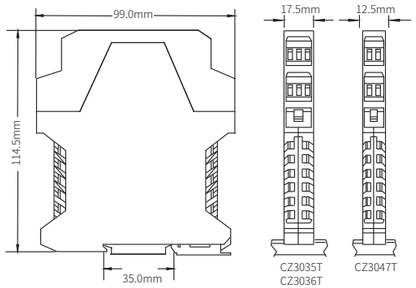
Analog Input(Sink Mode Output)

Features

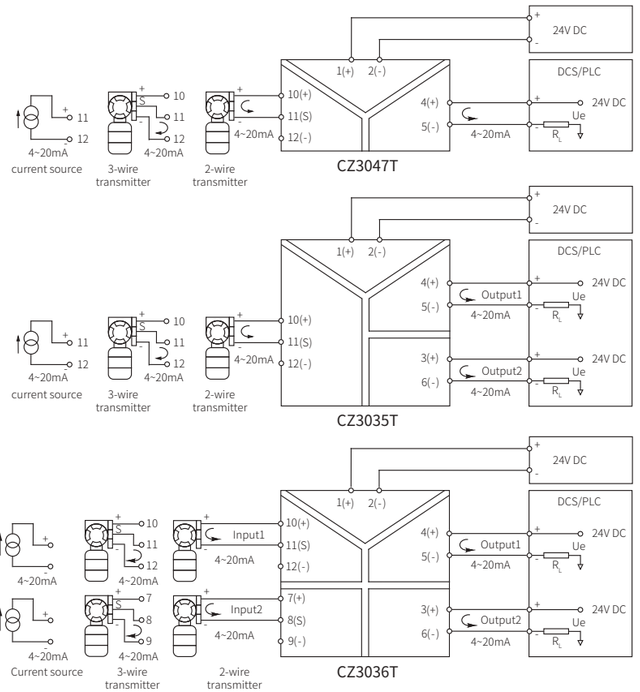
24V DC independent power supply
0/4~20mA current input
0/4~20mA sink mode output

	CZ3047T 1/1	CZ3035T 1/2	CZ3036T 2/2
Input			
Input Current	0/4~20mA	0/4~20mA	0/4~20mA
Distribution Voltage	17.5~25V	17.5~25V	17.5~25V
Max. Current	＜35mA	＜35mA	＜35mA
Output			
Output Current	0/4~20mA	0/4~20mA	0/4~20mA
Ext.Source Voltage(U_e)	12~30V	12~30V	12~30V
Load Resistance	$R_L \leqslant (U_e-5)/0.02$	$R_L \leqslant (U_e-5)/0.02$	$R_L \leqslant (U_e-5)/0.02$
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	⩽40mA	⩽45mA	⩽80mA
Transmission Accuracy	0.1%F.S.(Typical：0.05%F.S.)	0.1%F.S.(Typical：0.05%F.S.)	0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift	0.005%F.S./℃	0.005%F.S./℃	0.005%F.S./℃
Response Time (0~90%)	⩽0.5 ms	⩽0.5 ms	⩽0.5 ms
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire transmitter，current source	2-or 3-wire transmitter，current source	2-or 3-wire transmitter，current source

Dimensions



Connection



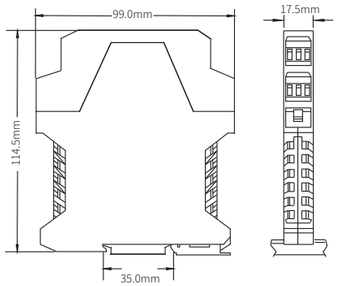
Analog Input(Loop Powered)

Features

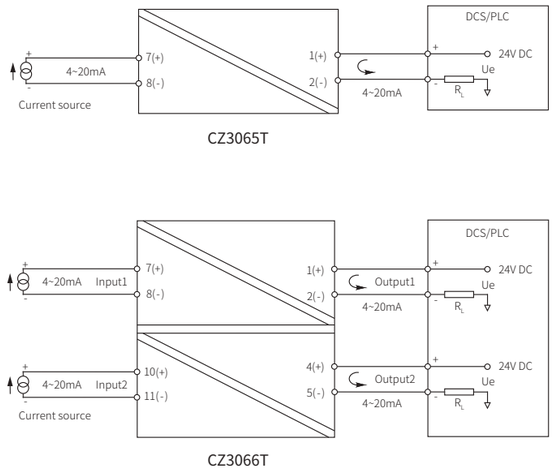
24V DC loop power supply
4~20mA current source input
4~20mA sink mode output

	CZ3065T 1/1	CZ3066T 2/2
Input		
Input Current	4~20mA	4~20mA
Input Impedance	⩽100Ω	⩽100Ω
Output		
Output Current	4~20mA	4~20mA
Voltage Drop	⩽14V	⩽14V
Load Resistance	$R_L \leqslant (U_e-14)/0.02$	$R_L \leqslant (U_e-14)/0.02$
General Parameters		
Loop Supply Voltage(U_e)	20~30V DC	20~30V DC
Power Reverse Protection	Support	Support
Transmission Accuracy	0.2%F.S.	0.2%F.S.
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	⩽0.5 ms	⩽0.5 ms
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	current source	current source

Dimensions



Connection



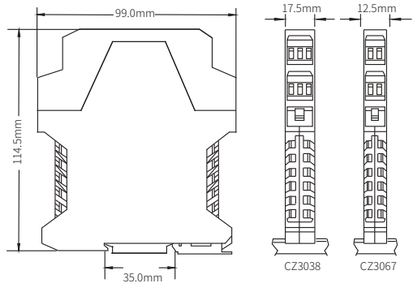
Analog Output

Features

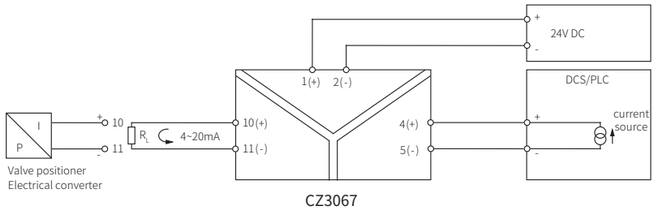
24V DC independent power supply
0/4~20mA current input/output
Output load up to 800Ω

	CZ3067 1/1	CZ3038 2/2
Input		
Input Signal	0/4~20mA	0/4~20mA
Input Voltage Drop	⩽2V	⩽2V
Max. Input Current	＜30mA	＜30mA
Output		
Output Current/Load Resistance	0(4)~20mA / R_L⩽800Ω	0(4)~20mA / R_L⩽800Ω
Max.Output Current	＜30mA	＜30mA
Output Voltage/Load Resistance	0(1)~5V / R_L⩾330kΩ	0(1)~5V / R_L⩾330kΩ
General Parameters		
Supply Voltage	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support
Current Consumption(Supply voltage:24V)	⩽40mA	⩽65mA
Transmission Accuracy	0.1%F.S.(Typical：0.05%F.S.)	0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift	0.005%F.S./℃	0.005%F.S./℃
Response Time (0~90%)	⩽2ms	⩽2ms
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-wire valve positioner， electrical converter	2-wire valve positioner， electrical converter

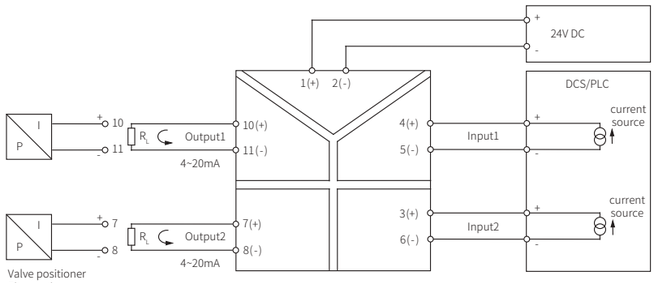
Dimensions



Connection



CZ3067



CZ3038

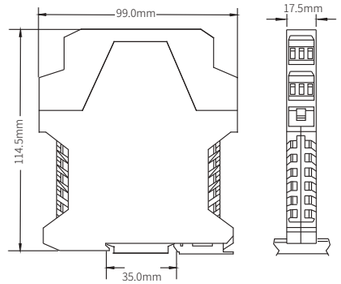
RTD Input

Features

24V DC independent power supply
Line fault detection(LFD)
Configurable by software

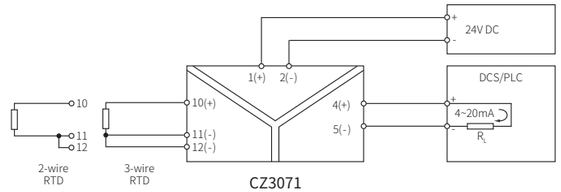
	CZ3071 1/1	CZ3076 1/2	CZ3079 2/2
Input			
Input Signal	Pt100，Pt1000，Cu100，Cu50	Pt100，Pt1000，Cu100，Cu50	Pt100，Pt1000，Cu100，Cu50
Output			
Output Current/Load Resistance	0~20mA，4~20mA / R_L⩽300Ω	0~20mA，4~20mA / R_L⩽300Ω	0~20mA，4~20mA / R_L⩽300Ω
Output Voltage/Load Resistance	0~5V，1~5V / R_L⩾20kΩ	0~5V，1~5V / R_L⩾20kΩ	0~5V，1~5V / R_L⩾300kΩ
Fault Current of Overrange/Underrange	I_H≈20.8mA/I_L≈3.8mA	I_H≈20.8mA/I_L≈3.8mA	I_H≈20.8mA/I_L≈3.8mA
Fault Current of Line Break	I≈20.8mA	I≈20.8mA	I≈20.8mA
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	⩽35mA	⩽70mA	⩽70mA
Conversion Accuracy	0.1%	0.1%	0.1%
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	⩽1s	⩽1s	⩽1s
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire RTD	2-or 3-wire RTD	2-or 3-wire RTD

Dimensions

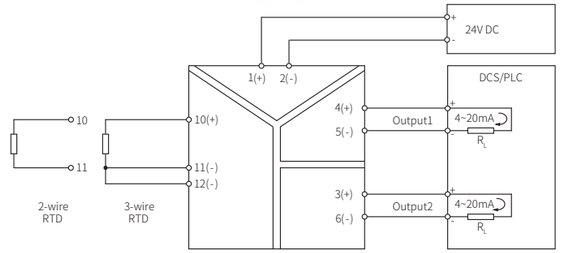


Note:
1. For 3-wire Input, keep the resistance of the three wires as equal as possible.
2. For 2-wire Input, terminal 11, 12(CZ3071) should be shorted.

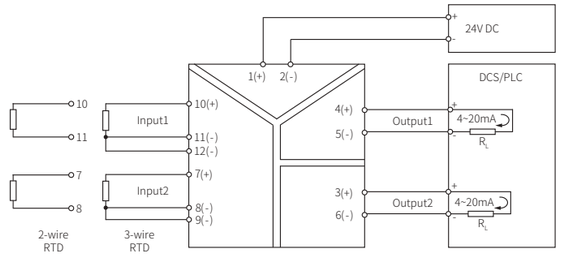
Connection



CZ3071



CZ3076



CZ3079

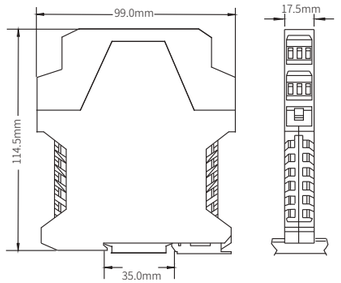
TC Input

Features

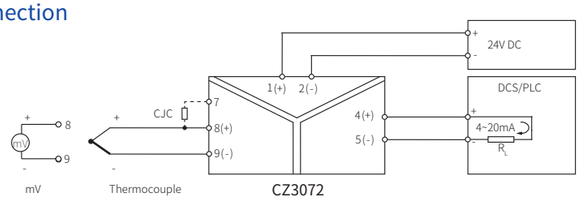
24V DC independent power supply
Line fault detection(LFD)
Configurable by software
Integral CJC on terminals

	CZ3072 1/1	CZ3074 1/2	CZ3079.TC 2/2
Input			
Input Signal(Customized mV signal)	T、E、J、K、N、R、S、B、C、D、mV	T、E、J、K、N、R、S、B、C、D、mV	T、E、J、K、N、R、S、B、C、D、mV
Internal CJC Temperature Range	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C
CJC Precision	±1°C	±1°C	±1°C
Output			
Output Current/Load Resistance	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω
Output Voltage/Load Resistance	0~5V，1~5V / R_L≥20kΩ	0~5V，1~5V / R_L≥20kΩ	0~5V，1~5V / R_L≥20kΩ
Fault Current of Overrange/Underrange	I_H≈20.8mA/I_L≈3.8mA	I_H≈20.8mA/I_L≈3.8mA	I_H≈20.8mA/I_L≈3.8mA
Fault Current of Line Break	I≈20.8mA	I≈20.8mA	I≈20.8mA
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	≤35mA	≤70mA	≤70mA
Conversion Accuracy	See P13 Table 2	See P13 Table 2	See P13 Table 2
Temperature Drift	0.01%F.S./°C	0.01%F.S./°C	0.01%F.S./°C
Response Time (0~90%)	≤1s	≤1s	≤1s
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	≥100MΩ; 500V DC	≥100MΩ; 500V DC	≥100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C
Suitable Field Apparatus	TC and mV signal sensor	TC and mV signal sensor	TC and mV signal sensor

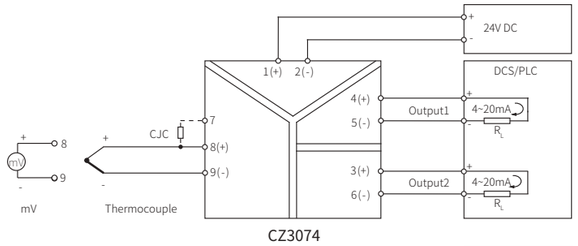
Dimensions



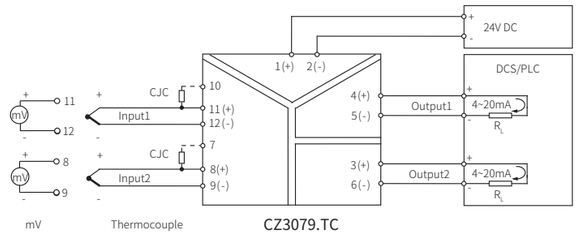
Connection



CZ3072



CZ3074



CZ3079.TC

RTD/TC Input(Loop Powered)

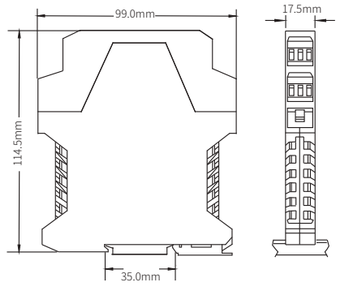
Features

24V DC loop power supply
Line fault detection(LFD)
Configurable by software
Integral CJC on TC input terminals

	1/1: CZ3077 2/2: CZ3078	1/1: CZ3177 2/2: CZ3178	1/1: CZ3277 2/2: CZ3278
Input			
Input Signal	Pt100，Cu100，Cu50	T、E、J、K、N、R、S、B (Customized mV signal)	Pt100，Cu100，Cu50 T、E、J、K、N、R、S、B
Internal CJC Temperature Range		-20~+60°C	-20~+60°C
CJC Precision		±1°C	±1°C
Output			
Output Current	4~20mA	4~20mA	4~20mA
Load Resistance	R_L≤(U_e-12)/0.021Ω	R_L≤(U_e-12)/0.021Ω	R_L≤(U_e-12)/0.021Ω
Fault Current of Overrange/Underrange	I_L≈20.8mA/I_L≈3.8mA	I_L≈20.8mA/I_L≈3.8mA	I_L≈20.8mA/I_L≈3.8mA
Fault Current of Line Break	I≈20.8mA	I≈20.8mA	I≈20.8mA
General Parameters			
Loop Supply Voltage(U_e)	12~30V DC	12~30V DC	12~30V DC
Power Reverse Protection	Support	Support	Support
Conversion Accuracy	See P13 Table 2	See P13 Table 2	See P13 Table 2
Temperature Drift	0.01%F.S./°C	0.01%F.S./°C	0.01%F.S./°C
Response Time (0~90%)	≤1s	≤1s	≤1s
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	≥100MΩ; 500V DC	≥100MΩ; 500V DC	≥100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C
Suitable Field Apparatus	2-or 3-wire RTD	TC sensor，mV signal	RTD，TC sensor

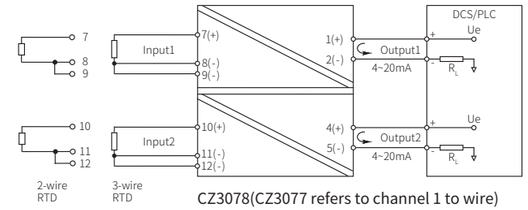
Note: Fault current of line break <4mA or other special requirements, need to be customized.

Dimensions

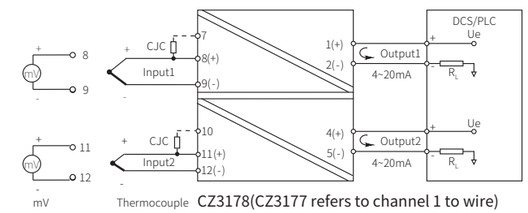


Note:
1. CZ3277/CZ3278 is universal temperature converter. Use standard terminal for RTD input.
2. Use CJC terminal for thermocouple input.9(CZ3079) should be shorted.

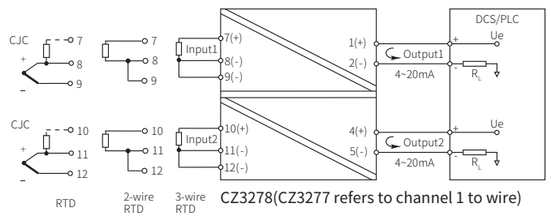
Connection



CZ3078(CZ3077 refers to channel 1 to wire)



CZ3178(CZ3177 refers to channel 1 to wire)



CZ3278(CZ3277 refers to channel 1 to wire)

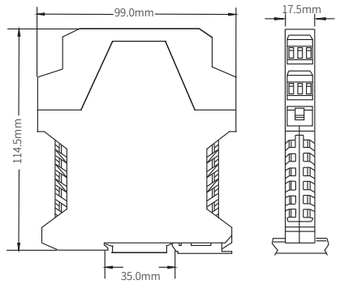
Potentiometer Input

Features

24V DC independent power supply
Line fault detection(LFD)
Configurable by software

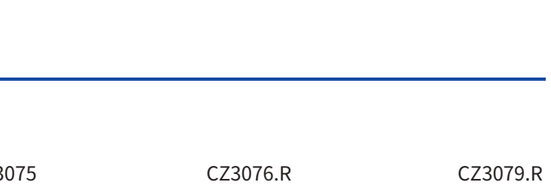
	CZ3075 1/1	CZ3076.R 1/2	CZ3079.R 2/2
Input			
Input Signal	0~10kΩ	0~10kΩ	0~10kΩ
Output			
Output Current/Load Resistance	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω
Output Voltage/Load Resistance	0~5V，1~5V/R_L≥20kΩ	0~5V，1~5V/R_L≥20kΩ	0~5V，1~5V/R_L≥20kΩ
Fault Current of Overrange/Underrange	I_L≈20.8mA/I_L≈3.8mA	I_L≈20.8mA/I_L≈3.8mA	I_L≈20.8mA/I_L≈3.8mA
Fault Current of Line Break	I≈20.8mA	I≈20.8mA	I≈20.8mA
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	≤40mA	≤70mA	≤70mA
Conversion Accuracy	0.1%	0.1%	0.1%
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	≤1s	≤1s	≤1s
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	≥100MΩ; 500V DC	≥100MΩ; 500V DC	≥100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire Potentiometer	2-or 3-wire Potentiometer	2-or 3-wire Potentiometer

Dimensions

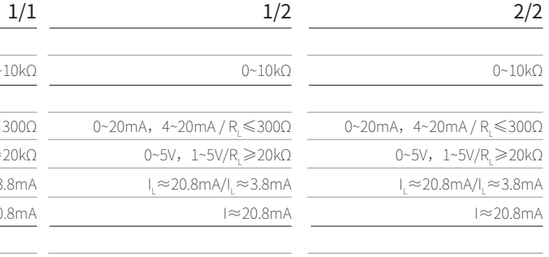


Note:
1. For 3-wire Input, keep the resistance of the three wires as equal as possible.
2. For 2-wire Input, terminal 11, 12(CZ3075) should be shorted.

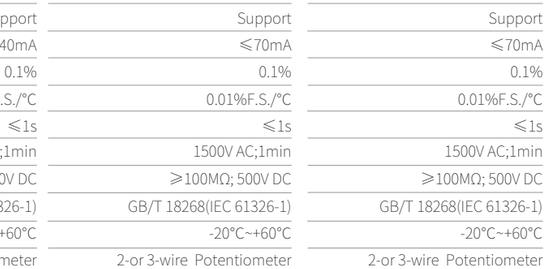
Connection



CZ3075



CZ3076.R



CZ3079.R

Pulse input

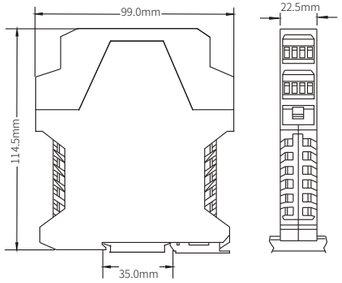
Features

24V DC independent power supply
PNP/NPN transistor output or voltage pulse output

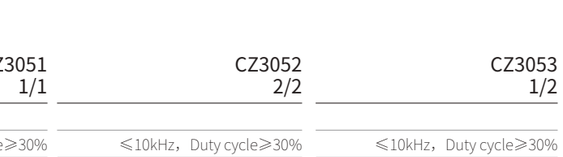
	CZ3051 1/1	CZ3052 2/2	CZ3053 1/2
Input			
Frequency Range	≤10kHz，Duty cycle≥30%	≤10kHz，Duty cycle≥30%	≤10kHz，Duty cycle≥30%
Pulse Voltage Level	4V≤V_H≤12V，V_L≤1V	4V≤V_H≤12V，V_L≤1V	4V≤V_H≤12V，V_L≤1V
Distribution Voltage(Specify when ordering)	No power distribution 5V or 12V or 24V@20mA	No power distribution 5V or 12V or 24V@20mA	No power distribution 5V or 12V or 24V@20mA
Output			
External Supply Voltage Vcc (Transistor output)	≤35V DC	≤35V DC	≤35V DC
Max.on-stage Current(Transistor output)	≤35mA	≤35mA	≤35mA
Transistor Collector Output	V_H: Vcc，V_L: ≤2.5V	V_H: Vcc，V_L: ≤2.5V	V_H: Vcc，V_L: ≤2.5V
Pull-up Resistance	2kΩ≤R_L≤20kΩ	2kΩ≤R_L≤20kΩ	2kΩ≤R_L≤20kΩ
Transistor Emitter Output	V_H: Vcc-2.5V，V_L: ≤0.5V	V_H: Vcc-2.5V，V_L: ≤0.5V	V_H: Vcc-2.5V，V_L: ≤0.5V
Pull-down Resistance	2kΩ≤R_L≤10kΩ	2kΩ≤R_L≤10kΩ	2kΩ≤R_L≤10kΩ
Voltage Pulse Output	V_H: 4.5V≤V_H≤24V，V_L: ≤0.5V	V_H: 4.5V≤V_H≤24V，V_L: ≤0.5V	V_H: 4.5V≤V_H≤24V，V_L: ≤0.5V
Load Resistance	R_L≥1kΩ	R_L≥1kΩ	R_L≥1kΩ
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption (Supply voltage:24V，no power distribution)	≤30mA	≤55mA	≤50mA
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	≥100MΩ	≥100MΩ	≥100MΩ
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire voltage pulse source	2-or 3-wire voltage pulse source	2-or 3-wire voltage pulse source

Note：Voltage pulse output can be selected 5V, 12 and 24V. V_H is related to the output level. See the manual for details.

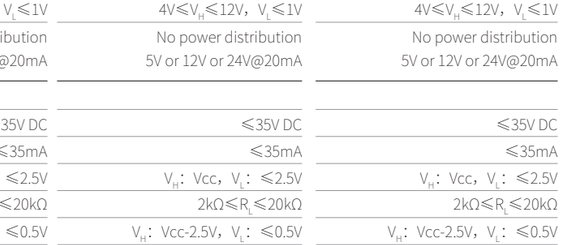
Dimensions



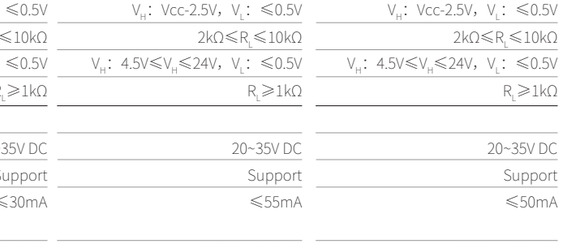
Connection



CZ3051



CZ3052



CZ3053

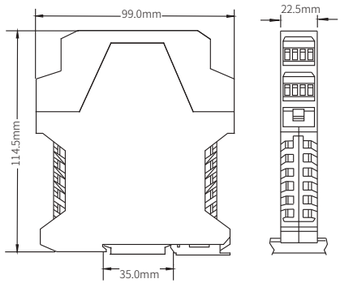
Frequency Converter

Features

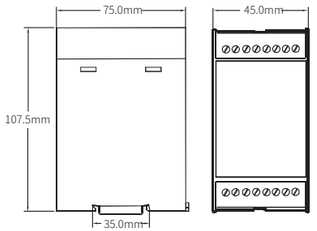
24V DC independent power supply
Acquisition of NPN, PNP, NAMUR, and frequency signals
Line fault detection(LFD)
Configurable by software

	CZ3055 1/1
Input	
PNP / NPN Transistor	Power distribution:14V，current＜20mA
Voltage Pulse Source	Max. Input voltage:30V
Switch/Proximity Switch	Power distribution≈8V，Short-circuit current≈8mA
Frequency Range / Pulse Width	0.1Hz~100kHz/≥2μs
Output	
Output Current/Load Resistance	0~20mA，4~20mA / R_L≤400Ω
Output Voltage/Load Resistance	0~5V，1~5V / R_L≥300kΩ
Relay Output	1*SPST
Contact Rating	250V AC,2A / 30V DC,2A；Resistive load
Response Time @100kHz input(0~90%)	≤20ms
General Parameters	
Supply Voltage	20~35V DC
Power Reverse Protection	Support
Current Consumption(Supply voltage: 24V)	≤90mA
Conversion Accuracy	0.1%F.S.(Typical≤0.05%F.S.)
Temperature Drift	0.01% F.S./℃
Dielectric Strength	1500V AC;1min
Insulation Resistance	≥100MΩ；500V DC
EMC Standards	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃
Suitable Field Apparatus	

Dimensions

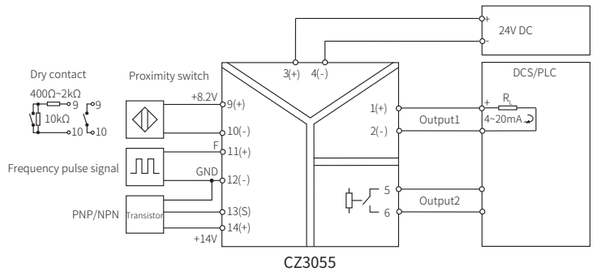


CZ3055



CZ3355

Connection



CZ3055

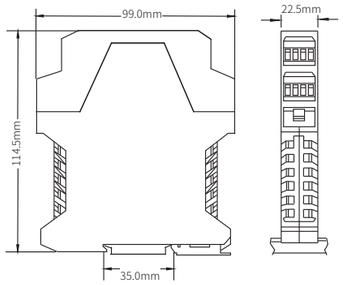
Vibration Transducer Input

Features

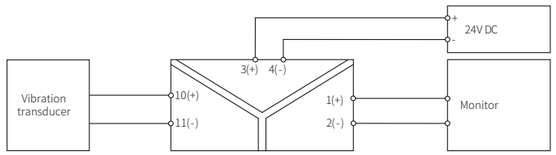
24V DC independent power supply
Vibration transducer input
-10~+10V voltage input/output

	CZ3058 1/1
Input	
Input Voltage	-10V~+10V
Input Impedance	10kΩ
Output	
Output Voltage	-10V~+10V
Load Resistance	R_L≥20kΩ
General Parameters	
Supply Voltage	20~35V DC
Power Reverse Protection	Support
Current Consumption(Supply voltage:24V)	≤40mA
DC Transmission Accuracy	＜±0.2%F.S.
AC Transmission Accuracy	0Hz~600Hz：±0.2%F.S. 600Hz~10kHz：-1.5%~+0.2%F.S.
Phase Response(0~90%)	＜10μs
Voltage Bandwidth(-3dB)	≥40kHz
Temperature Drift	100ppm/℃
Dielectric Strength	1500V AC;1min
Insulation Resistance	≥100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃
Suitable Field Apparatus	Vibration transducer

Dimensions



Connection



CZ3058

Voltage Input

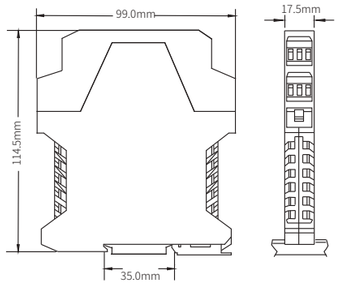
Features

24V DC independent power supply
Multiple voltage input
Multiple current/voltage output

	CZ3083 1/1	CZ3088 2/2	CZ3089 1/2
Input			
Input Voltage	0~5V，1~5V，0~10V	0~5V，1~5V，0~10V	0~5V，1~5V，0~10V
Input Impedance	⩾100kΩ	⩾100kΩ	⩾100kΩ
Distribution Voltage(Specify when ordering)	No power distribution 10V or 15V@20mA	No power distribution 10V or 15V@20mA	No power distribution 10V or 15V@20mA
Output			
Output Current	0~20mA，4~20mA	0~20mA，4~20mA	0~20mA，4~20mA
Load Resistance(Current output)	R_L⩽300Ω	R_L⩽300Ω	R_L⩽300Ω
Output Voltage	0~5V，1~5V，0~10V	0~5V，1~5V，0~10V	0~5V，1~5V，0~10V
Load Resistance(Voltage output)	R_L⩾20kΩ	R_L⩾20kΩ	R_L⩾20kΩ
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V，power distribution current: 20mA)	⩽110mA	⩽130mA	⩽130mA
Transmission Accuracy	0.1%F.S.	0.1%F.S.	0.1%F.S.
Temperature Drift	0.005%F.S./℃	0.005%F.S./℃	0.005%F.S./℃
Response Time (0~90%)	⩽0.1s	⩽0.1s	⩽0.1s
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	Voltage source output device	Voltage source output device	Voltage source output device

Note: CZ3088,CZ3089 can only order no power distribution module when current output.

Dimensions



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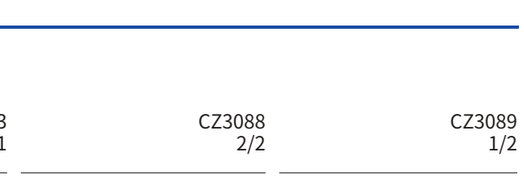
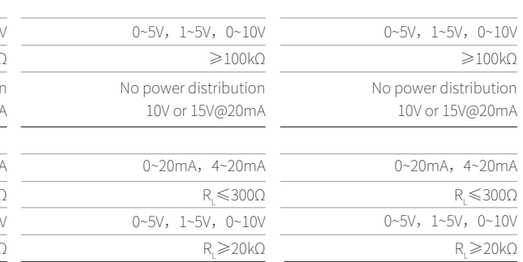
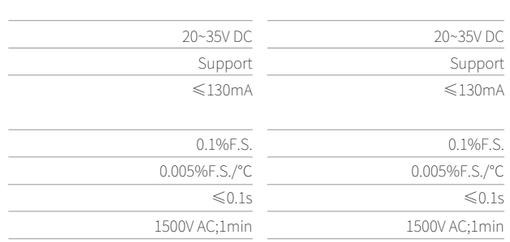






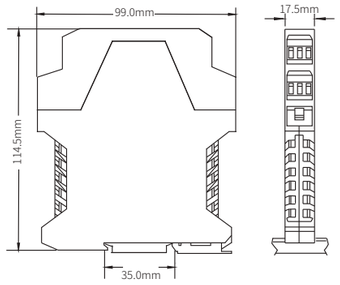
Communication Input

Features

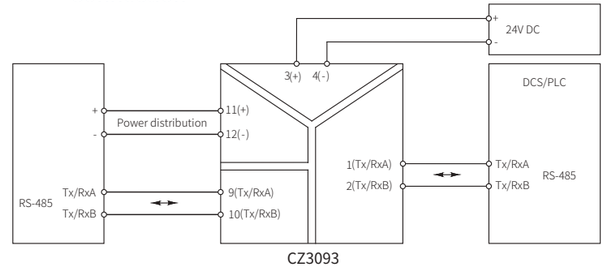
24V DC independent power supply
Automatic transmit/receive changeover
Transmission speed up to 56kbps

	CZ3093 1/1
Input	
Input Signal	RS-485 half duplex
Distribution Voltage(Specify when ordering)	5V or 6V@100mA
	8V or 9V or 12V@50mA
Output	
Output Signal	RS-485 half duplex
Communiction Signal Specification	RS-485
Signal Level Rules	standard RS-485 differential level
Transmission Delay	⩽10μs
Serial Transmission Speed	⩽56kbps
General Parameters	
Supply Voltage	20~35V DC
Power Reverse Protection	Support
Current Consumption(Supply voltage:24V，power distribution: 6V/100mA)	⩽160mA
Dielectric Strength	1500V AC;1min
Insulation Resistance	⩾100MΩ
EMC Standards	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃
Suitable Field Apparatus	Device with RS-485 communication interface

Dimensions



Connection

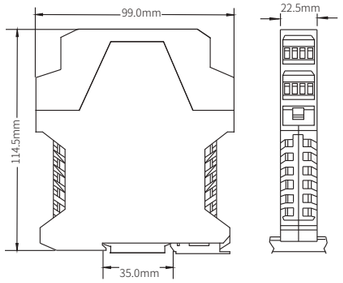


Features

24V DC independant power supply
1 channle current/voltage input
Multiple channles current/voltage ouput

	CZ3383.11 1/1	CZ3383.13 1/3
Input		
Input Current/Input Impedance	0~20mA，4~20mA/⩽100Ω	0~20mA，4~20mA/⩽100Ω
Input Voltage/Input Impedance	0~5V，1~5V/⩾100kΩ 0~10V，2~10V/⩾300kΩ	0~5V，1~5V/⩾100kΩ 0~10V，2~10V/⩾300kΩ
Power Distribution	⩾15.5V/20mA	⩾15.5V/20mA
Output		
Output Current	0~20mA，4~20mA	0~20mA，4~20mA
Load Resistance(Current output)	R_L⩽300Ω	R_L⩽300Ω
Output Voltage	0~5V，1~5V，0~10V，2~10V	0~5V，1~5V，0~10V，2~10V
Load Resistance(Voltage output)	R_L⩾2kΩ	R_L⩾2kΩ
Fault Indicator and Current	When line break/ line shorted, the alarm light flashes and the output is 0mA.	
General Parameters		
Supply Voltage	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support
Current Consumption(Supply voltage:24V)	⩽70mA	⩽100mA
Transmission Accuracy	0.1%F.S.	0.1%F.S.
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	⩽0.5s	⩽0.5s
Dielectric Strength	1500V AC;1min	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire transmitter, current source, voltage source	2-or 3-wire transmitter, current source, voltage source

Dimensions



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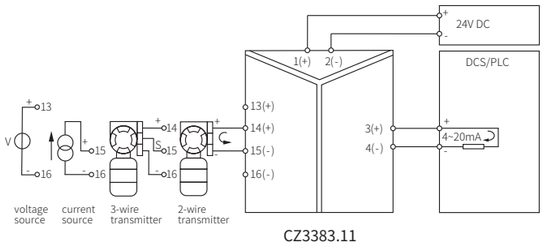
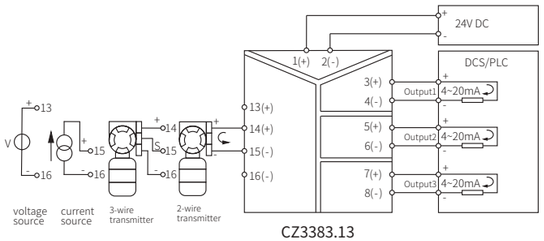


CZ3383.11



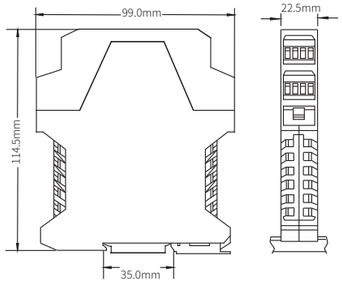
CZ3383.13

Features

24V DC independent power supply
Signal spliter(1 input,4 output)

	CZ3383 1/4
Input	
Input Current/Input Impedance	0~20mA，4~20mA/⩽100Ω
Input Voltage/Input Impedance	0~5V，1~5V/⩾100kΩ 0~10V，2~10V/⩾300kΩ
Power Distribution	⩾15.5V/20mA
Output	
Output Current	0~20mA，4~20mA
Load Resistance(Current output)	R_L⩽300Ω
Output Voltage	0~5V，1~5V，0~10V，2~10V
Load Resistance(Voltage output)	R_L⩾2kΩ
Fault Indicator and Current	When line break/line shorted, the alarm light flashes and the output is 0mA.
General Parameters	
Supply Voltage	20~35V DC
Power Reverse Protection	Support
Current Consumption(Supply voltage:24V)	⩽110mA
Transmission Accuracy	0.1%F.S.
Temperature Drift	0.01%F.S./℃
Response Time (0~90%)	⩽0.5s
Dielectric Strength	1500V AC;1min
Insulation Resistance	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire transmitter，current source，voltage source

Dimensions



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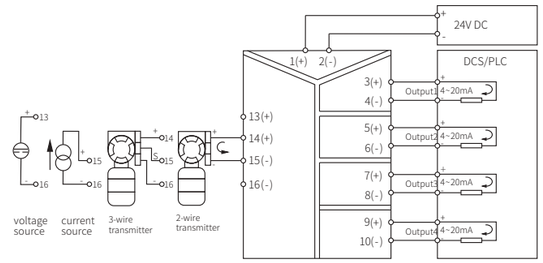
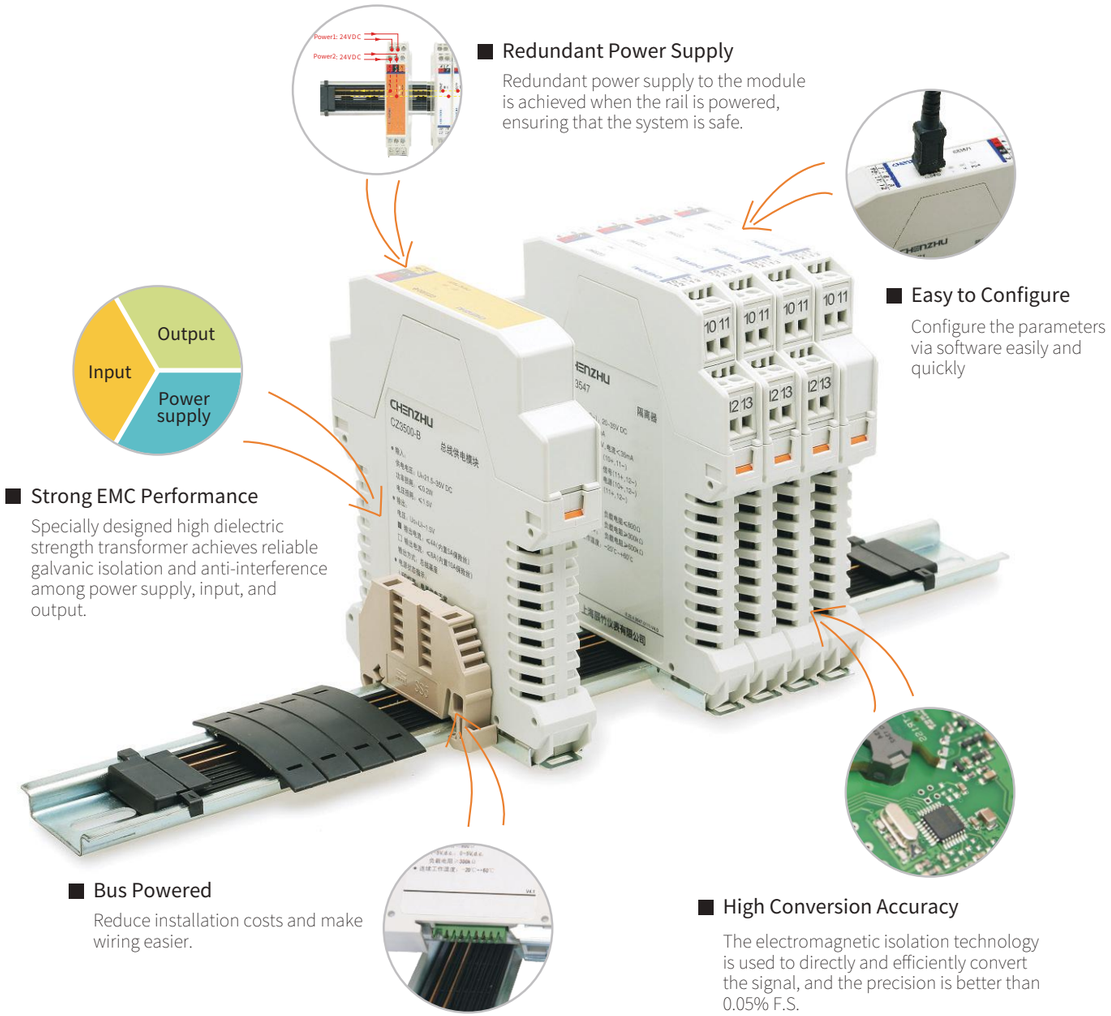


CZ3383

CZ3500 Range

CZ3500 range rail-powered signal conditioners are high-performance products. The new design concept and technology are perfectly combined to achieve various performance characteristics, such as high-precision, small-volume, easy installation and high interference suppression, ensuring more convenient system integration and more reliable operation.



■ **Redundant Power Supply**

Redundant power supply to the module is achieved when the rail is powered, ensuring that the system is safe.

■ **Easy to Configure**

Configure the parameters via software easily and quickly

■ **Strong EMC Performance**

Specially designed high dielectric strength transformer achieves reliable galvanic isolation and anti-interference among power supply, input, and output.

■ **Bus Powered**

Reduce installation costs and make wiring easier.

■ **High Conversion Accuracy**

The electromagnetic isolation technology is used to directly and efficiently convert the signal, and the precision is better than 0.05% F.S.

CE

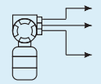
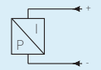
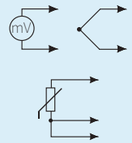
Field Instrument	Application	Module No.	Channels	Input	Output	Features	Page
	Analog Input	CZ3547	1/1	0/4~20mA	0/4~20mA	Independent powered	33
		CZ3535	1/2		0/1~5V		
		CZ3536	2/2				
	Analog Output	CZ3567	1/1	0/4~20mA	0/4~20mA	Independent powered	34
		CZ3538	2/2		0/1~5V		
	Temperature Converters	CZ3571	1/1	RTD	0~20mA，4~20mA	Independent powered	35
		CZ3576	1/2		0~5V，1~5V	Configurable via software	
		CZ3579	2/2				
		CZ3572	1/1	TC	0~20mA，4~20mA		36
		CZ3574	1/2	mV	0~5V，1~5V		
		CZ3579.TC	2/2				
		CZ3575	1/1	0~5kΩ	0~20mA，4~20mA		37
		CZ3576.R	1/2	0~10kΩ	0~5V，1~5V		
		CZ3579.R	2/2				
	Power Supply Feed Module	CZ3500-B		21.5V~25V	21.5V~25V	Redundant power supply	38

Table 3 Input Signal Type and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200℃~+400℃	50℃	0.5℃/0.1%
	E	-200℃~+900℃	50℃	0.5℃/0.1%
	J	-200℃~+1200℃	50℃	0.5℃/0.1%
	K	-200℃~+1372℃	50℃	0.5℃/0.1%
	N	-200℃~+1300℃	50℃	0.5℃/0.1%
	R	-40℃~+1768℃	500℃	1.5℃/0.1%
	S	-40℃~+1768℃	500℃	1.5℃/0.1%
	B	+320℃~+1820℃	500℃	1.5℃/0.1%
	C	0℃~+2200℃	500℃	1.5℃/0.1%
	D	0℃~+2200℃	500℃	1.5℃/0.1%
RTD	Pt100	-200℃~+850℃	20℃	0.2℃/0.1%
	Pt1000	-200℃~+300℃	20℃	0.2℃/0.1%
	Cu50	-50℃~+150℃	20℃	0.2℃/0.1%
	Cu100	-50℃~+150℃	20℃	0.2℃/0.1%
mV		-100mV~+100mV	10mV	20μV/0.1%
Potentiometer		0kΩ~400Ω	50Ω	0.2Ω/0.1%
		0kΩ~2.5kΩ	250Ω	1.25Ω/0.1%
		0kΩ~10kΩ	1000Ω	5Ω/0.1%

Note:
1. The "%" of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.
2. Allow a maximum wire resistance of 50Ω/line for RTD input(3-wire).
3. When the thermocouple is input, the conversion accuracy does not include the CJC. For every 100Ω increase in the compensation wire, the cold junction error increases by 0.2℃.
4. When the Type B thermocouple is input, the lower limit of temperature range is required to be greater than 680 ℃ to ensure the accuracy index.

Configuration Accessory

Configuration Tool: USBCOM-MINI

Software: Easyconfig

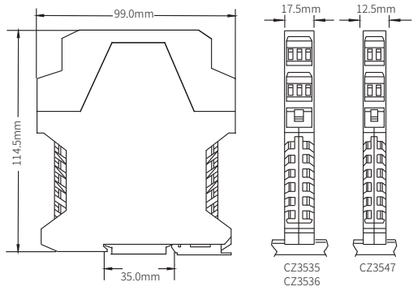
Analog Input

Features

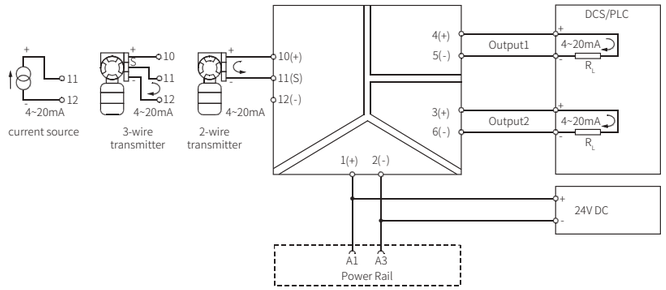
24V DC independent power supply
0/4~20mA current input
o/4~20mA current source output
Powerd via DIN bus or terminal

	CZ3547 1/1	CZ3535 1/2	CZ3536 2/2
Input			
Input Current	0/4~20mA	0/4~20mA	0/4~20mA
Input Impedance	⩽50Ω	⩽50Ω	⩽50Ω
Distribution Voltage	17.5V~25V	17.5V~25V	17.5V~25V
Max.Input Current	＜35mA	＜35mA	＜35mA
Output			
Output Current/Load Resistance	0(4)~20mA / R_L⩽800Ω	0(4)~20mA / R_L⩽300Ω	0(4)~20mA / R_L⩽300Ω
Output Voltage/Load Resistance	0(1)~5V / R_L⩾330kΩ	0(1)~5V / R_L⩾330kΩ	0(1)~5V / R_L⩾330kΩ
	0(2)~10V / R_L⩾660kΩ	0(2)~10V / R_L⩾660kΩ	0(2)~10V / R_L⩾660kΩ
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	⩽60mA	⩽75mA	⩽100mA
Transmission Accuracy	0.1%F.S. (Typical：0.05%F.S.)	0.1%F.S. (Typical：0.05%F.S.)	0.1%F.S. (Typical：0.05%F.S.)
Temperature Drift	0.005%F.S./℃	0.005%F.S./℃	0.005%F.S./℃
Response Time (0~90%)	⩽0.5 ms	⩽0.5 ms	⩽0.5 ms
Dielectric Strength	1500V DC;1min	1500V DC;1min	1500V DC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire transmitter，current source	2-or 3-wire transmitter，current source	2-or 3-wire transmitter，current source

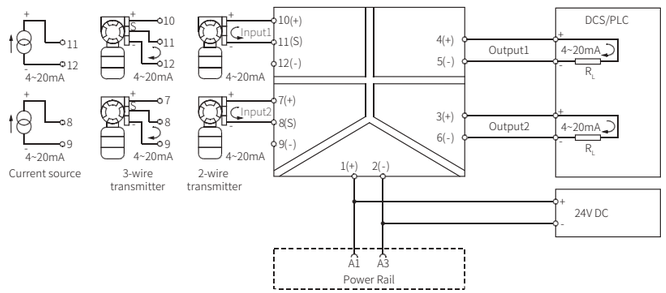
Dimensions



Connection



CZ3535(CZ3547 Output part only contains output 1)



CZ3536

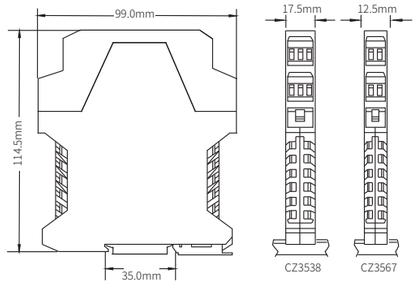
Analog Output

Features

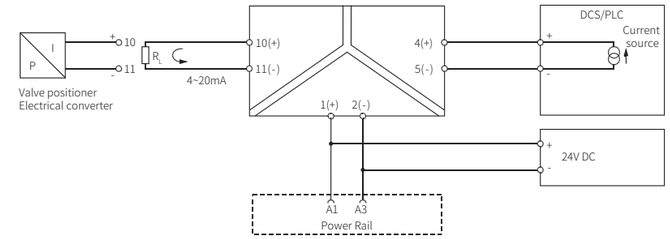
24V DC independent power supply
0/4~20mA current input/output
Output load up to 800Ω
Powerd via DIN bus or terminal

	CZ3567 1/1	CZ3538 2/2
Input		
Input Current	0/4~20mA	0/4~20mA
Input Voltage Drop	⩽2V	⩽2V
Max. Input Current	＜30mA	＜30mA
Output		
Output Current/Load Resistance	0(4)~20mA / R_L⩽800Ω	0(4)~20mA / R_L⩽800Ω
Max. Output Current	＜30mA	＜30mA
Output Voltage/Load Resistance	0(1)~5V / R_L⩾330kΩ	0(1)~5V / R_L⩾330kΩ
General Parameters		
Supply Voltage	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support
Current Consumption(Supply voltage:24V)	⩽40mA	⩽65mA
Transmission Accuracy	0.1%F.S.(Typical：0.05%F.S.)	0.1%F.S.(Typical：0.05%F.S.)
Temperature Drift	0.005%F.S./℃	0.005%F.S./℃
Response Time (0~90%)	⩽2ms	⩽2ms
Dielectric Strength	1500V DC;1min	1500V DC;1min
Insulation Resistance	⩾100MΩ; 500V DC	⩾100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-wire Valve positioner， Electrical converter	2-wire Valve positioner， Electrical converter

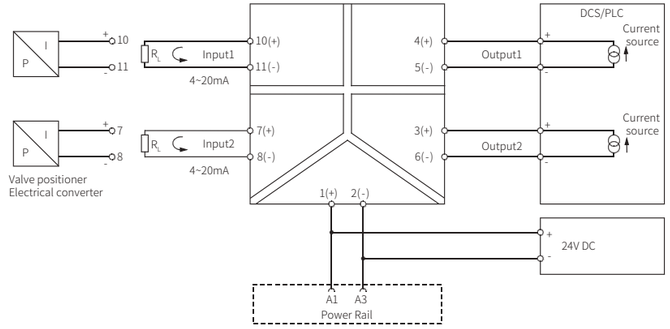
Dimensions



Connection



CZ3567



CZ3538

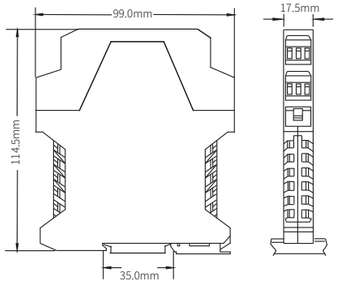
RTD Input

Features

24V DC independent power supply
Line fault detection(LFD)
Configurable by software
Powerd via DIN bus or terminal

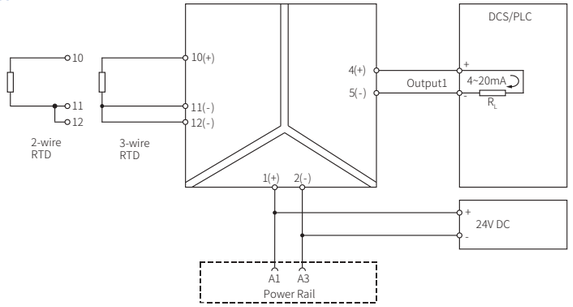
	CZ3571 1/1	CZ3576 1/2	CZ3579 2/2
Input			
Input Signal	Pt100，Pt1000，Cu100，Cu50	Pt100，Pt1000，Cu100，Cu50	Pt100，Pt1000，Cu100，Cu50
Output			
Output Current/Load Resistance	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω
Output Voltage/Load Resistance	0~5V，1~5V / R_L≥20kΩ	0~5V，1~5V / R_L≥20kΩ	0~5V，1~5V / R_L≥20kΩ
Fault Current of Overrange/Underrange	I_L≈20.8mA/I_L≈3.8mA	I_L≈20.8mA/I_L≈3.8mA	I_L≈20.8mA/I_L≈3.8mA
Fault Current of Line Break	I≈20.8mA	I≈20.8mA	I≈20.8mA
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	≤35mA	≤55mA	≤55mA
Conversion Accuracy	See P32 Table 3	See P32 Table 3	See P32 Table 3
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	≤1s	≤1s	≤1s
Dielectric Strength	1500V DC;1min	1500V DC;1min	1500V DC;1min
Insulation Resistance	≥100MΩ; 500V DC	≥100MΩ; 500V DC	≥150MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire RTD	2-or 3-wire RTD	2-or 3-wire RTD

Dimensions

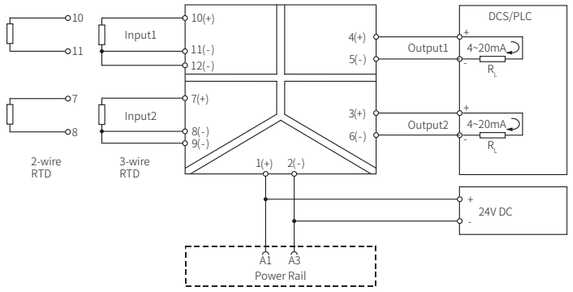


Note:
1. For 3-wire Input, keep the resistance of the three wires as equal as possible.
2. For 2-wire Input, terminal 11, 12(CZ3571) should be shorted.

Connection



CZ3571



CZ3579(CZ3576 Input part only contains input 1)

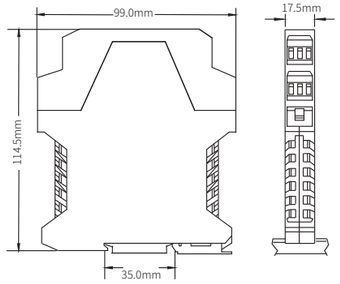
TC Input

Features

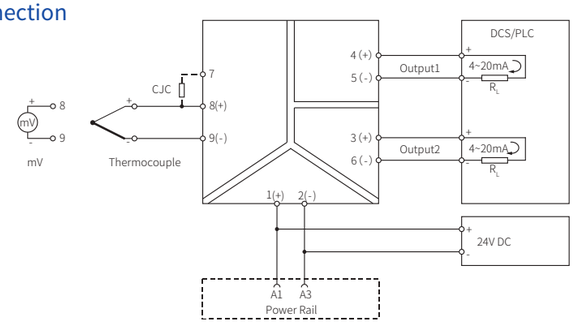
24V DC independent power supply
Line fault detection(LFD)
Configurable by software
Integral CJC on terminals
Powerd via DIN bus or terminal

	CZ3572 1/1	CZ3574 1/2	CZ3579.TC 2/2
Input			
Input Signal(Customized mV signal)	T、E、J、K、N、R、S、B、C、D、mV	T、E、J、K、N、R、S、B、C、D、mV	T、E、J、K、N、R、S、B、C、D、mV
Internal CJC Temperature Range	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C
CJC Precision	±1°C	±1°C	±1°C
Output			
Output Current/Load Resistance	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω
Output Voltage/Load Resistance	0~5V，1~5V / R_L≥20kΩ	0~5V，1~5V / R_L≥20kΩ	0~5V，1~5V / R_L≥20kΩ
Fault Current of Overrange/Underrange	I_L≈20.8mA/I_L≈3.8mA	I_L≈20.8mA/I_L≈3.8mA	I_L≈20.8mA/I_L≈3.8mA
Fault Current of Line Break	I≈20.8mA	I≈20.8mA	I≈20.8mA
General Parameters			
Loop Supply Voltage(U_s)	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage: 24V)	≤35mA	≤70mA	≤70mA
Conversion Accuracy	See P32 Table 3	See P32 Table 3	See P32 Table 3
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	≤1s	≤1s	≤1s
Dielectric Strength	1500V DC;1min	1500V DC;1min	1500V DC;1min
Insulation Resistance	≥100MΩ; 500V DC	≥100MΩ; 500V DC	≥100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C
Suitable Field Apparatus	TC sensor and mV signal	TC sensor and mV signal	TC sensor and mV signal

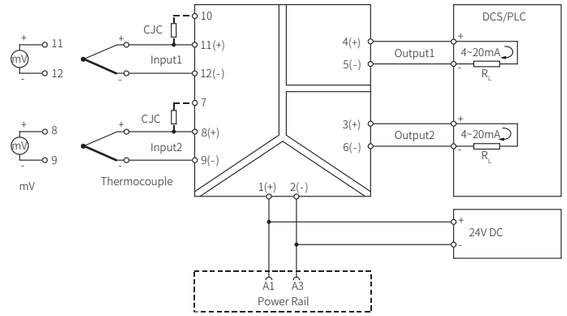
Dimensions



Connection



CZ3574(CZ3572 Output part only contains output 1)



CZ3579.TC

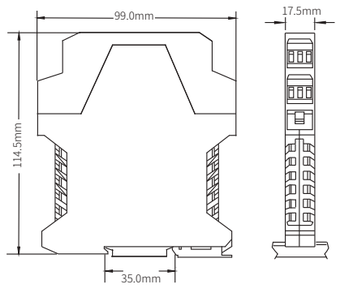
Potentiometer Input

Features

24V DC independent power supply
Line fault detection(LFD)
Configurable by software
Powerd via DIN bus or terminal

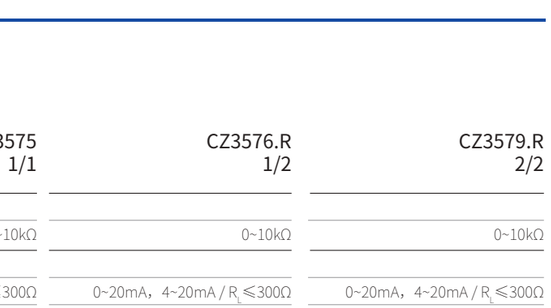
	CZ3575 1/1	CZ3576.R 1/2	CZ3579.R 2/2
Input			
Input Signal	0~10kΩ	0~10kΩ	0~10kΩ
Output			
Output Current/Load Resistance	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / R_L≤300Ω
Output Voltage/Load Resistance	0~5V，1~5V / R_L≥20kΩ	0~5V，1~5V / R_L≥20kΩ	0~5V，1~5V / R_L≥20kΩ
General Parameters			
Supply Voltage	20~35V DC	20~35V DC	20~35V DC
Power Reverse Protection	Support	Support	Support
Current Consumption(Supply voltage:24V)	≤40mA	≤70mA	≤70mA
Conversion Accuracy	0.1%	0.1%	0.1%
Temperature Drift	0.01%F.S./℃	0.01%F.S./℃	0.01%F.S./℃
Response Time (0~90%)	≤1s	≤1s	≤1s
Dielectric Strength	1500V AC;1min	1500V AC;1min	1500V AC;1min
Insulation Resistance	≥100MΩ; 500V DC	≥100MΩ; 500V DC	≥100MΩ; 500V DC
EMC Standards	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Ambient Temperature	-20℃~+60℃	-20℃~+60℃	-20℃~+60℃
Suitable Field Apparatus	2-or 3-wire Potentiometer	2-or 3-wire Potentiometer	2-or 3-wire Potentiometer

Dimensions

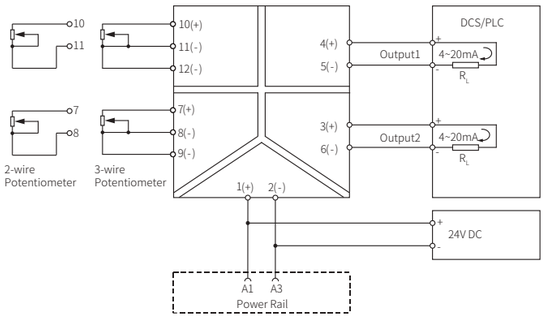


Note:
1. For 3-wire Input, keep the resistance of the three wires as equal as possible.
2. For 2-wire Input, terminal 11, 12(CZ3575) should be shorted.

Connection



CZ3575



CZ3579.R(CZ3576.R Input part only contains input 1)

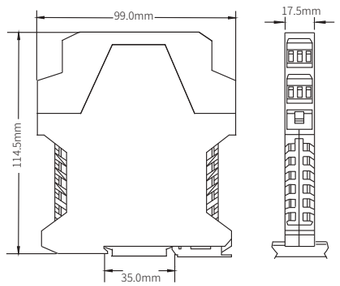
Redundant Power Feed Module

Features

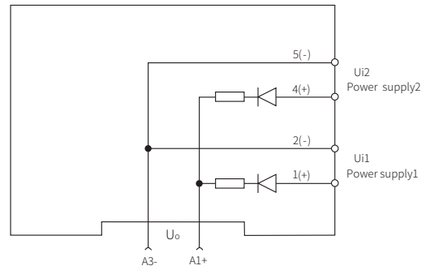
Used to deliver the power supply voltage to the DIN rail
Designed for application requiring redundant power
Supply rating 4 A or 8A, external fuse

	CZ3500-B
Input	
Rated Voltage (Ui)	21.5~35V DC
Power Dissipation	≤0.2W
Voltage Drop	≤1.5V
Output	
Output Voltage	U_O=U_I-1.5V
Output Current	Built-in 5A fuse：≤4A Built-in 10A fuse：≤8A
Output to	Bus base
Status Indication	
Green LED	LED on: power supply is normal LED off: power supply failure
General Parameters	
Power Reverse Protection	Support
Isolation	Input and Output are not isolated
Ambient Temperature	-20℃~+60℃
Storage Temperature	-40℃~+80℃
Relative Humidity	10%~90%RH

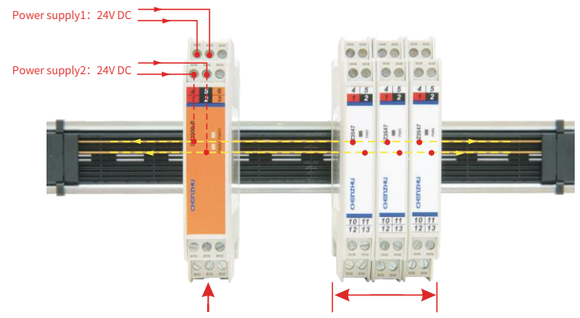
Dimensions



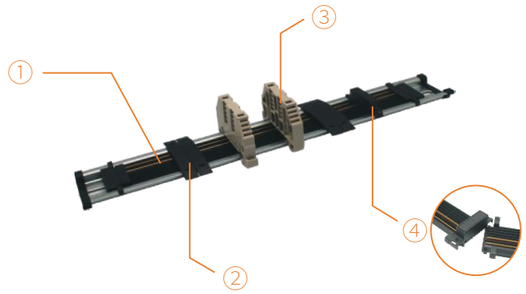
Connection



CZ3500-B

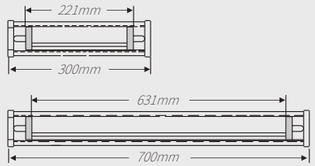


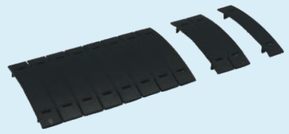
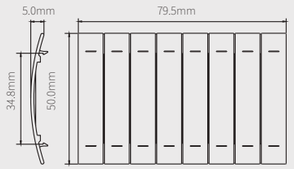
Accessories

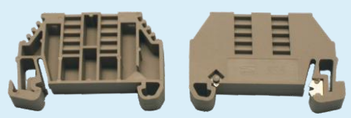
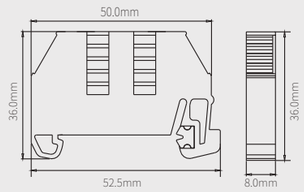


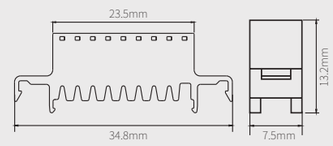
Componet:

① Bus base (including rail)
② Bus cover
③ End bracket
④ Expansion connector

Bus base (including rail)	Dimensions	Description		
		Module no.	CZBR-300	CZBR-700
		Rail length	300mm	700mm
		Installation length	221mm	631mm
		Number of rail slots	2	2

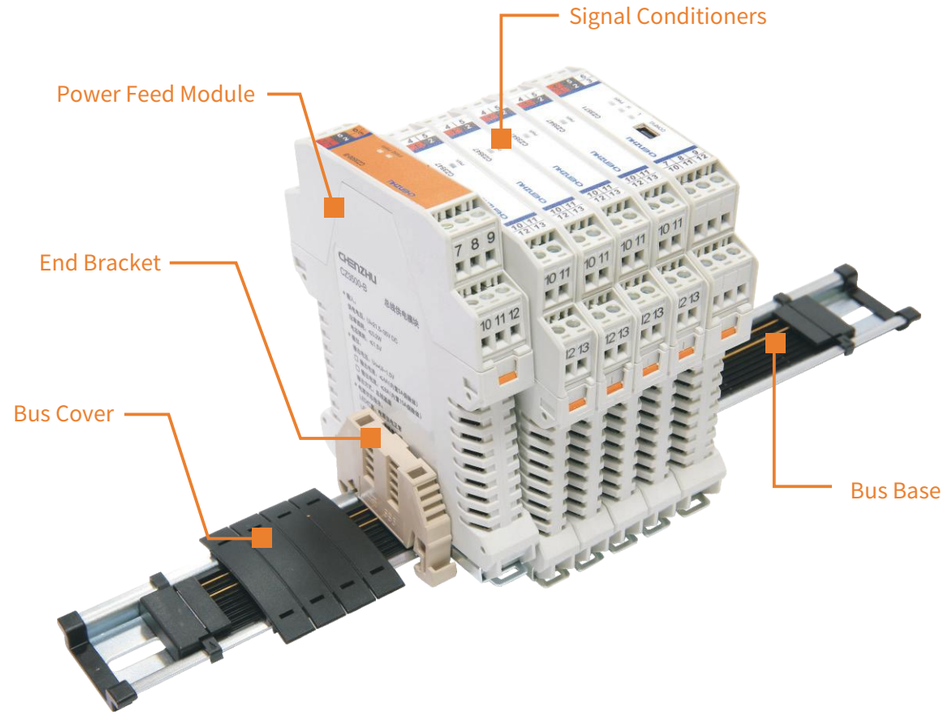
Bus cover	Dimensions	Description	
		Module no.	CZBR-C
		Function	Protect the exposed bus, can be split as needed

End bracket	Dimensions	Description	
		Module no.	CZBR-E
		Function	One set of two as standard, used to fix the module to prevent loosening

Expansion connector	Dimensions	Description	
		Module no.	CZBR-B
		Function	Connect the bus bases for extending

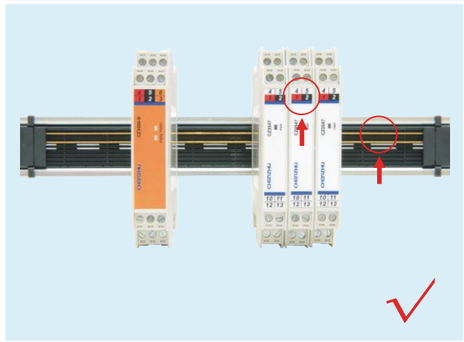
Installation Introduction

Bus Power Supply Structure

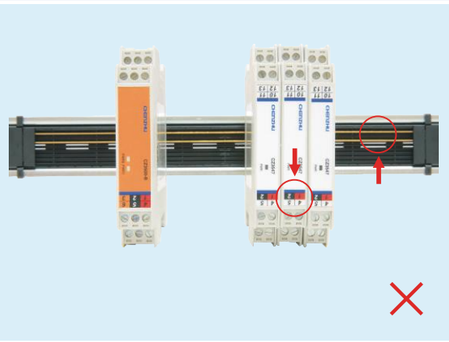


Module and Bus Base Connection

Right: The module label is oriented in the same direction as the bus base metal channel:



Wrong: The module label is oriented in the opposite direction as the bus base metal channel:



【Factory video @Youtube】

CZYB-E09.02/2022.07

Headquarters

SHANGHAI CHENZHU INSTRUMENT CO.,LTD.

Add: Building 6, 201 Minyi Rd., Shanghai 201612, P.R.China

Tel: +86-21-64360668
E-mail: chenzhu@chenzhu-inst.com
Web: en.chenzhu-inst.com

ASEAN Region

CHENZHU SDN BHD (1314739-P)

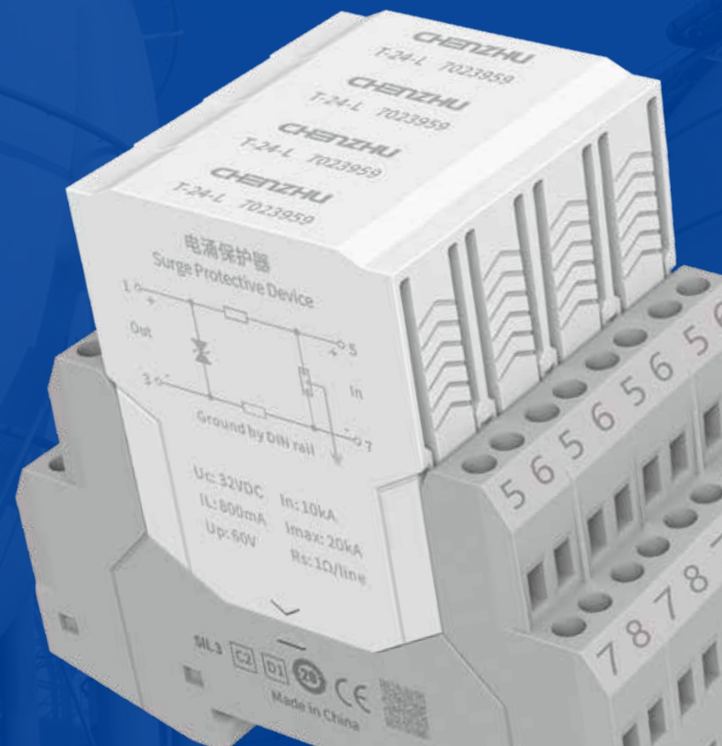
Add: 1F-16, IOI Business Park, No. 1, Persiaran Puchong Jaya Selatan, Bandar Puchong Jaya Selatan, 47100 Puchong, Selangor, Malaysia.
Tel: +60-3-80704739
E-mail: sales@chenzhu-asean.com
Web:www.chenzhu-asean.com

CHENZHU

Surge Protective Device（SPD）

5 Year WARRANTY

https://en.chenzhu-inst.com/



CHENZHU COMPANY OVERVIEW

CHENZHU' s headquarter is located at Shanghai, China, with an area of 8500m².

Shanghai Chenzhu Instrument Co,Ltd. was founded in April, 2002, who was originated from Shanghai Institute of Process Automation Instrumentation. CHENZHU is a professional company with core expertise of R&D, manufacturing and sale service of high quality safety products, such as isolated barriers, signal conditioners, surge protective devices, safety relays etc.

MANAGEMENT SYSTEMS

ISO9001

ISO14001

ISO45001

IECEx QUALITY ASSESSMENT

R&D Strength

Based on ISO/IEC/GB standards, CHENZHU has established the professional laboratory which is applied up to 70 test capabilities and verification items in CHENZHU's safety electrical products' development process.

R&D Team
28%
Work Force

R&D Investment
11%
of Sale Revenue

Innovation
110+
Patents

Testing Facility
80+
Capabilities

Smart Factory

CHENZHU factory is continually driven by lean management and flexible production. By our strict quality examination, CHENZHU ensures the production meets the design specification and satisfies our customers.

Factory
3500㎡
In total

Max Cap.
2,000,000pcs
Year

Sales Volume
1,080,000pcs
In 2021

Lean Production
10+
Years' experience

Test Verification of Conformity

Verification Number: 181200538SHA-V1

- Applicant Name & Address: Shanghai Chenzhu Instrument Co.,Ltd. Room 702, Building 5, No.518 Xinzhuan Road,Songjiang Hi-tech Park, Caohejing Development Zone, Shanghai, P.R.China
- Manufacturing site Name & Address: Same as applicant
- Product Description: Surge Protective Device
- Ratings & Principle Characteristics: Type 2, partially accessible, indoor use only, with mechanical indicator, with fusible metal SnBi alloy Sn42Bi58 as internal disconnector, with or without signal circuit, for TT or TN power system only (Details see Annex)
- Models/Type References: T2-20/3P, T2-20/3P, T2-20/4P, T2-20/1P+1, T2-20/3P+1, T2-40/3P, T2-40/3P, T2-40/4P, T2-40/1P+1, T2-40/3P+1, T2-80/3P, T2-80/3P, T2-80/4P, T2-80/1P+1, T2-80/3P+1, T2-20/2PF, T2-20/3PF, T2-20/4PF, T2-20/1P+1F, T2-20/3P+1F, T2-40/2PF, T2-40/3PF, T2-40/4PF, T2-40/1P+1F, T2-40/3P+1F, T2-80/2PF, T2-80/3PF, T2-80/4PF, T2-80/1P+1F, T2-80/3P+1F
- Brand Name(s): CHENZHU
- Standard(s)/Directive(s): The Low Voltage Directive 2014/35/EU
- Verification Issuing Office Name & Address: Intertek Testing Services Shanghai Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, China
- Test Report Number(s): 181200538SHA-003

Signature

Name: Oliver Wei
Position: Manager
Date: 28 December 2018

■ CE Certification

FUNCTIONAL SAFETY CERTIFICATE

This is to certify that the

Surge Protective Devices CZLBX-48 and CZLBX-48-S series

manufactured by

SHANGHAI CHENZHU INSTRUMENT CO., LTD.
Floor 7~8, Building 6, No. 201,
Minyi Road, Songjiang District,
Shanghai 201612, China

have been assessed by Sira Certification Service with reference to the CASS methodologies and found to meet the requirements of

IEC 61508:2010
Routes 1_H & 1_S
Systematic Capability (SC3)

as an element/subsystem suitable for use in safety related systems performing safety functions up to and including

SIL 3 capable with HFT=0 (1oo1)*

* The SIL3 result has taken into consideration external diagnostics that may be available when the SPD is integrated into a SIS. The hardware/software failures of the assumed diagnostics is outside the scope of this certification and must be considered at system level by the integrator.

This certificate does not waive the need for further functional safety verification to establish the achieved Safety Integrity Level (SIL) of the safety related system

Certification Decision: James Lyndsay

Initial Certification : 15/12/2020
This certificate re-issued : 15/12/2020
Renewal date : 14/12/2025

Certificate No.: Sira FSP 20012/00
Form 7008 Issue 1
Page 3 of 7

Sira Certification Service
Part of CSA Group UK
Unit 6 Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom
Tel: +44 (0) 1244 670900
Email: ukinfo@csagroup.org
Web: www.csagroup.org

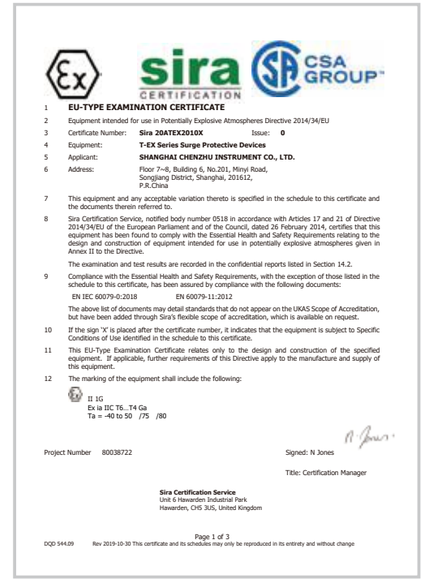
■ SIL Certification

IECEx TEST REPORT COVER

- ExTR Reference Number: GM/CNE/ExTR15.0001/00
- ExTR Free Reference Number: CGM/IECEx/ExTR15.0001
- Compiled by + signature (ExTL): Le Gao
- Reviewed by + signature (ExTL): Huang Yongwei
- Reviewed by + signature (ExCB): Ge Qing
- Approved by + signature (ExCB): Zhang Wei
- Date of issue: 2015-03-30
- Ex Testing Laboratory (ExTL): Shanghai Inspection and Testing Institute of Instruments and Automatic Systems(SITIAAS) National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation(NSPSI)
- Address: 103 Cao Bei Road, Shanghai 200233, China
- Ex Certification Body (ExCB): China Quality Mark Certification Group Co., Ltd.
- Address: No. 33, Zhongguang Road, Haidian District, Beijing City, China
- Applicant's name: Shanghai Chenzhu Instrument Co. Ltd
- Address: Building 6, 201 West Road, Caohejing Development Zone, Songjiang District, Shanghai, 201612, P.R. China
- Standards assessed with the ExTR package: IEC 60079-0:2011 IEC 60079-11:2011 IEC 60079-26:2006
- Clauses considered: All clauses considered
- Test procedure: IECEx System
- Test Report Form Number: ExTR Cover, 6 released 2014-01
- Test item description: Surge Protective Device
- Model/type reference: CZLBX-48*
- Code (e.g. Ex __ IIC T__): Ex ia IIC T4~T6 Ga
- Rating: Safe parameters refer to the General Product Information
- All testing fully performed by ExTL (Yes) (Part of ExTL address above)

Instructions for Intended Use of ExTR Cover:
An ExTR Cover is the sole top-level document to associate together all other parts of an IECEx Test Report (ExTR) package. An ExTR package is comprised of an ExTR Cover and one or more associated ExTR elements (which may include Ex Test Reports, ExTR Addendums and ExTR of Minor Differences). All ExTR package documents are compiled and reviewed by the ExTL. The issuing ExCB indicates final approval of the overall ExTR package on the ExTR Cover.

■ IECEx Certification



EU-TYPE EXAMINATION CERTIFICATE

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
3 Certificate Number: **Sira 20ATEX2010X** Issue: **0**
4 Equipment: **T-EX Series Surge Protective Devices**
5 Applicant: **SHANGHAI CHENZHU INSTRUMENT CO., LTD.**
6 Address: Floor 7~8, Building 6, No.201, Minyi Road, Songjiang District, Shanghai, 201612, P.R.China

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
8 Sira Certification Service, notified body number 0518 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in the confidential reports listed in Section 14.2.
9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:
EN IEC 60079-0:2018 EN 60079-11:2012
The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.
10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.
11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.
12 The marking of the equipment shall include the following:
II 1G
Ex ia IIC T6...T4 Ga
Ta = -40 to 50 /75 /80

Project Number 80038722

Signed: N Jones

Title: Certification Manager

Sira Certification Service
Unit 6 Hawarden Industrial Park
Hawarden, CH5 3US, United Kingdom

Page 1 of 3

DQD 544.09 Rev 2019-10-30 This certificate and its schedules may only be reproduced in its entirety and without change

■ ATEX Certification

■ NEPSI Certification

■ Type Test Report

■ Patent

■ Product Liability Insurance

T Series Functional SPD

SPD for signal

- 12.5mm width
- 2-wire,3-wire,4-wire is optional
- Hot pluggable

SPD for power

- 18mm/P width
- T2: 40~80kA (8/20μs)
- Short circuit withstand-ing：1000A

CZLB Series Classical SPD

SPD for signal

- 7.6mm width
- Ground via terminal or DIN 35mm rail

SPD for power

- 18mm/P width
- T2: 40kA (8/20μs)
- T1: 15kA (10/350μs)

CZLBX Series Screw Mounting SPD

- Intrinsic safety certification;explosion proof electrial product certification
- Various of thread specification is optional
- 304 or 316 stainless steel housing is optional

iFL Series Network SPD

- Fully aluminium alloy housing, good electromagnetic shielding
- FE、GE、PoE、wireless is optional
- Grounded by DIN rail or screw terminals

Catalogue

T series SPD for signal

Model	Order No.	Wiring	Load current I_L	Max.operating voltage U_C	Nominal discharge current In(8/20μs)	Impulse current limp(10/350μs)	Protection	Page
T-5-EX-L	7086993	2	500mA	6V DC	10kA	2.5kA	IS，TC、RS-485、CAN	9
T-5-EX-L3	7025543	3	500mA	6V DC	10kA	2.5kA	IS，RTD	9
T-5-EX-L4	7019501	4	500mA	6V DC	10kA	2.5kA	IS，RTD、TC、RS-422	9
T-24-EX-L	7096962	2	500mA	32V DC	10kA	2.5kA	IS，AI、AO、DI、DO	10
T-24-EX-L3	7097610	3	500mA	32V DC	10kA	2.5kA	IS，AI、AO、DI、DO、RS-232	10
T-24-EX-L4	7040569	4	500mA	32V DC	10kA	2.5kA	IS，AI、AO、DI、DO	10
T-5-L	7099647	2	800mA	6V DC	10kA	2.5kA	TC、RS-485、CAN	11
T-5-L3	7050235	3	800mA	6V DC	10kA	2.5kA	RTD	11
T-5-L4	7029162	4	800mA	6V DC	10kA	2.5kA	RTD、TC、RS-422	11
T-24-L	7023959	2	800mA	32V DC	10kA	2.5kA	AI、AO、DI、DO	12
T-24-L3	7091758	3	800mA	32V DC	10kA	2.5kA	AI、AO、DI、DO、RS-232	12
T-24-L4	7074245	4	800mA	32V DC	10kA	2.5kA	AI、AO、DI、DO	12

T series SPD for power

Model	Order No.	Max.operating voltage U_C	Recommended backup fuse	Nominal discharge current In(8/20μs)	Max. discharge current Imax(8/20μs)	Protection	Remote signaling	Page
T-24	7062371	58VDC/40VAC	–	10kA	20kA	24VDC power (＜10A)	–	13
T2-24	7073945	90VDC/60VAC	80A gG	20kA	40kA	24VDC power	–	14
T2-24F	7093094	90VDC/60VAC	80A gG	20kA	40kA	24VDC power	√	14
T2-110	7089524	180VDC/120VAC	80A gG	20kA	40kA	110VDC power	–	14
T2-110F	7062355	180VDC/120VAC	80A gG	20kA	40kA	110VDC power	√	14
T2-220	7065567	320VDC/220VAC	80A gG	20kA	40kA	220VDC power	–	14
T2-220F	7011000	320VDC/220VAC	80A gG	20kA	40kA	220VDC power	√	14
T2-1000	7053964	1000VDC	80A gG	20kA	40kA	1000VDC PV	–	15
T2-1000F	7065508	1000VDC	80A gG	20kA	40kA	1000VDC PV	√	15
T2-1500	7094994	1500VDC	80A gG	20kA	40kA	1500VDC PV	–	15
T2-1500F	7067731	1500VDC	80A gG	20kA	40kA	1500VDC PV	√	15
T2-40/2P	7067699	385VAC	80A gG	20kA	40kA	TN System	–	16
T2-40/2PF	7062709	385VAC	80A gG	20kA	40kA	TN System	√	16
T2-40/3P	7079704	385VAC	80A gG	20kA	40kA	IT、TN-C System	–	16
T2-40/3PF	7046181	385VAC	80A gG	20kA	40kA	IT、TN-C System	√	16
T2-40/4P	7085466	385VAC	80A gG	20kA	40kA	TN-S System	–	16
T2-40/4PF	7018432	385VAC	80A gG	20kA	40kA	TN-S System	√	16
T2-40/1P	7056020	385VAC	80A gG	20kA	40kA	Single line	–	17
T2-40/1PF	7031533	385VAC	80A gG	20kA	40kA	Single line	√	17
T2-40/1P+1	7032273	385VAC	80A gG	20kA	40kA	TT System	–	17
T2-40/1P+1F	7070280	385VAC	80A gG	20kA	40kA	TT System	√	17
T2-40/3P+1	7085025	385VAC	80A gG	20kA	40kA	TT System	–	17
T2-40/3P+1F	7081984	385VAC	80A gG	20kA	40kA	TT System	√	17
T2-80/2P	7030066	385VAC	125A gG	40kA	80kA	TN System	–	18
T2-80/2PF	7066780	385VAC	125A gG	40kA	80kA	TN System	√	18
T2-80/3P	7025082	385VAC	125A gG	40kA	80kA	IT、TN-C System	–	18
T2-80/3PF	7038693	385VAC	125A gG	40kA	80kA	IT、TN-C System	√	18
T2-80/4P	7018734	385VAC	125A gG	40kA	80kA	TN-S System	–	18
T2-80/4PF	7088870	385VAC	125A gG	40kA	80kA	TN-S System	√	18
T2-80/1P	7077138	385VAC	125A gG	40kA	80kA	Single line	√	19
T2-80/1PF	7012410	385VAC	125A gG	40kA	80kA	Single line	√	19
T2-80/1P+1	7015677	385VAC	125A gG	40kA	80kA	TT System	–	19
T2-80/1P+1F	7042357	385VAC	125A gG	40kA	80kA	TT System	√	19
T2-80/3P+1	7055729	385VAC	125A gG	40kA	80kA	TT System	–	19
T2-80/3P+1F	7058261	385VAC	125A gG	40kA	80kA	TT System	√	19
T2-40/700/2P	7031662	700VAC	80A gG	20kA	40kA	TN System	–	20
T2-40/700/2PF	7087013	700VAC	80A gG	20kA	40kA	TN System	√	20
T2-40/700/3P	7066877	700VAC	80A gG	20kA	40kA	IT、TN-C System	–	20
T2-40/700/3PF	7028674	700VAC	80A gG	20kA	40kA	IT、TN-C System	√	20

Model	Order No.	Max.operating voltage U_C	Recommended backup fuse	Nominal discharge current In(8/20μs)	Max. discharge current Imax(8/20μs)	Protection	Remote signaling	Page
T2-40/700/4P	7087771	700VAC	80A gG	20kA	40kA	TN-S	–	20
T2-40/700/4PF	7020165	700VAC	80A gG	20kA	40kA	TN-S	√	20
T2-40/700/1P+1	7062817	700VAC	80A gG	20kA	40kA	TT	–	21
T2-40/700/1P+1F	7033598	700VAC	80A gG	20kA	40kA	TT	√	21
T2-40/700/3P+1	7013762	700VAC	80A gG	20kA	40kA	TT	–	21
T2-40/700/3P+1F	7097406	700VAC	80A gG	20kA	40kA	TT	√	21

CZLB series SPD for signal

Model	Order No.	Wiring	Load current I_L	Max.operating voltage U_C	Nominal discharge current In(8/20μs)	Impulse current limp(10/350μs)	Protection	Page
CZLB-5(T2)	7051773	2	500mA	6V DC	10kA	2.5kA	IS，TC、RS-485、CAN	22
CZLB-5(R3)	7014195	3	500mA	6V DC	10kA	2.5kA	IS，RTD	22
CZLB-24(B2)	7090592	2	500mA	32V DC	10kA	2.5kA	IS，AI、AO、DI、DO	23
CZLB-24(B3)	7013226	3	500mA	32V DC	10kA	2.5kA	IS，AI、AO、DI、DO、RS-232	23

CZLB series SPD for power

Model	Order No.	Max.operating voltage U_C	Recommended backup fuse	Nominal discharge current In(8/20μs)	Max. discharge current Imax(8/20μs)	Protection	Remote signaling	Page
CZLB-24P	7059650	58VDC/40VAC	–	10kA	20kA	24VDC (＜10A)	–	24
CZLB-40/2P	7051402	385VAC	80A gG	20kA	40kA	TN System	–	24
CZLB-40/2PF	7028111	385VAC	80A gG	20kA	40kA	TN System	√	24
CZLB-40/3P	7061543	385VAC	80A gG	20kA	40kA	IT、TN-C System	–	25
CZLB-40/3PF	7023751	385VAC	80A gG	20kA	40kA	IT、TN-C System	√	25
CZLB-40/4P	7045781	385VAC	80A gG	20kA	40kA	TN-S System	–	25
CZLB-40/4PF	7094265	385VAC	80A gG	20kA	40kA	TN-S System	√	25
CZLB-40/1P+1	7047317	385VAC	80A gG	20kA	40kA	TT System	–	25
CZLB-40/1P+1F	7054943	385VAC	80A gG	20kA	40kA	TT System	√	25
CZLB-40/3P+1	7078829	385VAC	80A gG	20kA	40kA	TT System	–	26
CZLB-40/3P+1F	7091611	385VAC	80A gG	20kA	40kA	TT System	√	26
CZLB-160/440/2P	7024977	440VAC	200A gG	80kA	160kA	TN System	–	26
CZLB-160/440/3P	7069757	440VAC	200A gG	80kA	160kA	IT、TN-C System	√	26
CZLB-160/440/4P	7086079	440VAC	200A gG	80kA	160kA	TN-S System	–	27
CZLB-160/440/1P+1	7053172	440VAC	200A gG	80kA	160kA	TT System	–	27
CZLB-160/440/3P+1	7083196	440VAC	200A gG	80kA	160kA	TT System	–	27

CZLBX Series Screw Mounting SPD

Model	Order No.	Thread	Wiring	Max. operate voltage U_C	Nominal discharge current In(8/20μs)	Impulse current limp(10/350μs)	Protection	Page
CZLBX-48	7041233…	1/2" NPT…	2	48V DC	10kA	2.5kA	RTD、RS-485、AI、AO、DI、DO	29
CZLBX-48-3	7024477…	1/2" NPT…	3	48V DC	10kA	2.5kA	RTD、RS-485、AI、AO、DI、DO	29
CZLBX-48-4	7060125…	1/2" NPT…	4	48V DC	10kA	2.5kA	RTD、RS-485、AI、AO、DI、DO	29

iFL Series Network SPD

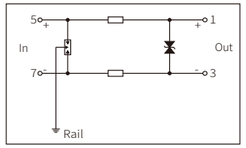
Model	Order No.	Max. operate voltage U_C	Nominal discharge current In(8/20μs)	Protection	Page
iFL-RJ45	7079893	8VDC	2kA	Network	30
iFL-RJ45-2	7978591	8VDC/58VDC	10kA	Network，24VDC power 2 in 1	30
iFL-RJ45-2	7054623	8VDC/275VAC	3kA	Network，220VAC power 2 in 1	30
iFL-RJ45/PoE	7069852	8VDC/60VDC	2kA	PoE	31
iFL-RJ45/GigE	7058560	60VDC	2kA	GigE	31
iFL-RF	7043433	24VDC	10kA	Wireless	32

For 5V signal(IS system)

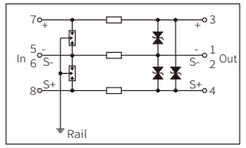
Features

- 12.5mm width
- Pluggable protection module
- Ground via DIN 35mm rail

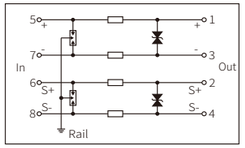
T-5-EX-L



T-5-EX-L3

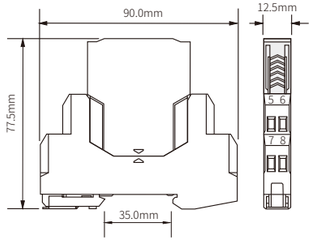


T-5-EX-L4

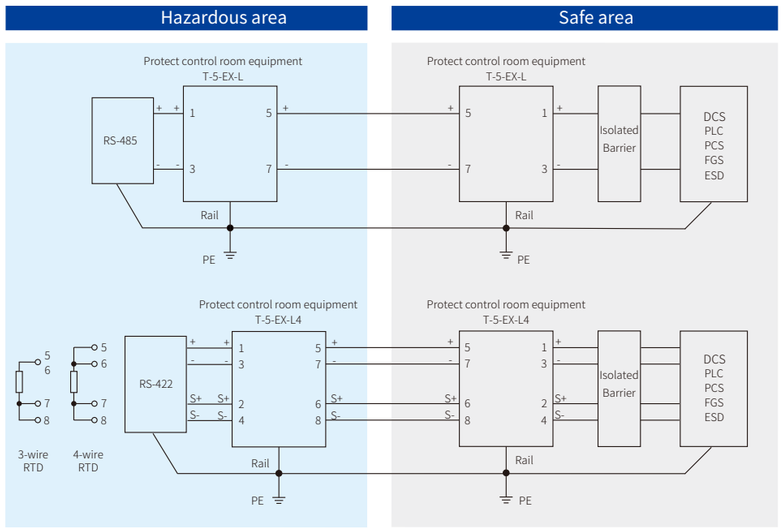


Technical data		2-wire	3-wire	4-wire
Max. continuous operating voltage U_c		6V DC	6V DC	6V DC
Nominal operating current I_L		500mA	500mA	500mA
Resistance(per line)		1Ω	1Ω	1Ω
Nominal discharge current I_n(8/20μs)		10kA	10kA	10kA
Max. discharge current I_{max}(8/20μs)		20kA	20kA	20kA
Impulse current I_{imp}(10/350μs)		2.5kA	2.5kA	2.5kA
Voltage protection level U_p(8/20μs)	L-L/L-G	40V/600V	40V/600V	40V/600V
Voltage protection level U_p (1kV/μs)	L-L/L-G	20V/600V	20V/600V	20V/600V
Bandwidth(-0.5dB)		40MHz	40MHz	40MHz
Response time		1ns	1ns	1ns
Residual current I_{PE}		<10μA	<10μA	<10μA
Housing protection grade(IEC60529)		IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)		PA66/V0	PA66/V0	PA66/V0
Testing standard		GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification				
Ex marking		II 1G Ex ia IIC T6…T4 Ga	II 1G Ex ia IIC T6…T4 Ga	II 1G Ex ia IIC T6…T4 Ga
Certificate Number		Sira 20ATEX2010X IECEx SIR 20.0018X	Sira 20ATEX2010X IECEx SIR 20.0018X	Sira 20ATEX2010X IECEx SIR 20.0018X
Entity Parameters		Ui=6V; Ii=500mA; Pi=5.32W; Ci≈0μF; Li≈0mH	Ui=6V; Ii=500mA; Pi=5.32W; Ci≈0μF; Li≈0mH	Ui=6V; Ii=500mA; Pi=5.32W; Ci≈0μF; Li≈0mH
Functional safety certification		SIL3	SIL3	SIL3
Type test		Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number		7086993	7025543	7019501

Dimensions



Typical applications

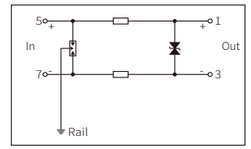


For 24V signal(IS system)

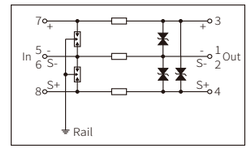
Features

- 12.5mm width
- Pluggable protection module
- Ground via DIN 35mm rail

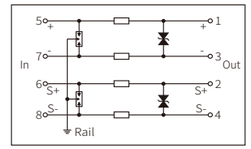
T-24-EX-L



T-24-EX-L3

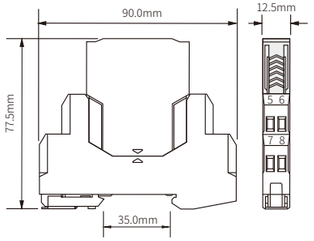


T-24-EX-L4

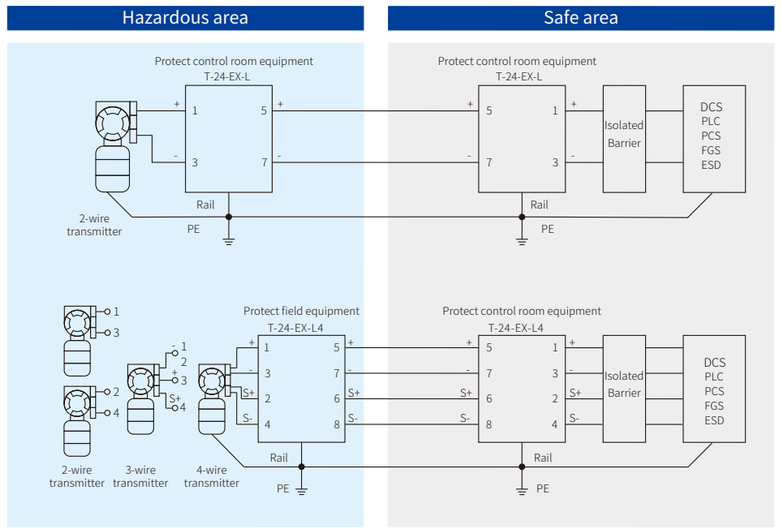


Technical data		2-wire	3-wire	4-wire
Max. continuous operating voltage U_c		32V DC	32V DC	32V DC
Nominal operating current I_L		500mA	500mA	500mA
Resistance(per line)		1Ω	1Ω	1Ω
Nominal discharge current I_n(8/20μs)		10kA	10kA	10kA
Max. discharge current I_{max}(8/20μs)		20kA	20kA	20kA
Impulse current I_{imp}(10/350μs)		2.5kA	2.5kA	2.5kA
Voltage protection level U_p(8/20μs)	L-L/L-G	60V/600V	60V/600V	60V/600V
Voltage protection level U_p (1kV/μs)	L-L/L-G	40V/600V	40V/600V	40V/600V
Bandwidth(-0.5dB)		40MHz	40MHz	40MHz
Response time		1ns	1ns	1ns
Residual current I_{PE}		<1μA	<1μA	<1μA
Housing protection grade(IEC60529)		IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)		PA66/V0	PA66/V0	PA66/V0
Testing standard		GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification				
Ex marking		II 1G Ex ia IIC T6…T4 Ga	II 1G Ex ia IIC T6…T4 Ga	II 1G Ex ia IIC T6…T4 Ga
Certificate Number		Sira 20ATEX2010X IECEx SIR 20.0018X	Sira 20ATEX2010X IECEx SIR 20.0018X	Sira 20ATEX2010X IECEx SIR 20.0018X
Entity Parameters		Ui=30V;Ii=500mA;Pi=5.32W; Ci≈0μF;Li≈0mH	Ui=30V;Ii=500mA;Pi=5.32W; Ci≈0μF;Li≈0mH	Ui=32V;Ii=500mA;Pi=5.32W; Ci≈0μF;Li≈0mH
Functional safety certification		SIL3	SIL3	SIL3
Type test		Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number		7096962	7097610	7040569

Dimensions



Typical applications

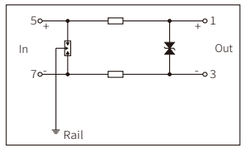


For 5V signal

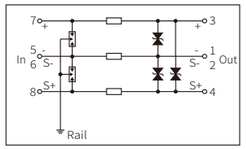
Features

- 12.5mm width
- Pluggable protection module
- Ground via DIN 35mm rail

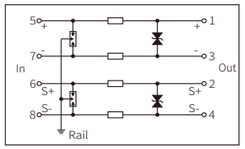
T-5-L



T-5-L3

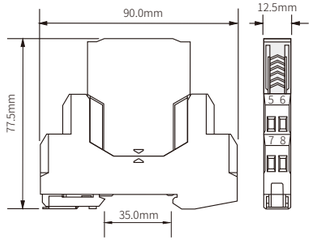


T-5-L4



Technical data		2-wire	3-wire	4-wire
Max. continuous operating voltage U_c		6V DC	6V DC	6V DC
Nominal operating current I_L		800mA	800mA	800mA
Resistance(per line)		1Ω	1Ω	1Ω
Nominal discharge current I_n(8/20μs)		10kA	10kA	10kA
Max. discharge current I_{max}(8/20μs)		20kA	20kA	20kA
Impulse current I_{imp}(10/350μs)		2.5kA	2.5kA	2.5kA
Voltage protection level U_p(8/20μs)	L-L/L-G	40V/600V	40V/600V	40V/600V
Voltage protection level U_p (1kV/μs)	L-L/L-G	20V/600V	20V/600V	20V/600V
Bandwidth(-0.5dB)		40MHz	40MHz	40MHz
Response time		1ns	1ns	1ns
Residual current I_{PE}		<10μA	<10μA	<10μA
Housing protection grade(IEC60529)		IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)		PA66/V0	PA66/V0	PA66/V0
Testing standard		GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification				
Functional safety certification		SIL3	SIL3	SIL3
Type test		Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number		7099647	7050235	7029162

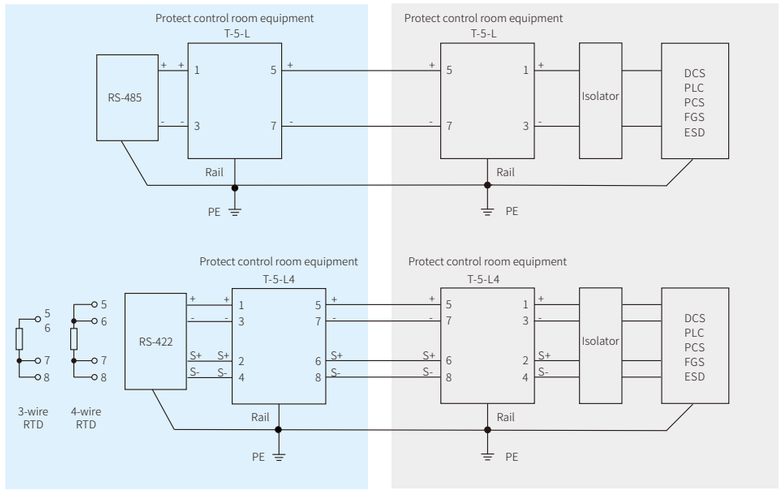
Dimensions



SIL3 IEC61508 CE

Typical applications

Field | **Control room**

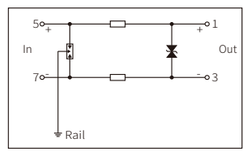


For 24V signal

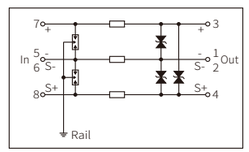
Features

- 12.5mm width
- Pluggable protection module
- Ground via DIN 35mm rail

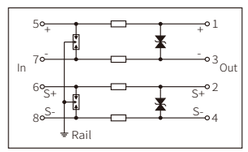
T-24-L



T-24-L3

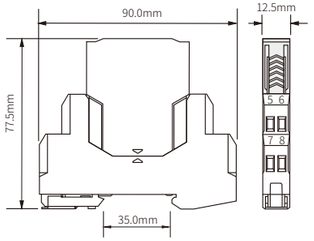


T-24-L4



Technical data	2-wire	3-wire	4-wire
Nominal operating voltage U_n	24V DC	24V DC	24V DC
Max. continuous operating voltage U_c	32V DC	32V DC	32V DC
Nominal operating current I_L	800mA	800mA	800mA
Nominal discharge current I_n(8/20μs)	10kA	10kA	10kA
Impulse current I_{imp}(10/350μs)	2.5kA	2.5kA	2.5kA
Total impulse current I_{imp}(10/350μs)	5kA	7.5kA	10kA
Voltage protection level $U_p(I_n)$	L-G:1.3kV	L-G:1.3kV	L-G:1.3kV
Voltage protection level $U_p(I_{imp})$	L-G:70V	L-G:70V	L-G:70V
Voltage protection level U_p (1kV/μs)	L-L:40V,L-G:90V	L-L:40V,L-G:90V	L-L:40V,L-G:90V
Bandwidth(-0.5dB)	40MHz	40MHz	40MHz
Response time	L-L:1ns,L-G:200ns	L-L:1ns,L-G:200ns	L-L:1ns,L-G:200ns
Resistance(per line)	1Ω	1Ω	1Ω
Residual current I_{PE}	<1μA	<1μA	<1μA
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification			
Functional safety certification	SIL3	SIL3	SIL3
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	7023959	7091758	7074245

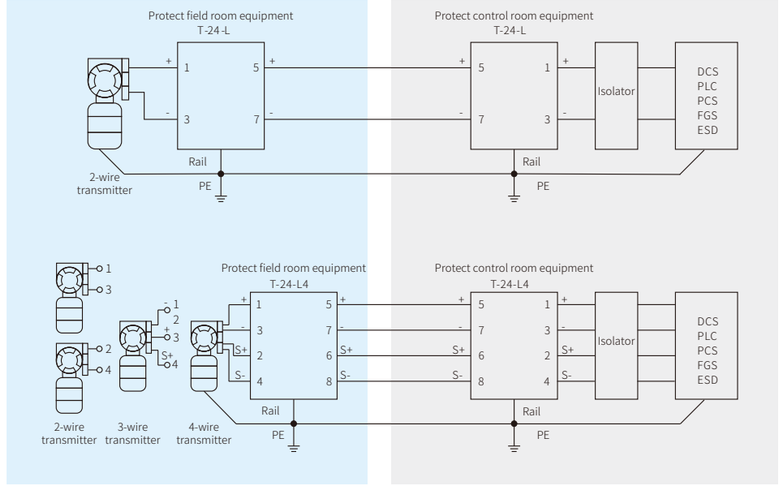
Dimensions



SIL3 IEC61508 CE

Typical applications

Field

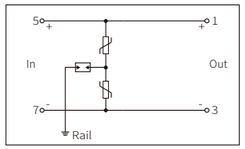


For DC power

Features

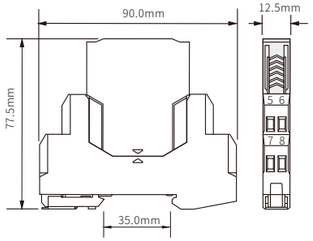
- 12.5mm width
- Pluggable protection module
- Ground via DIN 35mm rail

T-24

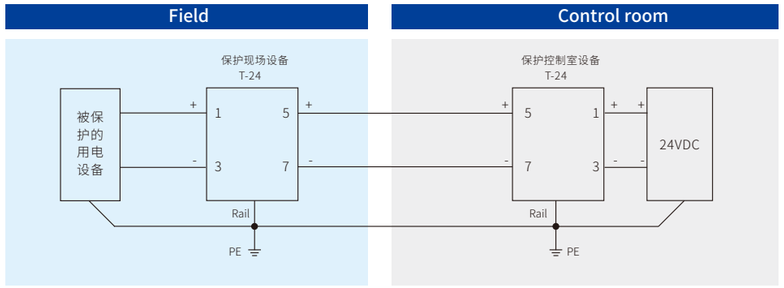


Technical data	
Max. continuous operating voltage U_c	58VDC/40VAC
Nominal operating current I_L	10A
Nominal discharge current I_n(8/20μs)	10kA
Max. discharge current I_{max}(8/20μs)	20kA
Impulse current I_{imp}(10/350μs)	2.5kA
Voltage protection level U_p	800V
Recommended grounding cable	2.5mm²
Residual current I_{PE}	<20μA
Response time	25ns
Housing protection grade(IEC60529)	IP 20
Housing material/Flammability rating(UL94)	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21
Certification	
Type test	Shanghai Lightning Protection Center
Order number	7062371

Dimensions



Typical applications

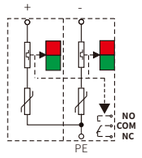


CE

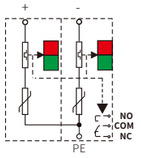
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

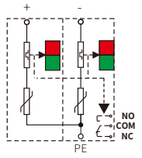
T2-24
T2-24F



T2-110
T2-110F

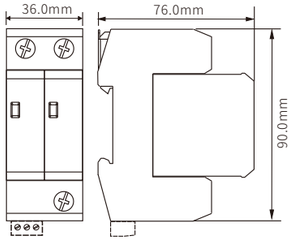


T2-220
T2-220F



Technical data			
Max. continuous operating voltage U_c	90VDC/60VAC	180VDC/120VAC	320VDC/220VAC
Nominal discharge current I_n(8/20μs)	20kA	20kA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	40kA	40kA
Voltage protection level U_p	600V	800V	1.2kV
Recommended backup fuse	80A gG	80A gG	80A gG
Short-circuit current rating I_{SCCR}	1000A	1000A	1000A
Recommended grounding cable	4~35mm²	4~35mm²	4~35mm²
Response time	25ns	25ns	25ns
Residual current	<10μA	<10μA	<10μA
Remote alarm output（model F）	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	T2-24：7073945 T2-24F：7093094	T2-110：7089524 T2-110F：7062355	T2-220：7065567 T2-220F：7011000

Dimensions（18mm/P）

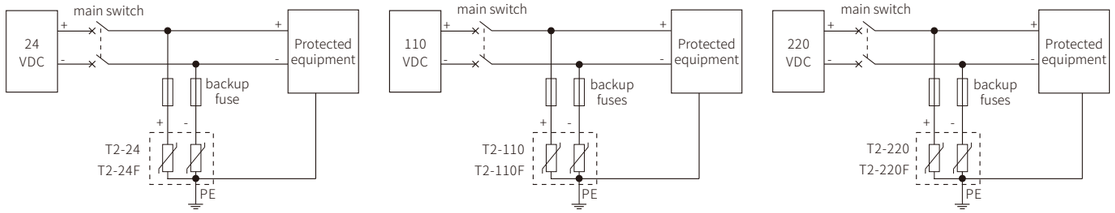


76.0mm×90.0mm×36.0mm

76.0mm×90.0mm×36.0mm

76.0mm×90.0mm×36.0mm

Typical applications



CE

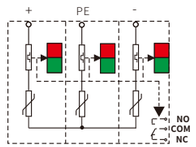
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For DC power

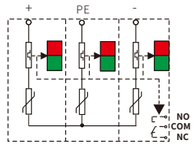
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

T2-1000
T2-1000F

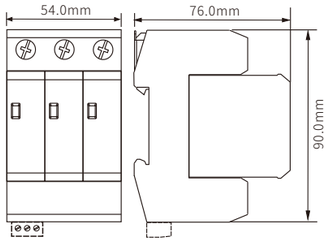


T2-1500
T2-1500F



Technical data		
Max. continuous operating voltage U_c	1000VDC	1500VDC
Nominal discharge current I_n(8/20μs)	20kA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	40kA
Voltage protection level U_p	4kV	6kV
Short-circuit current rating Iscpv	1000A	1000A
Recommended backup fuse	80A gG	80A gG
Recommended grounding cable	4~35mm²	4~35mm²
Response time	25ns	25ns
Residual current	<10μA	<10μA
Remote alarm output（model F）	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0
Testing standard	GB/T 18802.31/IEC 61643-31	GB/T 18802.31/IEC 61643-31
Certification		
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	T2-1000：7053964	T2-1500：7094994
	T2-1000F：7065508	T2-1500F：7067731

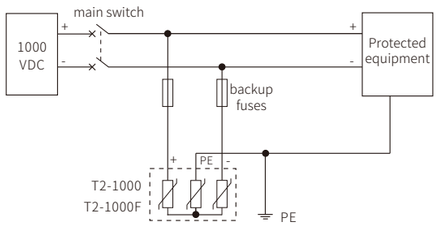
Dimensions（18mm/P）

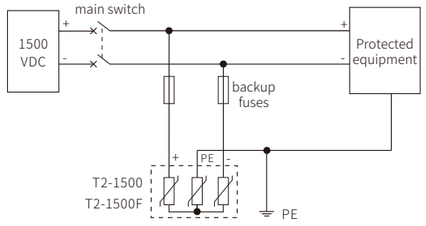


76.0mm×90.0mm×54.0mm

76.0mm×90.0mm×54.0mm

Typical applications





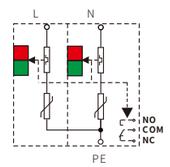
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For AC power(40kA)

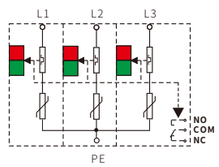
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

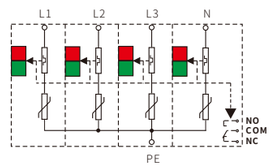
T2-40/2P
T2-40/2PF



T2-40/3P
T2-40/3PF

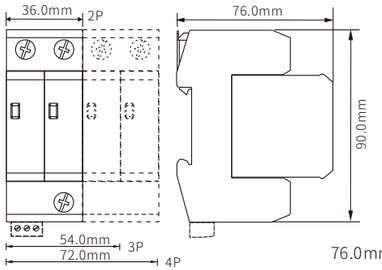


T2-40/4P
T2-40/4PF



Technical data			
Max. continuous operating voltage U_c	385VAC	385VAC	385VAC
Nominal discharge current I_n(8/20μs)	20kA	20kA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	40kA	40kA
Voltage protection level U_p	1.7kV	1.7kV	1.7kV
Recommended backup fuse	80A gG	80A gG	80A gG
Short-circuit current rating I_{SCCR}	1000A	1000A	1000A
Recommended grounding cable	4~35mm²	4~35mm²	4~35mm²
Response time	25ns	25ns	25ns
Residual current	<20μA	<20μA	<20μA
Remote alarm output（model F）	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Power supply system	Single phase（TN）	Three-phase four line（TN-C）	Three-phase five line（TN-S）
		Three-phase three line（IT）	
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	T2-40/2P：7067699	T2-40/3P：7079704	T2-40/4P：7085466
	T2-40/2PF：7062709	T2-40/3PF：7046181	T2-40/4PF：7018432

Dimensions（18mm/P）

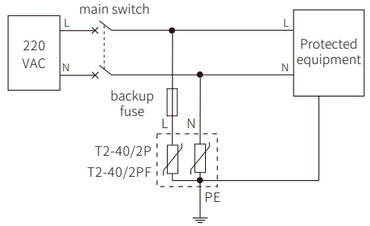


76.0mm×90.0mm×36.0mm

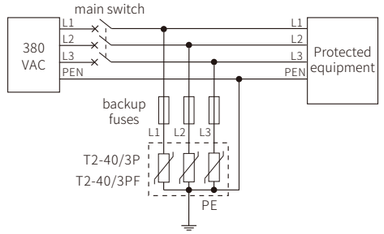
76.0mm×90.0mm×54.0mm

76.0mm×90.0mm×72.0mm

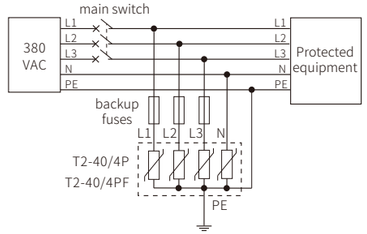
Typical applications



Single phase（TN）



Three-phase four line（TN-C）



Three-phase five line（TN-S）

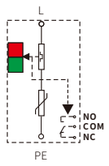
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For AC power(40kA)

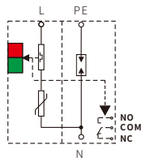
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

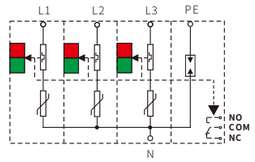
T2-40/1P
T2-40/1PF



T2-40/1P+1
T2-40/1P+1F

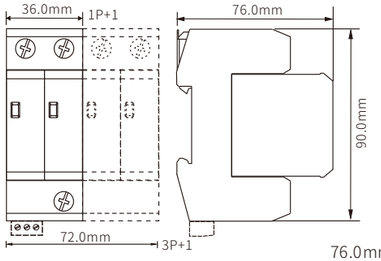


T2-40/3P+1
T2-40/3P+1F



Technical data		T2-80G module	T2-40 module	T2-80G module	T2-40 module
Max. continuous operating voltage U_c	385VAC	255VAC	385VAC	255VAC	385VAC
Nominal discharge current I_n(8/20μs)	20kA	40KA	20kA	40KA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	80kA	40kA	80kA	40kA
Voltage protection level U_p	1.7kV	1.2kV	1.7kV	1.2kV	1.7kV
Recommended backup fuse	80A gG		80A gG		80A gG
Short-circuit current rating I_{SCCR}	1000A		1000A		1000A
Recommended grounding cable	4~35mm²		4~35mm²		4~35mm²
Response time	25ns		25ns		25ns
Residual current	<20μA		<20μA		<20μA
Remote alarm output（model F）	250VAC/0.5A；24VDC/0.5A		250VAC/0.5A；24VDC/0.5A		250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)	IP 20		IP 20		IP 20
Housing material/Flammability rating(UL94)	PA66/V0		PA66/V0		PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11
Power supply system	Single line		Single phase（TT）		Three-phase four line（TT）
Certification					
Type test	Shanghai Lightning Protection Center		Shanghai Lightning Protection Center		Shanghai Lightning Protection Center
Order number	T2-40/1P：7056020		T2-40/1P+1：7032273		T2-40/3P+1：7085025
	T2-40/1PF：7031533		T2-40/1P+1F：7070280		T2-40/3P+1F：7081984

Dimensions（18mm/P）

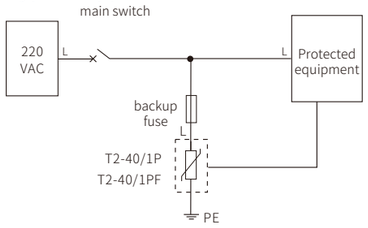


76.0mm×90.0mm×18.0mm

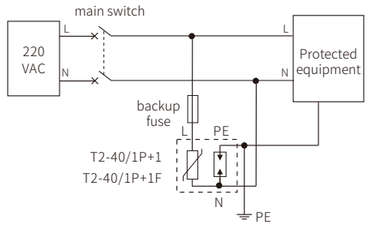
76.0mm×90.0mm×36.0mm

76.0mm×90.0mm×72.0mm

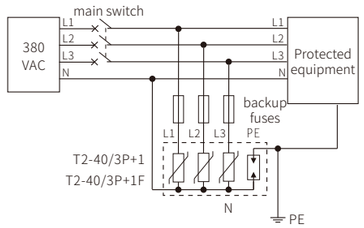
Typical applications



Single line



Single phase（TT）



Three-phase four line（TT）

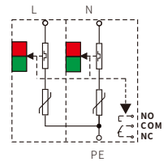
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For AC power(80kA)

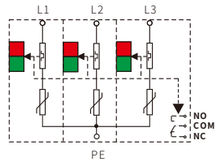
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

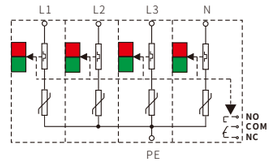
T2-80/2P
T2-80/2PF



T2-80/3P
T2-80/3PF

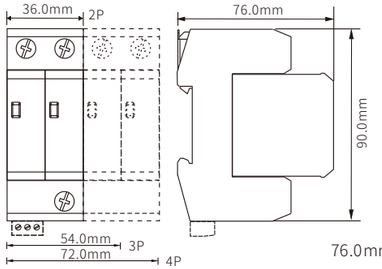


T2-80/4P
T2-80/4PF



Technical data			
Max. continuous operating voltage U_c	385VAC	385VAC	385VAC
Nominal discharge current I_n(8/20μs)	40kA	40kA	40kA
Max. discharge current I_{max}(8/20μs)	80kA	80kA	80kA
Voltage protection level U_p	2.0kV	2.0kV	2.0kV
Recommended backup fuse	125A gG	125A gG	125A gG
Short-circuit current rating I_{SCCR}	1000A	1000A	1000A
Recommended grounding cable	4~35mm²	4~35mm²	4~35mm²
Response time	25ns	25ns	25ns
Residual current	<20μA	<20μA	<20μA
Remote alarm output（model F）	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Power supply system	Single phase（TN）	Three-phase four line（TN-C） Three-phase three line（IT）	Three-phase five line（TN-S）
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	T2-80/2P：7030066	T2-80/3P：7025082	T2-80/4P：7018734
	T2-80/2PF：7066780	T2-80/3PF：7038693	T2-80/4PF：7088870

Dimensions（18mm/P）

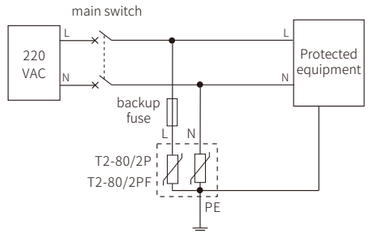


76.0mm×90.0mm×36.0mm

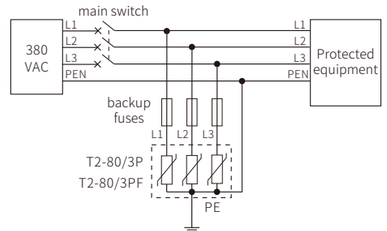
76.0mm×90.0mm×54.0mm

76.0mm×90.0mm×72.0mm

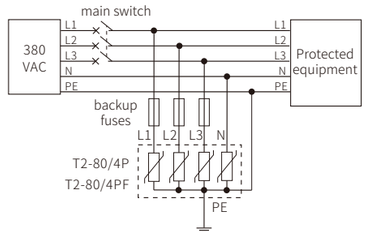
Typical applications



Single phase（TN）



Three-phase four line（TN-C）



Three-phase five line（TN-S）

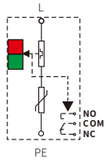
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For AC power(80kA)

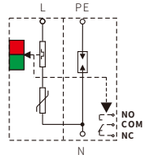
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with “F”

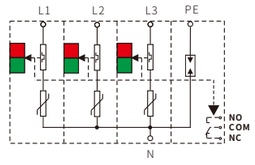
T2-80/1P
T2-80/1PF



T2-80/1P+1
T2-80/1P+1F

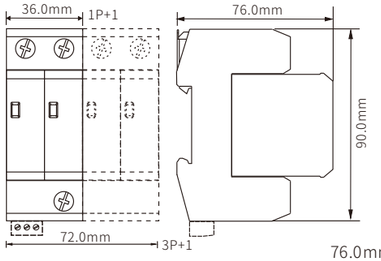


T2-80/3P+1
T2-80/3P+1F



Technical data		T2-80G module	T2-80 module	T2-80G module	T2-80 module
Max. continuous operating voltage U_c	385VAC	255VAC	385VAC	255VAC	385VAC
Nominal discharge current I_n(8/20μs)	40kA	40KA	40kA	40KA	40kA
Max. discharge current I_{max}(8/20μs)	80kA	80kA	80kA	80kA	80kA
Voltage protection level U_p	2.0kV	1.2kV	2.0kV	1.2kV	2.0kV
Recommended backup fuse	125A gG		125A gG		125A gG
Short-circuit current rating I_{SCCR}	1000A		1000A		1000A
Recommended grounding cable	4~35mm²		4~35mm²		4~35mm²
Response time	25ns		25ns		25ns
Residual current	<20μA		<20μA		<20μA
Remote alarm output（model F）	250VAC/0.5A；24VDC/0.5A		250VAC/0.5A；24VDC/0.5A		250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)	IP 20		IP 20		IP 20
Housing material/Flammability rating(UL94)	PA66/V0		PA66/V0		PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11
Power supply system	Single line		Single phase（TT）		Three-phase four line（TT）
Certification					
Type test	Shanghai Lightning Protection Center		Shanghai Lightning Protection Center		Shanghai Lightning Protection Center
Order number	T2-80/1P：7077138		T2-80/1P+1：7015677		T2-80/3P+1：7055729
	T2-80/1PF：7012410		T2-80/1P+1F：7042357		T2-80/3P+1F：7058261

Dimensions（18mm/P）

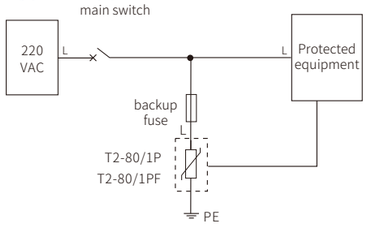


76.0mm×90.0mm×18.0mm

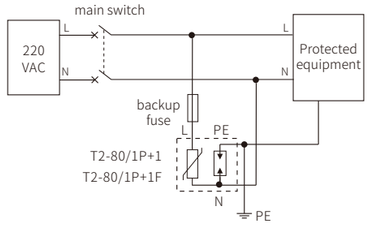
76.0mm×90.0mm×36.0mm

76.0mm×90.0mm×72.0mm

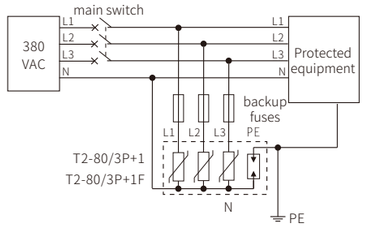
Typical applications



Single line



Single phase（TT）



Three-phase four line（TT）

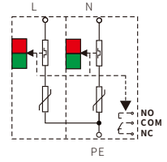
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For AC power(40kA)(400/690VAC)

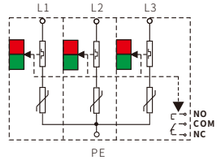
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with “F”

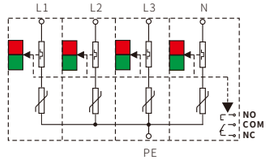
T2-40/700/2P
T2-40/700/2PF



T2-40/700/3P
T2-40/700/3PF

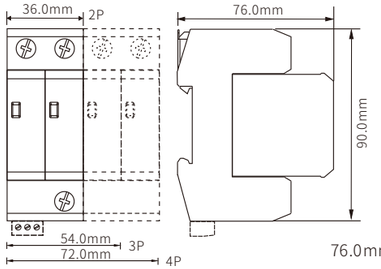


T2-40/700/4P
T2-40/700/4PF



Technical data			
Max. continuous operating voltage U_c	700VAC	700VAC	700VAC
Nominal discharge current I_n(8/20μs)	20kA	20kA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	40kA	40kA
Voltage protection level U_p	2.8kV	2.8kV	2.8kV
Recommended backup fuse	80A gG	80A gG	80A gG
Short-circuit current rating I_{SCCR}	1000A	1000A	1000A
Recommended grounding cable	4~35mm²	4~35mm²	4~35mm²
Response time	25ns	25ns	25ns
Residual current	<20μA	<20μA	<20μA
Remote alarm output（model F）	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Power supply system	Single phase（TN）	Three-phase four line（TN-C） Three-phase three line（IT）	Three-phase five line（TN-S）
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	T2-40/700/2P：7031662	T2-40/700/3P：7066877	T2-40/700/4P：7087771
	T2-40/700/2PF：7087013	T2-40/700/3PF：7028674	T2-40/700/4PF：7020165

Dimensions（18mm/P）

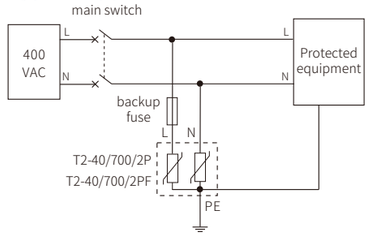


76.0mm×90.0mm×36.0mm

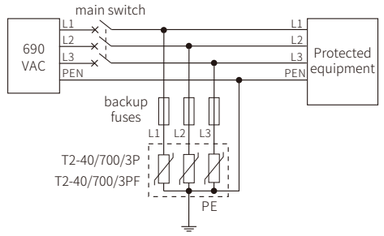
76.0mm×90.0mm×54.0mm

76.0mm×90.0mm×72.0mm

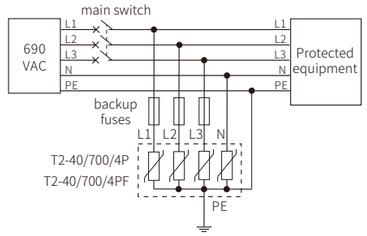
Typical applications



Single phase（TN）



Three-phase four line（TN-C）



Three-phase five line（TN-S）

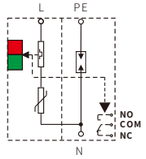
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For AC power(40kA)(400/690VAC)

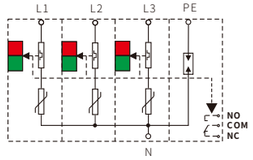
Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

T2-40/700/1P+1
T2-40/700/1P+1F

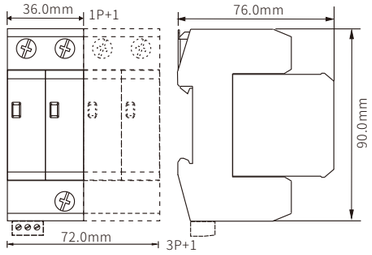


T2-40/700/3P+1
T2-40/700/3P+1F



Technical data	T2-80GH module	T2-40/700 module	T2-80GH module	T2-40/700 module
Max. continuous operating voltage U_c	2000VDC	700VAC	2000VDC	700VAC
Nominal discharge current I_n(8/20μs)	40KA	20kA	40KA	20kA
Max. discharge current I_{max}(8/20μs)	80kA	40kA	80kA	40kA
Voltage protection level U_p	3.5kV	2.8kV	3.5kV	2.8kV
Recommended backup fuse		80A gG		80A gG
Short-circuit current rating I_{SCCR}		1000A		1000A
Recommended grounding cable		4~35mm²		4~35mm²
Response time		25ns		25ns
Residual current		<20μA		<20μA
Remote alarm output（model F）		250VAC/0.5A；24VDC/0.5A		250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)		IP 20		IP 20
Housing material/Flammability rating(UL94)		PA66/V0		PA66/V0
Testing standard		GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11
Power supply system		Single phase（TT）		Three-phase four line（TT）
Certification				
Type test		Shanghai Lightning Protection Center		Shanghai Lightning Protection Center
Order number		T2-40/700/1P+1：7062817		T2-40/700/3P+1：7013762
		T2-40/700/1P+1F：7033598		T2-40/700/3P+1F：7097406

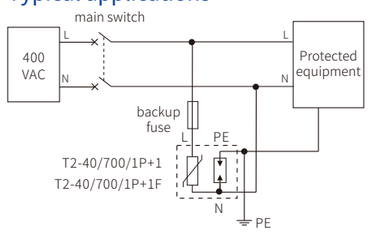
Dimensions（18mm/P）



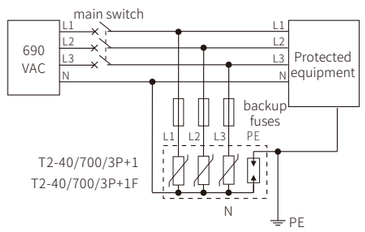
76.0mm×90.0mm×36.0mm

76.0mm×90.0mm×72.0mm

Typical applications



Single phase（TT）



Three-phase four line（TT）

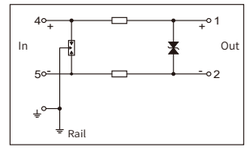
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For 5V signal(IS system)

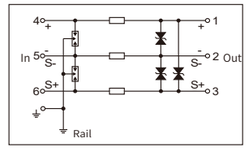
Features

- 7.6mm width
- Resistance per line:1Ω
- Ground viaterminal or DIN 35mm rail

CZLB-5(T2)

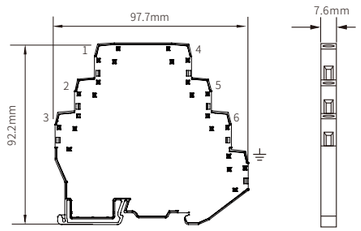


CZLB-5(R3)

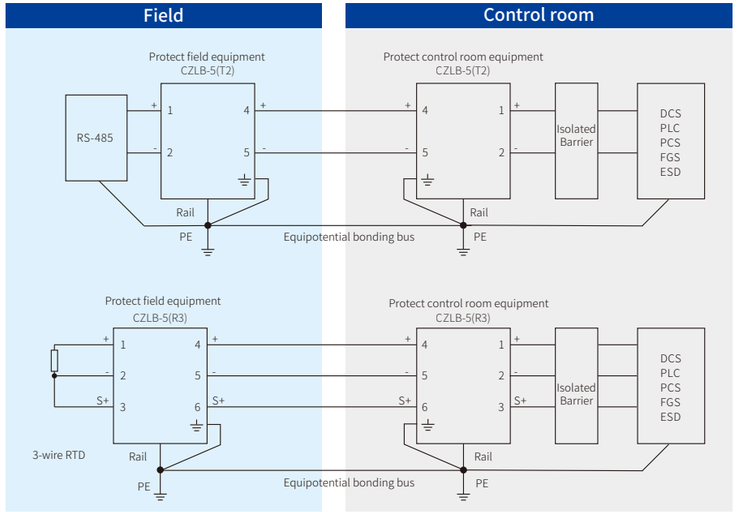


Technical data		2-wire	3-wire
Max. continuous operating voltage U_c		6V DC	6V DC
Nominal operating current I_L		500mA	500mA
Resistance(per line)		1Ω	1Ω
Nominal discharge current I_n(8/20μs)		10kA	10kA
Max. discharge current I_{max}(8/20μs)		20kA	20kA
Impulse current I_{imp}(10/350μs)		2.5kA	2.5kA
Voltage protection level U_p	L-L/L-G	40V/600V	40V/600V
Bandwidth (-0.5dB)		40MHz	40MHz
Response time		1ns	1ns
Residual current		＜10μA	＜10μA
Housing protection grade(IEC60529)		IP 20	IP 20
Housing material/Flammability rating(UL94)		PA66/V0	PA66/V0
Testing standard		GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification			
Ex marking		Ex ia IIC T4…T6 Ga	Ex ia IIC T4…T6 Ga
Certificate Number		See Certification for details	See Certification for details
Entity Parameters		Ui=6V; Ii=500mA; Pi=0.75W; Ci≈0μF; Li≈0mH	Ui=6V; Ii=500mA; Pi=0.75W; Ci≈0μF; Li≈0mH
Functional safety certification		SIL3	SIL3
Type t est		Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number		7051773	7014195

Dimensions



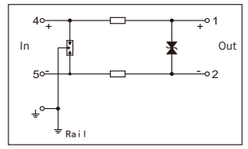
Typical applications



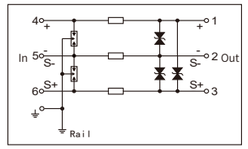
For 24V signal(IS system)

Features

- 7.6mm width
- Resistance per line:1Ω
- Ground viaterminal or DIN 35mm rail



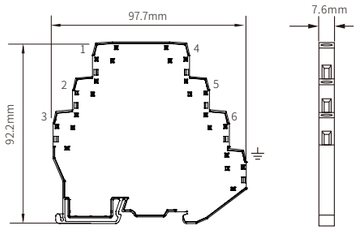
CZLB-24(B2)



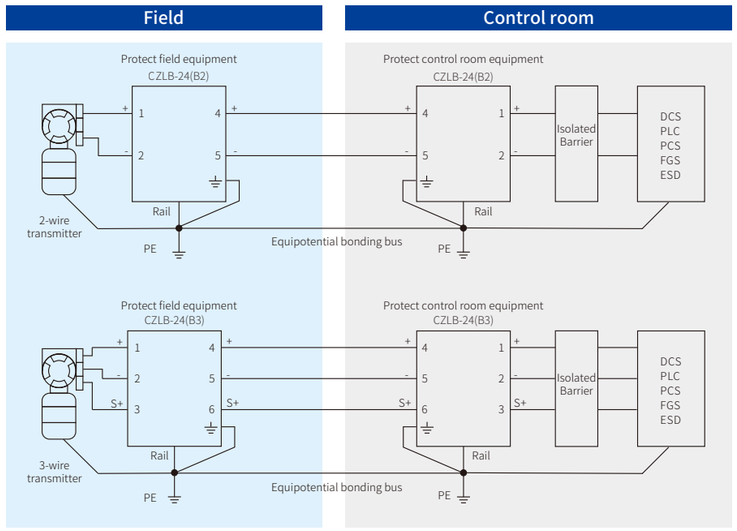
CZLB-24(B3)

Technical data		2-wire	3-wire
Max. continuous operating voltage U_c		32V DC	32V DC
Nominal operating current I_L		500mA	500mA
Resistance(per line)		1Ω	1Ω
Nominal discharge current I_n(8/20μs)		10kA	10kA
Max. discharge current I_{max}(8/20μs)		20kA	20kA
Impulse current I_{imp}(10/350μs)		2.5kA	2.5kA
Voltage protection level U_p	L-L/L-G	60V/600V	60V/600V
Bandwidth (-0.5dB)		40MHz	40MHz
Response time		1ns	1ns
Residual current		＜1μA	＜1μA
Housing protection grade(IEC60529)		IP 20	IP 20
Housing material/Flammability rating(UL94)		PA66/V0	PA66/V0
Testing standard		GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification			
Ex marking		Ex ia IIC T4 ···T6 Ga	Ex ia IIC T4 ···T6 Ga
Certificate Number		See Certification for details	See Certification for details
Entity Parameters		Ui=30V;Ii=500mA； Pi=0.75W; Ci≈0μF;Li≈0mH	Ui=30V;Ii=500mA； Pi=0.75W; Ci≈0μF;Li≈0mH
Functional safety certification		SIL3	SIL3
Type test		Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number		7090592	7013226

Dimensions



Typical applications

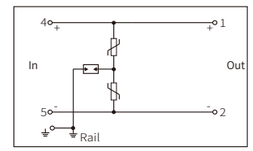


For low-voltage power (⩽10A)

Features

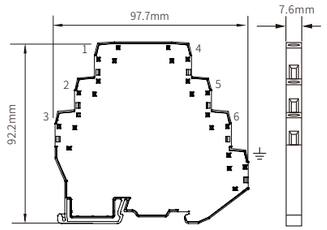
- 7.6mm width
- Ground via terminal or DIN 35mm rail

CZLB-24P

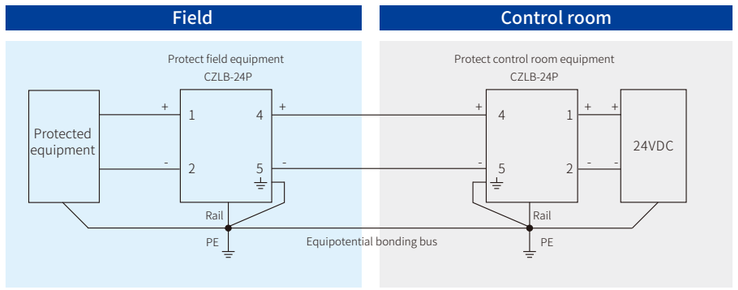


Technical data	
Max. continuous operating voltage U_c	58VDC/40VAC
Nominal operating current I_L	10A
Nominal discharge current I_n(8/20μs)	10kA
Max. discharge current I_{max}(8/20μs)	20kA
Impulse current I_{imp}(10/350μs)	2.5kA
Voltage protection level U_p	800V
Recommended grounding cable	2.5mm²
Response time	25ns
Residual current	<20μA
Housing protection grade(IEC60529)	IP 20
Housing material/Flammability rating(UL94)	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21
Certification	
Type test	Shanghai Lightning Protection Center
Order number	7059650

Dimensions



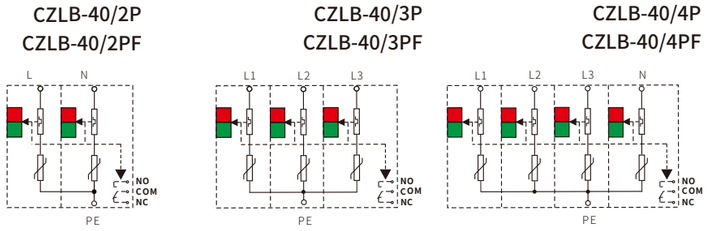
Typical applications



For AC Power(40kA)

Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

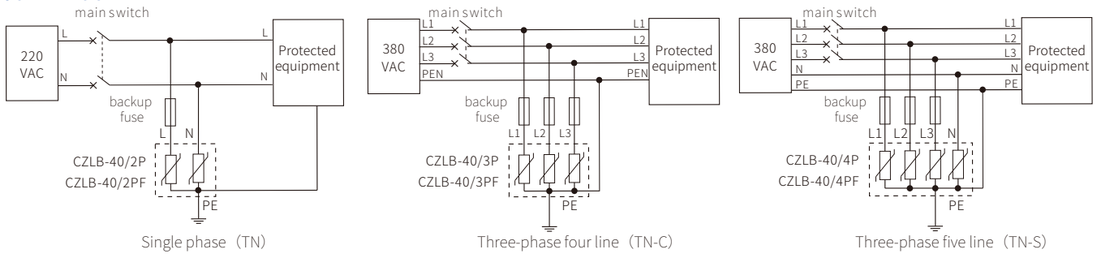


Technical data			
Max. continuous operating voltage U_c	385VAC	385VAC	385VAC
Nominal discharge current I_n(8/20μs)	20kA	20kA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	40kA	40kA
Voltage protection level U_p	1.7kV	1.7kV	1.7kV
Recommended backup fuse	80A gG	80A gG	80A gG
Short-circuit current rating I_{SCCR}	1000A	1000A	1000A
Recommended grounding cable	4~25mm²	4~25mm²	4~25mm²
Response time	25ns	25ns	25ns
Residual current	<20μA	<20μA	<20μA
Remote alarm output（model F）	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A	250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Power supply system	Single phase（TN）	hree-phase four line（TN-C） Three-phase three line（IT）	Three-phase five line（TN-S）
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	CZLB-40/2P：7051402	CZLB-40/3P：7061543	CZLB-40/4P：7045781
	CZLB-40/2PF：7028111	CZLB-40/3PF：7023751	CZLB-40/4PF：7094265

Dimensions（18mm/P）

60.0mm×86.0mm×36.0mm　60.0mm×86.0mm×54.0mm　60.0mm×86.0mm×72.0mm

Typical applications



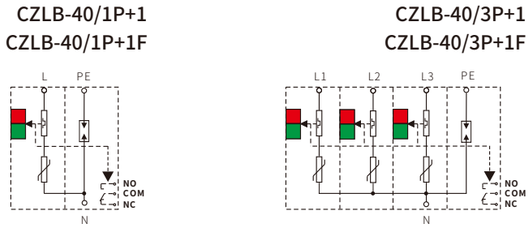
Single phase（TN）　Three-phase four line（TN-C）　Three-phase five line（TN-S）

Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

For AC Power(40kA)

Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

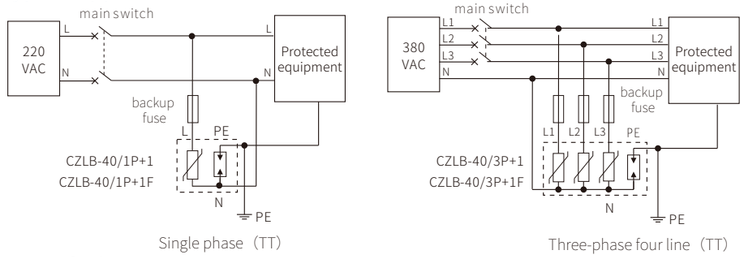


Technical data	CZLB-40G Module	C2-40 Module	CZLB-40G Module	CZLB-40 Module
Max. continuous operating voltage U_c	255VAC	385VAC	255VAC	385VAC
Nominal discharge current I_n(8/20μs)	20KA	20kA	20KA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	40kA	40kA	40kA
Voltage protection level U_p	1.2kV	1.7kV	1.2kV	1.7kV
Recommended backup fuse		80A gG		80A gG
Short-circuit current rating I_{SCCR}		1000A		1000A
Recommended grounding cable		4~25mm²		4~25mm²
Response time		25ns		25ns
Residual current		<20μA		<20μA
Remote alarm output（model F）		250VAC/0.5A；24VDC/0.5A		250VAC/0.5A；24VDC/0.5A
Housing protection grade(IEC60529)		IP 20		IP 20
Housing material/Flammability rating(UL94)		PA66/V0		PA66/V0
Testing standard		GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11
Power supply system		Single phase（TT）		Three-phase four line（TT）
Certification				
Type test		Shanghai Lightning Protection Center		Shanghai Lightning Protection Center
Order number		CZLB-40/1P+1：7047317		CZLB-40/3P+1：7078829
		CZLB-40/1P+1F：7054943		CZLB-40/3P+1F：7091611

Dimensions（18mm/P）

60.0mm×86.0mm×36.0mm　60.0mm×86.0mm×72.0mm

Typical applications



Single phase（TT）　Three-phase four line（TT）

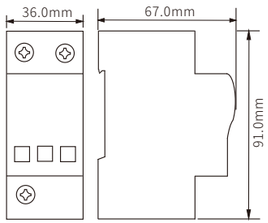
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with “F”

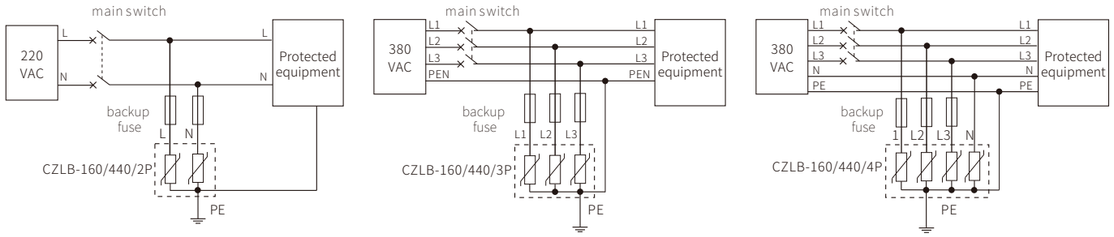
	CZLB-160/440/2P	CZLB-160/440/3P	CZLB-160/440/4P
Technical data			
Max. continuous operating voltage U_c	440VAC	440VAC	440VAC
Nominal discharge current I_n(8/20μs)	80kA	80kA	80kA
Max. discharge current I_{max}(8/20μs)	160kA	160kA	160kA
Impulse current I_{imp} (10/350μs)	15kA	15kA	15kA
Voltage protection level U_p (In)	2.8kV	2.8kV	2.8kV
Recommended backup fuse	200A gG	200A gG	200A gG
Recommended grounding cable	4~35mm²	4~35mm²	4~35mm²
Response time	25ns	25ns	25ns
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Power supply system	Single phase （TN）	hree-phase four line （TN-C） Three-phase three line （IT）	Three-phase five line （TN-S）
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	7024977	7069757	7086079

Dimensions（36mm/P）



67.0mm×91.0mm×72.0mm　67.0mm×91.0mm×108.0mm　67.0mm×91.0mm×144.0mm

Dimensions



Single phase（TN）　Three-phase four line（TN-C）　Three-phase five line（TN-S）

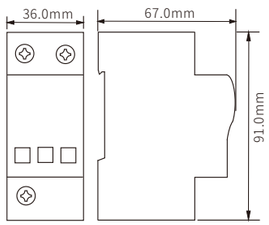
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

Features

- Status indication:
  Green: OK
  Red: Failed
- Pluggable
- Remote alarm output is optional, named with “F”

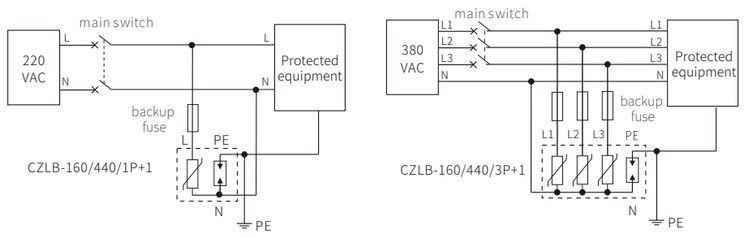
	CZLB-160/440/1P+1		CZLB-160/440/3P+1	
Technical data	CZLB-160/255	CZLB-160/440	CZLB-160/255	CZLB-160/440
Max. continuous operating voltage U_c	255VAC	440VAC	255VAC	440VAC
Nominal discharge current I_n(8/20μs)	80kA	80kA	80kA	80kA
Max. discharge current I_{max}(8/20μs)	160kA	160kA	160kA	160kA
Impulse current I_{imp} (10/350μs)	50kA	15kA	50kA	15kA
Voltage protection level U_p (In)	2.5kV	2.8kV	2.5kV	2.8kV
Recommended backup fuse		200A gG		200A gG
Recommended grounding cable		4~35mm²		4~35mm²
Response time		25ns		25ns
Housing protection grade(IEC60529)		IP 20		IP 20
Housing material/Flammability rating(UL94)		PA66/V0		PA66/V0
Testing standard		GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11
Power supply system		Single phase （TT）		Three-phase four line （TT）
Certification				
Type test		Shanghai Lightning Protection Center		Shanghai Lightning Protection Center
Order number		7053172		7083196

Dimensions （36mm/P）



67.0mm×91.0mm×72.0mm　67.0mm×91.0mm×144.0mm

Dimensions



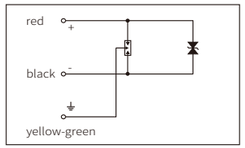
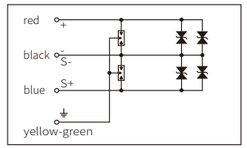
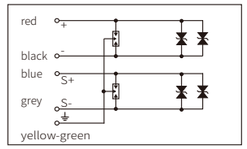
Single phase（TT）　Three-phase four line（TT）

Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area ⩾ 4mm² are recommended.
For connecting to PE.cables with a cross-sectional area ⩾ 6mm² are recommended.

Screw mounting SPD

Features

- Intrinsic safety certification;explosion proof electrial product certification
- Available in various of thread specification
- Available in various of housing material

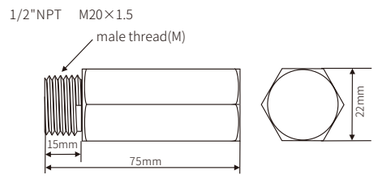
	CZLBX-48	CZLBX-48-3	CZLBX-48-4
			
Technical data	**2-wire**	**3-wire**	**4-wire**
Nominal operating voltage U_n	24V DC	24V DC	24V DC
Max. continuous operating voltage U_c	48V DC	48V DC	48V DC
Nominal discharge current I_n(8/20μs)	10kA	10kA	10kA
Impulse current I_{imp}(10/350μs)	2.5kA	2.5kA	2.5kA
Voltage protection level $U_p(I_n)$	L-G:1kV	L-G:1kV	L-G:1kV
Voltage protection level $U_p(I_{imp})$	L-G:680V	L-G:680V	L-G:680V
Voltage protection level U_p(1kV/μs)	L-L:60V;L-G:90V	L-L:60V;L-G:90V	L-L:60V;L-G:90V
Bandwidth(-0.5dB)	10MHz	10MHz	10MHz
Response time	L-L:1ns,L-G:200ns	L-L:1ns,L-G:200ns	L-L:1ns,L-G:200ns
Housing protection grade(IEC60529)	IP 67	IP 67	IP 67
Housing material	304 or 316	304 or 316	304 or 316
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification			
Ex marking	Ex ia II C T6...T4 Ga	Ex ia II C T6...T4 Ga	Ex ia II C T6...T4 Ga
Certificate Number	CSANe 21ATEX2011X	CSANe 21ATEX2011X	CSANe 21ATEX2011X
Entity Parameters	Ui=48V;Ii=500mA; Pi=5.32W; Ci=0nF;Li=0mH	Ui=48V;Ii=500mA; Pi=5.32W; Ci=0nF;Li=0mH	Ui=48V;Ii=500mA; Pi=5.32W; Ci=0nF;Li=0mH
Functional safety certification	SIL3	SIL3	SIL3
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number			
	1/2" NPT(304)：7041233	1/2" NPT(304)：7024477	1/2" NPT(304)：7060125
	3/4" NPT(304)：7030261	3/4" NPT(304)：7079620	3/4" NPT(304)：7031784
	M20×1.5(304)：7019156	M20×1.5(304)：7018599	M20×1.5(304)：7020401
	…	…	…

Naming

CZLBX-48- □

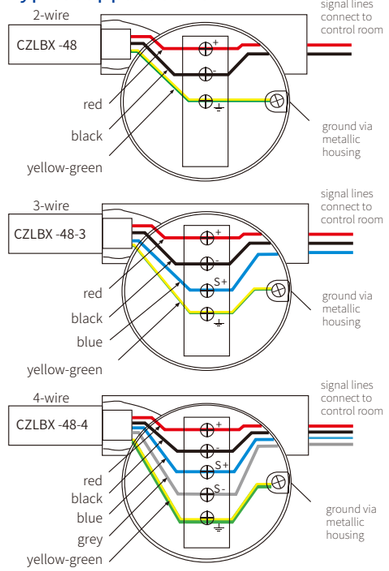
- blank: 2-wire
  3: 3-wire
  4: 4-wire
- Max.continuous operating voltage
- Screw mounting SPD

Dimensions



Wire specification：26/0.254
Signal wire is with 18AWG,1mm²
Ground wire is with 16AWG,1.32mm²
Wire length：240mm

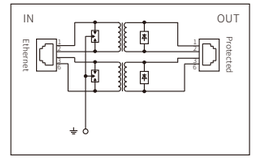
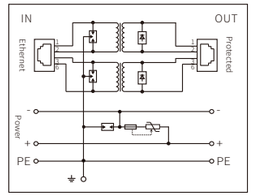
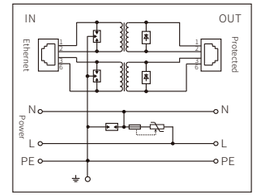
Typical applications



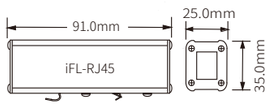
iFL Network SPD

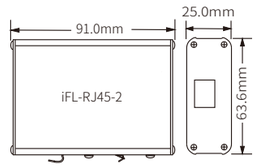
Features

- Fully aluminium alloy housing, good electromagnetic shielding.
- Suitable for various of network cameras.
- Grouned by DIN rail or screw terminals

	iFL-RJ45 Network	iFL-RJ45-2 Network, 24V power 2 in 1	iFL-RJ45-2 Network, 220V power 2 in 1
			
Technical data	**RJ45**	**24VDC**	**220VAC**
Max. continuous operating voltage U_c	8VDC	58VDC/40VAC	270VAC
Nominal discharge current I_n	2kA	10kA	3kA
Voltage protection level U_p (L-L/L-G)	100V/300V	850V/1kV	1kV/1.2kV
Bandwidth	100MHz	-	-
Insertion loss（0.1~50MHz）	0.5dB	-	-
Wires protected	1/2,3/6	+/-	L/N
Interface	RJ45	plug-inwiring	plug-inwiring
Housing protection grade(IEC60529)	IP20	IP20	IP20
Housing material(housing/end face)	Aluminium alloy/304 stainless steel	Aluminium alloy/304 stainless steel	Aluminium alloy/304 stainless steel
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	7079893	7978591	7054623

Dimensions



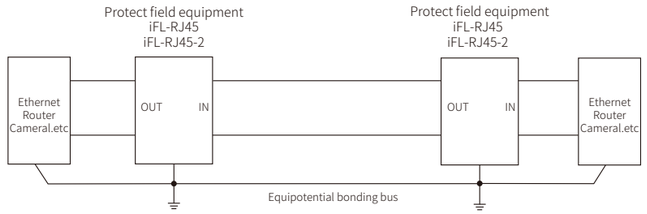



91.0mm×35.0mm×25.0mm


91.0mm×63.6mm×25.0mm


91.0mm×63.6mm×25.0mm

Typical applications

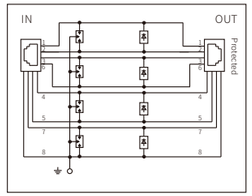


iFL Network SPD

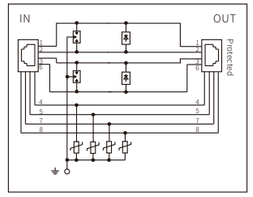
Features

- Fully aluminium alloy housing, good electromagnetic shielding.
- Suitable for various of network cameras.
- Grouned by DIN rail or screw terminals

iFL-RJ45/GigE
GigE

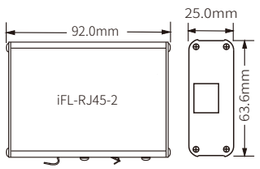


iFL-RJ45/PoE
PoE



Technical data	GigE	PoE power
Max. continuous operating voltage U_c	60VDC	60VDC
Nominal discharge current I_n	2kA	2kA
Voltage protection level U_p (L-L/L-G)	600V/1kV	600V/1kV
Bandwidth	500MHz	-
Insertion loss（0.1~50MHz）	⩽0.5dB	-
Wires protected	1/2,3/6,4/5,7/8	+/-
Interface	RJ45	RJ45
Housing protection grade(IEC60529)	IP20	IP20
Housing material (housing/end face)	Aluminium alloy/304 stainless steel	Aluminium alloy/304 stainless steel
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification		
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	7058560	7069852

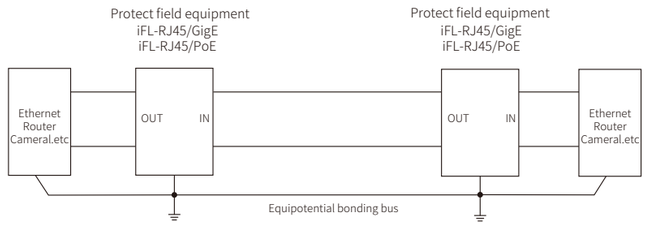
Dimensions



92.0mm×63.6mm×25.0mm

92.0mm×63.6mm×25.0mm

Typical applications

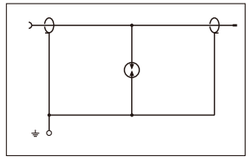


SPD for antennas and feeders

Features

- Fully aluminium alloy housing, good electromagnetic shielding.
- Available in various of thread specification.
- Low insertion loss and standing wave ratio

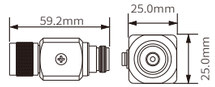
iFL-RF



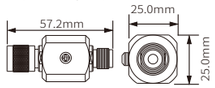
Technical data	
Max. continuous operating voltage U_c	24V
Nominal discharge current I_n(8/20μs)	10kA
Max. discharge current I_{max}(8/20μs)	20kA
Voltage protection level U_p	450V
Frequency range	0~4GHz
Response time	100ns
Interface	SMA、N、F、TNC、BNC
Insertion loss	⩽1.5GHz(0.1dB)/⩽4GHz(2dB)
Characteristic impedance	50Ω(N、TNC、SMA);75Ω(F、BNC)
Housing protection grade(IEC60529)	IP 55
Housing material	aluminium alloy
Testing standard	GB/T 18802.21/IEC 61643-21

Dimensions

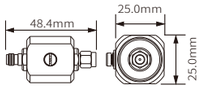
N：iFL-RF/N



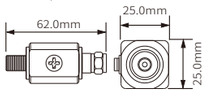
TNC：iFL-RF/TNC



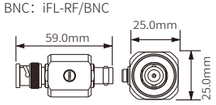
SMA：iFL-RF/SMA



F：iFL-RF/F



BNC：iFL-RF/BNC



N：iFL-RF/N

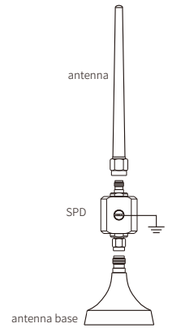
TNC：iFL-RF/TNC

SMA：iFL-RF/SMA

F：iFL-RF/F

BNC：iFL-RF/BNC

Typical applications



CHENZHU

Isolated Barrier | Signal Condioner | SPD | Safety Relay

SHANGHAI CHENZHU INSTRUMENT CO.,LTD.

Add: Building 6, 201 Minyi Rd., Shanghai 201612, P.R.China

Tel: +86-21-64360668
E-mail: chenzhu@chenzhu-inst.com
Web: en.chenzhu-inst.com

CZYB-E15-S.01/2022.03

CHENZHU

Configurable Safety Control Unit

CZSR Smart Series

Smart Configuration | Varieties of safety device input

SIL3 PLe Cat.4 | TÜV Rheinland Certification | G3 anti-corrosion

(2022)

5 Year WARRANTY

https://en.chenzhu-inst.com

COMPANY PROFILE

CHENZHU FOCUSED ON PROFESSIONALISM

Chenzhu Instrument Co. Ltd, was founded in April, 2002, who was originaled from Shanghai Institute of Process Automation Instrumentation. CHENZHU is a professional company with core expertise of R&D, manufacturing and sale service of high quality protection products, such as intrinsic barriers, signal isolators, surge protection devices, safety relays etc. CHENZHU has been specialised in providing a professional solution for the safety circuit on site.

R&D STRENGTHS

- Functional safety
- Intrinsic safety explosion-proof
- Signal interference preventing
- Surge protective
- Machinery safety
- Control safety
- Drive safety

MANAGEMENT SYSTEMS

ISO9001

ISO14001

ISO45001

Safety production certification

Integration of informatization and industrialization

R&D SOURCE OF DEVELOPMENT

Based on ISO/IEC/GB standards, CHENZHU has established the professional laboratory which is applied up to 70 test capabilities and verification items in CHENZHU's safety electrical products' development process.

R&D Team
28%
Employees

R&D Investment
11%
/Sales revenue/Year

Innovation
110+
Patents

Testing Facility
80+
Test capabilities

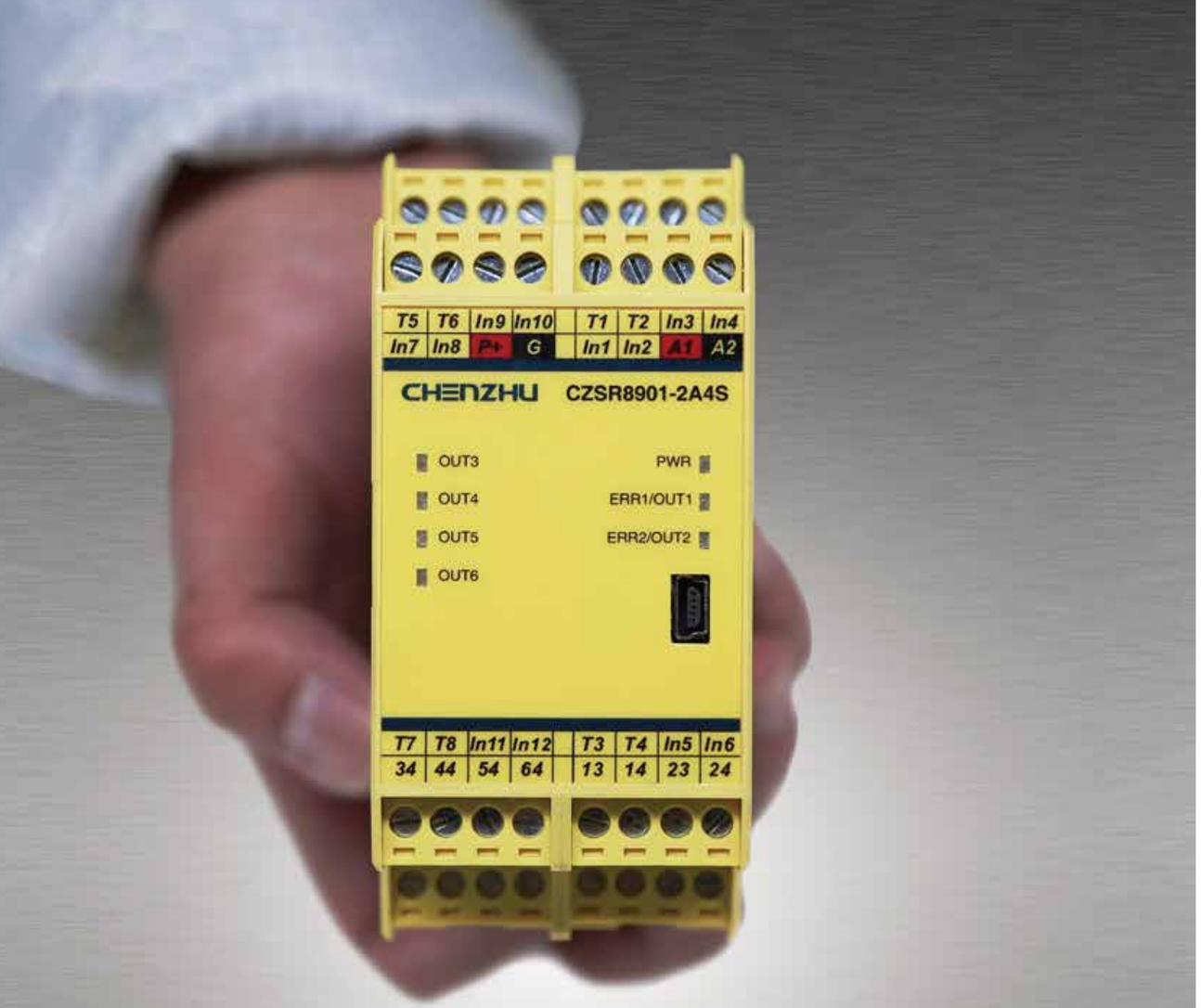
QUALITY ACHIEVEMENTS IN THE FUTURE

CHENZHU factory is continually driven by lean management and flexible production. By our strict quality examination, CHENZHU ensures the production meets the design specification and satisfies our customers.

Company
8500㎡
In total

Max Cap.
2,000,000pcs
Per year

Lean Production
10+
Years' experience



CZSR Smart Series Safety Control Unit

SIL3 PLe Cat.4 | TÜV Rheinland Certification | Configurable Control Logic

Varieties of safety device input | 5 years warranty

SIL3 IEC61508 PLe Cat.4 TÜVRheinland CERTIFIED CE 5 Years WARRANTY

CZSR Smart Series Product List

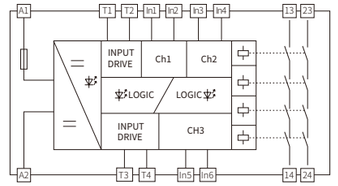
Input Devices	Model	Power Supply	Reset Mode	Safety Input	Relay Output		Semiconductor Output	
	CZSR8901-2A	24V DC	Universal	3	2	(2)	-	-
	CZSR8901-2A4S	24V DC	Universal	6	2	(2)	4	(4)

Features	CZSR8901-2A	CZSR8901-2A4S
Power data		
Supply voltage	20V~30V DC	20V~30V DC
Current consumption	⩽100mA (24V DC)	⩽110mA (24V DC)
Input data		
Input current	⩽50mA (24V DC)	⩽50mA (24V DC)
Cable resistance	⩽15Ω	⩽15Ω
Input devices	E-stop buttons, Safety gates, Light beam devices, Safety mats, Two-hand control buttons, Magnetic switches	
Relay output data		
Number of contacts	**2NO**	**2NO**
Contact material	$AgSnO_2$	$AgSnO_2$
External contact fuse protection	10A fast; 6A slow	10A quickly; 6A slowly
Utilisation category	5A/230V AC; 5A/24V DC	5A/250V AC; 5A/24V DC
Semiconductor output data		
Number of semi-output	**-**	**4SO**
Driving ability	-	2A (24V DC)
Time data		
Switch-on delay	⩽100ms	⩽100ms
Delay-on de-energisation	⩽30ms	⩽30ms
Recovery time	Trigger operation: ⩽30ms Power failure: ⩽1000ms	Trigger operation: ⩽30ms Power failure: ⩽1000ms
Supply short interruption	20ms	20ms
Environmental data		
EMC	EN60947, EN61000-6-2, EN61000-6-4	EN60947, EN61000-6-2, EN61000-6-4
Vibration	Vibration frequency: 10Hz~55Hz; Vibration amplitude: 0.35mm	
Ambient temperature	-20°C~+60°C	-20°C~+60°C
Storage temperature	-40°C~+85°C	-40°C~+85°C
Relative humidity	10%~90%	10%~90%
Insulation data		
Overvoltage category	III	III
Pollution degree	2	2
Rated insulation voltage	250V AC	250V AC
Rated impulse voltage	6000V (1.2/50us)	6000V (1.2/50us)
Dielectric strength	1500V AC, 1min	1500V AC, 1min
Clearance and creepage distance	In accordance with EN 60947-1	In accordance with EN 60947-1

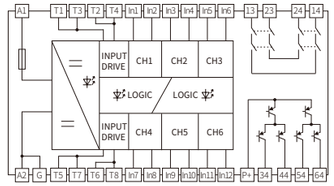
Products show

114.5mm×99.0mm×22.5mm CZSR8901-2A
114.5mm×99.0mm×45.0mm CZSR8901-2A4S

Block diagram

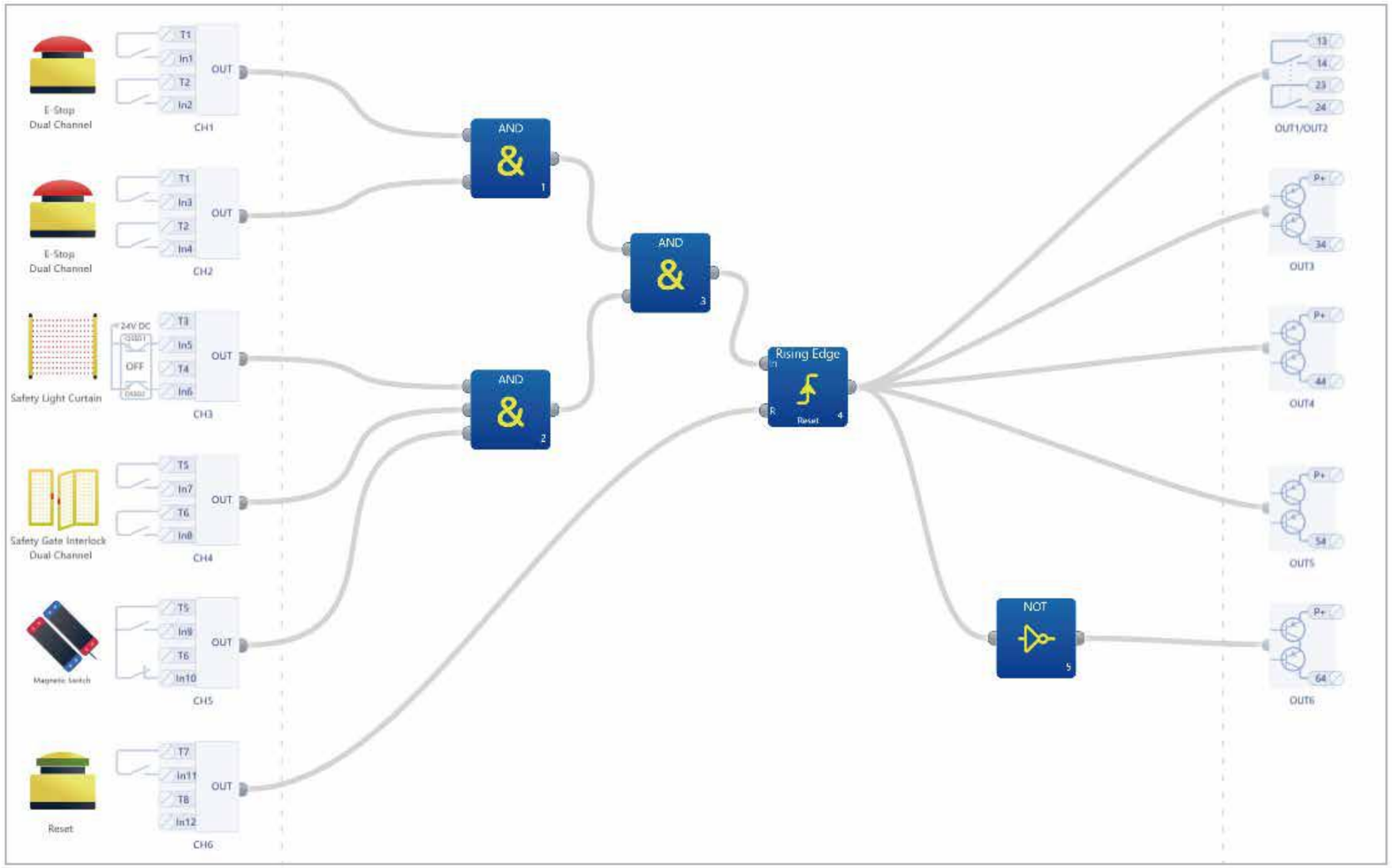


CZSR8901-2A



CZSR8901-2A4S

➤ SafConfig Main Screen

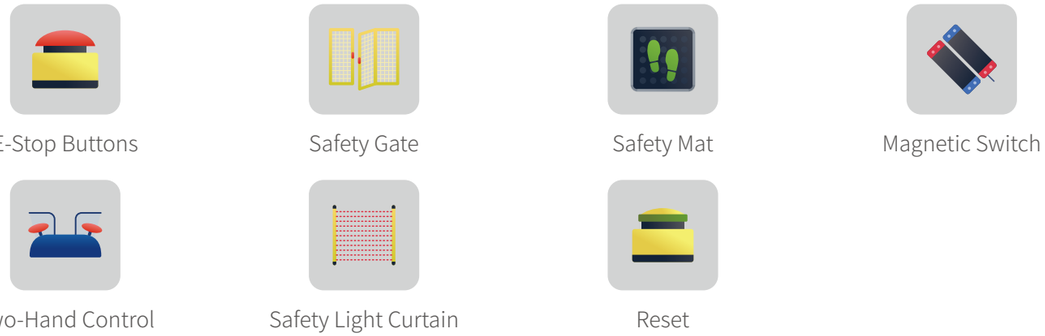


➤ SafConfig Login Screen

➤ SafConfig Software Features

- ♦ Online remote upgrade
- ♦ Drag-and-drop configuration
- ♦ Limit of function blocks：⩽18
- ♦ Simulation without hardware
- ♦ Running state monitoring
- ♦ Configure safety input type and safety output with delay

➤ Configurable Safety Input Signals

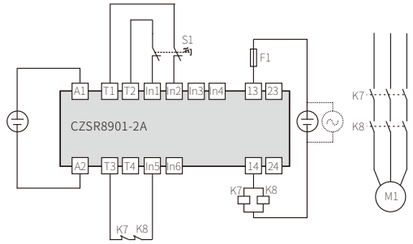


➤ Configurable Logic Blocks

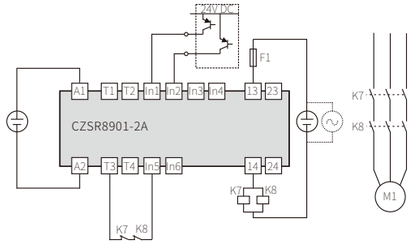
CZSR8901-2A

Application of CZSR8901-2A

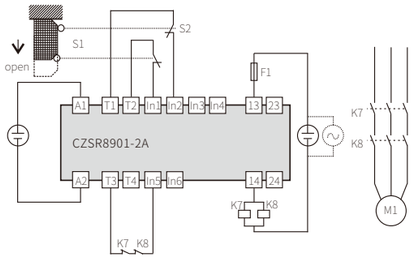
S1,S2: Various input devices
K7,K8: Contactors
F1: External fuse protection
M1: Motor



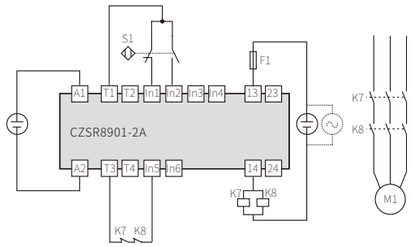
- E-stop buttons input
- Auto reset
- With EDM
- Up to Cat.4



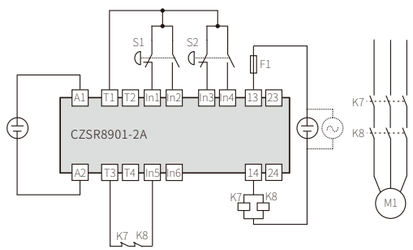
- Light beam devices input
- Auto reset
- With EDM
- Up to Cat.4



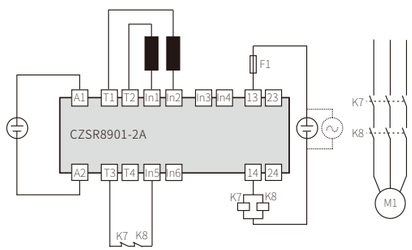
- Safety gates input
- Auto reset
- With EDM
- Up to Cat.4



- Magnetic switches input
- Auto reset
- With EDM
- Up to Cat.4



- Two-hand control buttons input
- Auto reset
- With EDM
- Up to Cat.4

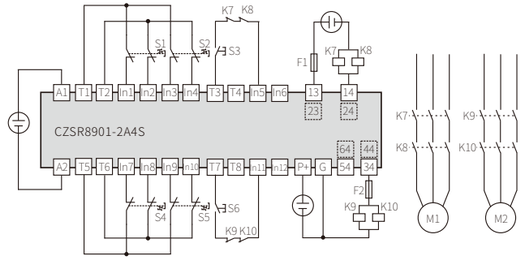


- Safety mats input
- Auto reset
- With EDM
- Up to Cat.4

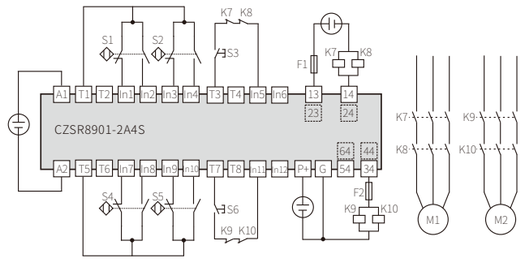
CZSR8901-2A4S

Application of CZSR8901-2A4S

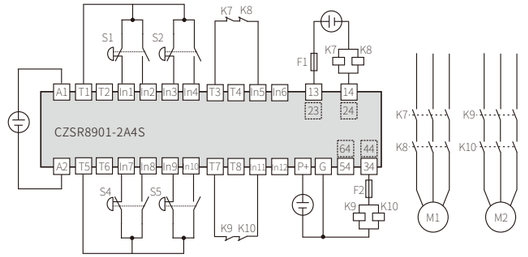
S1,S2,S4,S5: Various input devices
S3,S6: Reset buttons
K7,K8,K9,K10: Contactors
F1,F2: External fuse protection
M1,M2: Motors



- E-stop buttons input
- Manual reset
- With EDM
- Up to Cat.4



- Magnetic switches input
- Manual reset
- With EDM
- Up to Cat.4



- Two-hand control buttons input
- Auto reset
- With EDM
- Up to Cat.4

Application


Car


Food & Beverage


Rubber Plastic


Material Transfer


Wood processing


Robots


Semiconductors


Printing


Packaging


Machining


Textile


Special vehicles