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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

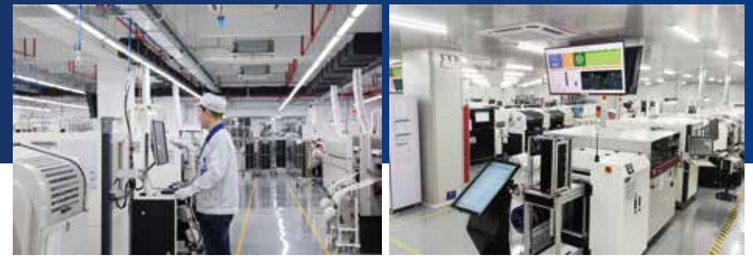
R&D Strength

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

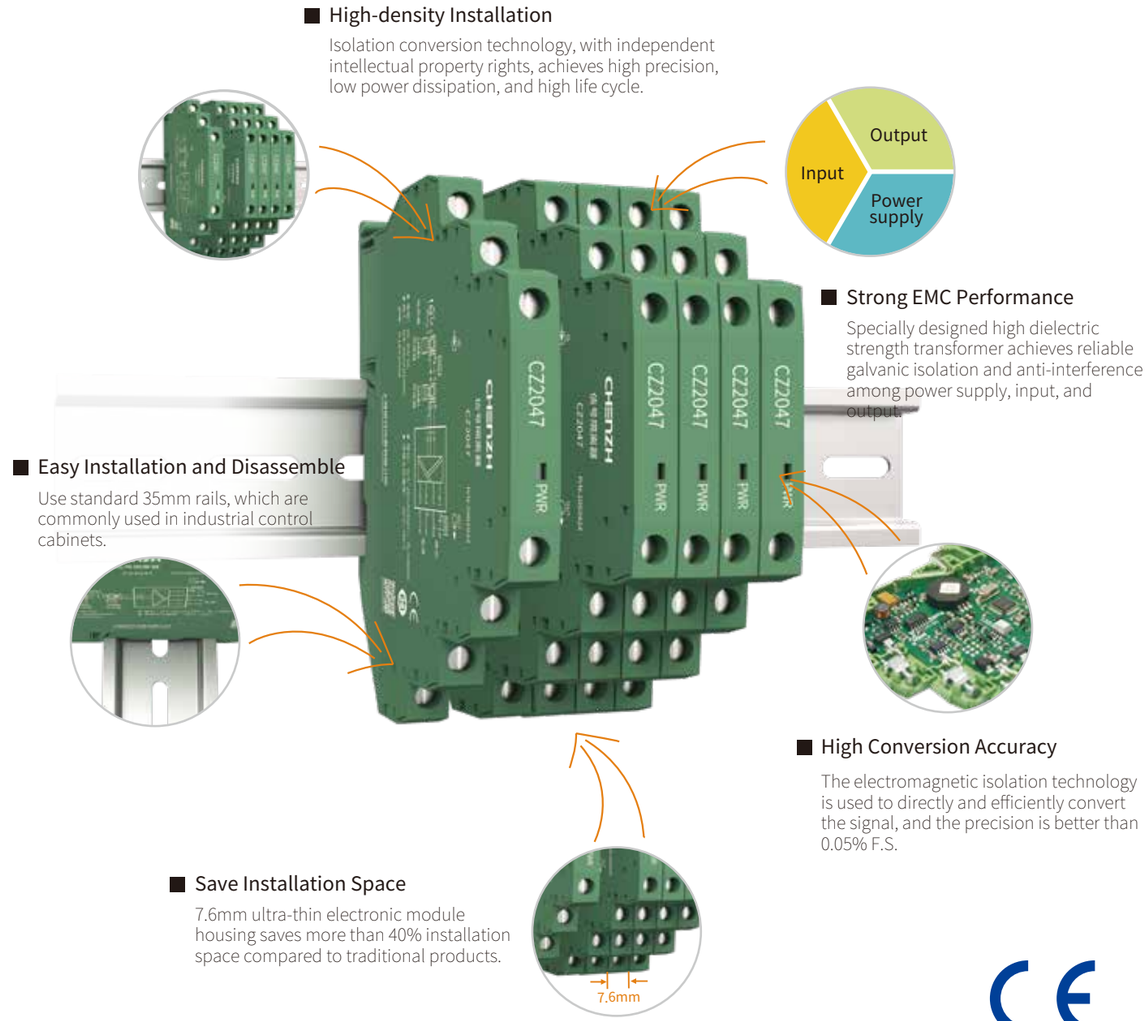
CHENZHU factory is continually driven by lean management and flexible production. By our strict quality examination, CHENZHU ensures the production meets the design specification and satisfies our customers.



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.



Selection Guide

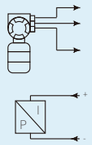
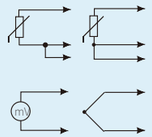
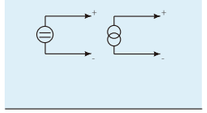
Field Instrument	Application	Module No.	Channels	Input	Output	Features	Page
	Analog Input / Analog Output	CZ2031	1/1	4~20mA (HART)	4~20mA (HART)	Loop powered	6
		CZ2047	1/1	0/4~20mA	0/4~20mA 0/1~5V	Independent powered	7
		CZ2067	1/1				
	Temperature Converters	CZ2071	1/1	RTD	0~20mA，4~20mA 0~5V，1~5V	Independent 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

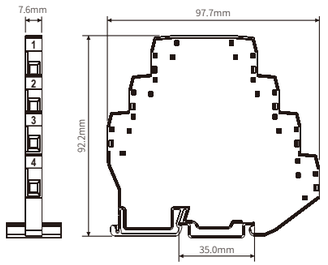
Analog Input /Analog Output (Loop Powered)

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

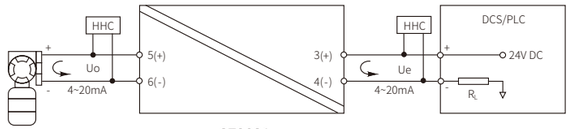
	CZ2031 Application 1: Analog Input	CZ2031 Application 2: Analog Output
Input		
Input Current	4~20mA(HART)	4~20mA(HART)
Distribution Voltage	$U_o \geqslant U_e - R_L \times 0.02$-6	
Loop Current	⩽25mA	⩽25mA
Output		
Output Current	4~20mA(HART)	4~20mA(HART)
Load Resistance	$R_L \geqslant 250\Omega$(HART)	$R_L \leqslant (U_t - 6)/ 0.02$
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



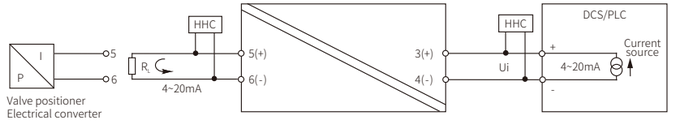
Connection

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

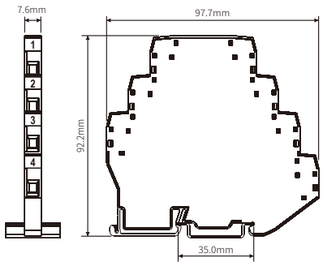
Analog Input / Analog Output

Features

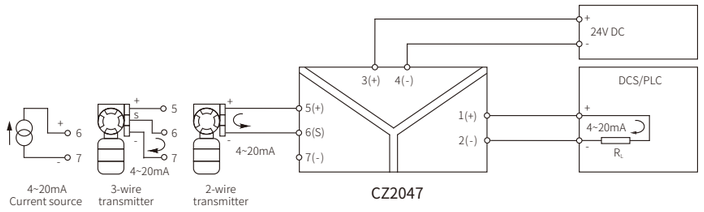
1-channel signal conditoner
24V DC supply
0/4~20mA current input/output
Ultra-slim housing width 7.6mm

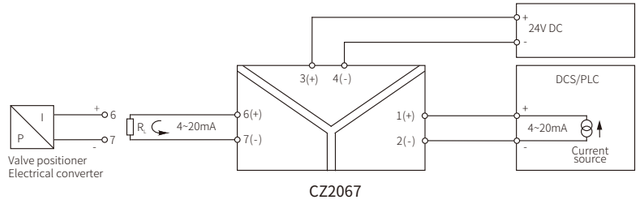
	CZ2047 Analog Input	CZ2067 Analog Output
Input		
Input Current	0/4~20mA	0/4~20mA
Distribution Voltage	⩾19V	
Input Voltage Drop		⩽7V@20mA
Max. Input Current	＜50mA	＜50mA
Output		
Output Current/Load Resistance	0(4)~20mA / R_L⩽550Ω	0(4)~20mA / R_L⩽800Ω
Max. Output Current	＜50mA	＜50mA
Output Voltage/Load 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

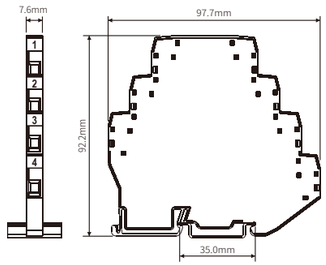
Features

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

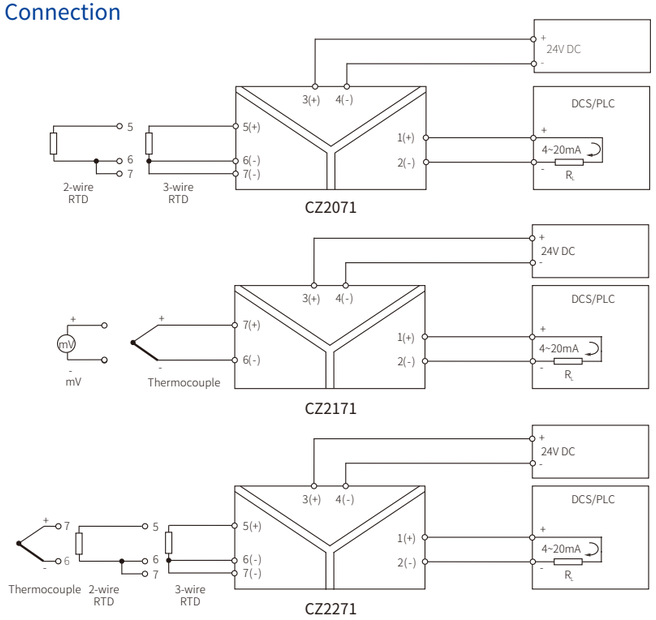
	CZ2071 RTD Input	CZ2171 TC Input	CZ2271 RTD/TC Input
Input			
Input Signal	Pt100，Cu100，Cu50	T、E、J、K、N、R、S、B (Customized mV signal)	Pt100，Cu100，Cu50 T、E、J、K、N、R、S、B
Internal CJC Temperature Range		-20°C~+60°C	-20°C~+60°C
CJC Precision		±1°C	±1°C
Output			
Output Current/Load Resistance	0~20mA，4~20mA / 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



Connection



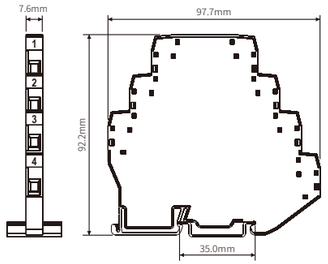
RTD / TC Input (Loop Powered)

Features

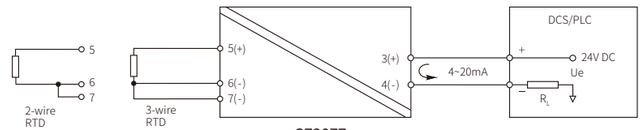
1-channel signal conditoner
24V DC loop powered
Line fault detection(LFD)
Configurable by software
Ultra-slim housing width 7.6mm

	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

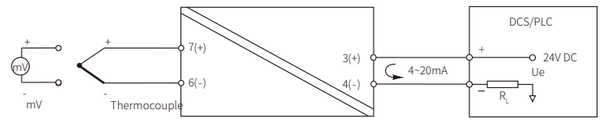
Dimensions



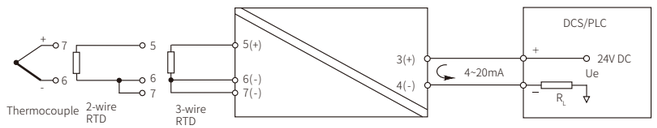
Connection



CZ2077



CZ2177



CZ2277

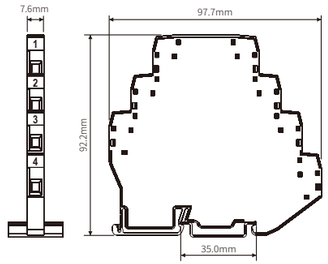
Voltage / Current Converters

Features

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

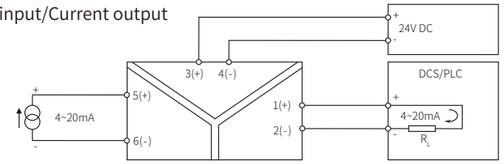
	CZ2083	CZ2083.A DIP configurable
Input		
Configuration	Not support	Via DIP switches
Input Signal	0~20mA，4~20mA 0~5V，1~5V，0~10V，2~10V	0~20mA，4~20mA 0~5V，1~5V，0~10V，2~10V
Output		
Configuration	Not support	Via DIP switches
Output Signal	0~20mA，4~20mA 0~5V，1~5V，0~10V，2~10V	0~20mA，4~20mA 0~5V，1~5V，0~10V，2~10V
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

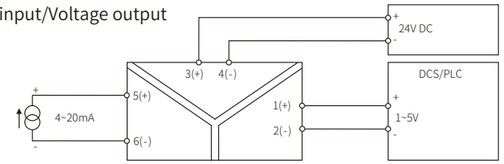


Connection

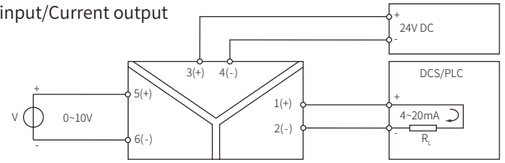
Application 1：Current input/Current output



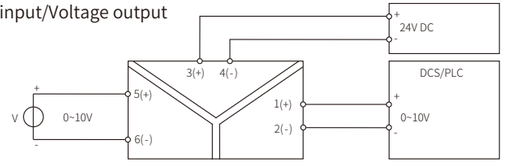
Application 2：Current input/Voltage output



Application 3：Voltage input/Current output

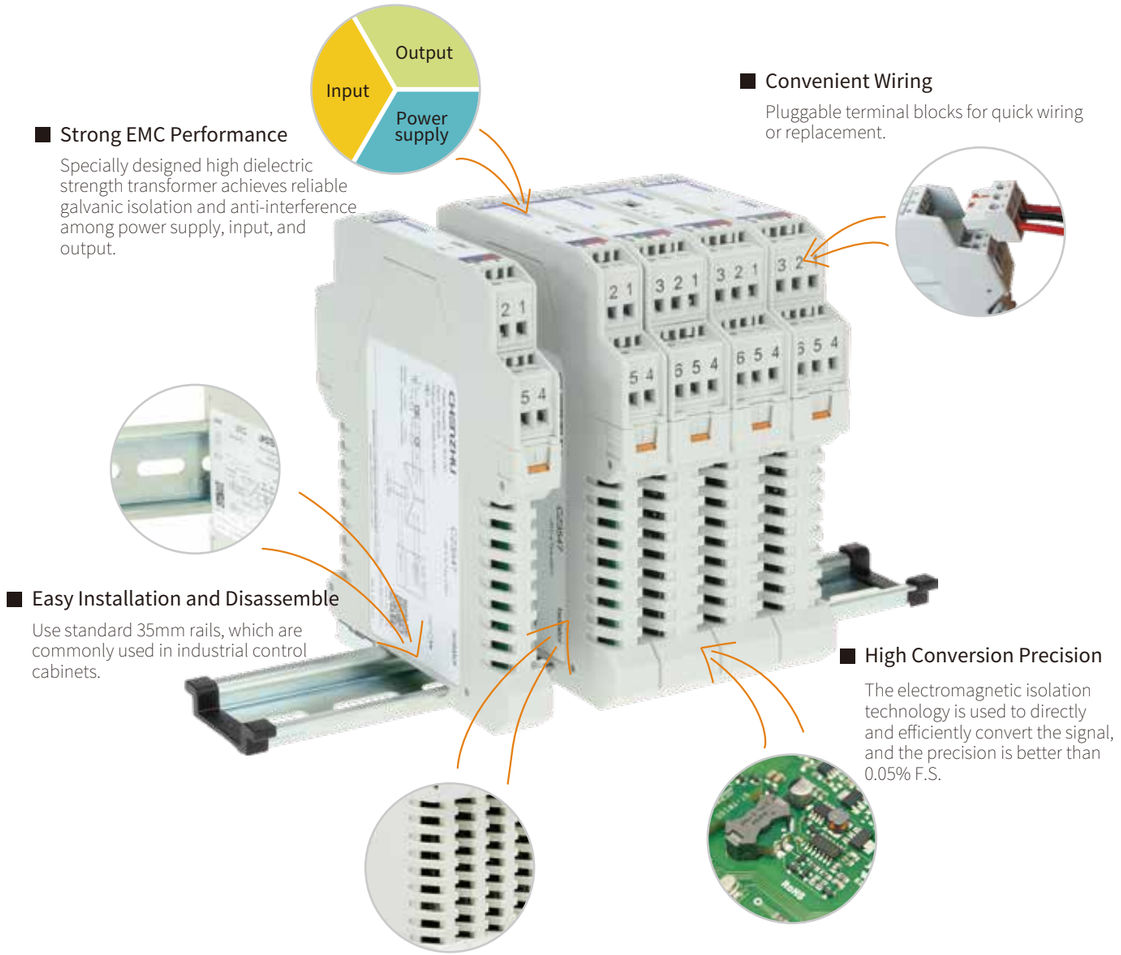


Application 4：Voltage input/Voltage output



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.

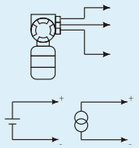
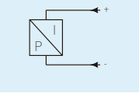
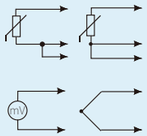
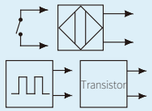
■ **High Conversion Precision**

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	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

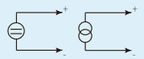
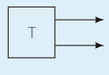
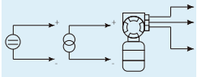
Field Instrument	Application	Module No.	Channels	Input	Output	Features	Page
	Vibration Tansducer Input	CZ3058	1/1	Vibration transducer -10V~10V	-10V~10V	Independent powered	26
	Voltage Input	CZ3083 CZ3088 CZ3089	1/1 2/2 1/2	0~5V，1~5V 0~10V	0~20mA，4~20mA 0~5V，1~5V 0~10V	Independent powered	27
	Communication 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

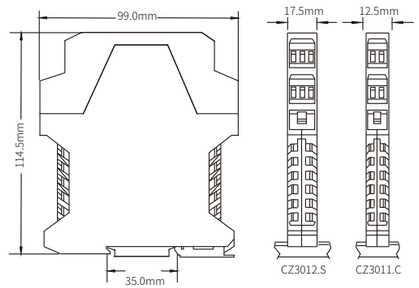
Switch Amplifier

Features

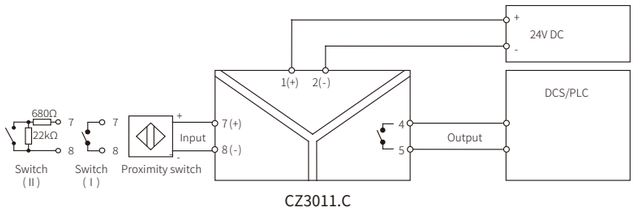
- 24V DC independent power supply
- Dry contact or proximity switch input
- Relay contact output
- Line fault detection(LFD)
- Configurable by DIP switches

	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.)	

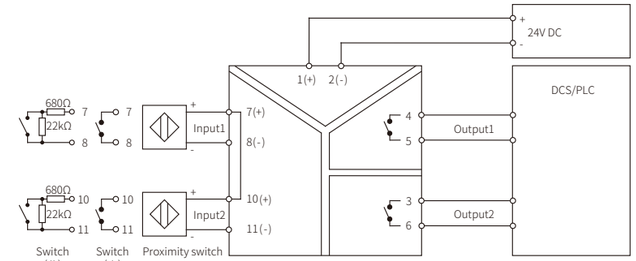
Dimensions



Connection



CZ3011.C



CZ3012.S

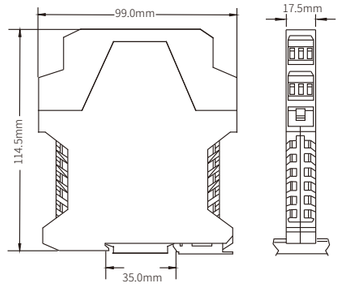
Analog Input / Analog Output (Loop Powered)

Features

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

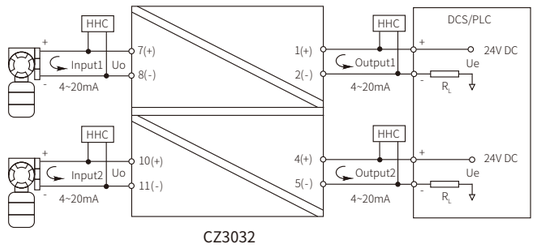
	1/1：CZ3031 2/2：CZ3032 Application 1: Analog Input	1/1：CZ3031 2/2：CZ3032 Application 2: Analog Output
Input		
Input Current	4~20mA(HART)	4~20mA(HART)
Voltage Drop	U_d≤6V	U_d≤6V
Distribution Voltage	U_o≥U_e-R_L×0.02-6	
Output		
Output Current	4~20mA(HART)	4~20mA(HART)
Load Resistance	R_L≥250Ω(HART)	R_L≤(U_e-6)/0.02
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



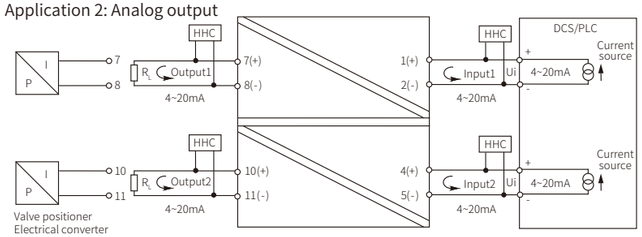
Connection

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.

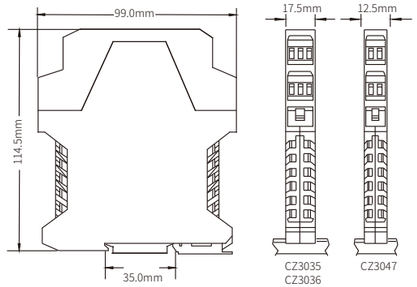
Analog Input(Current Source Output)

Features

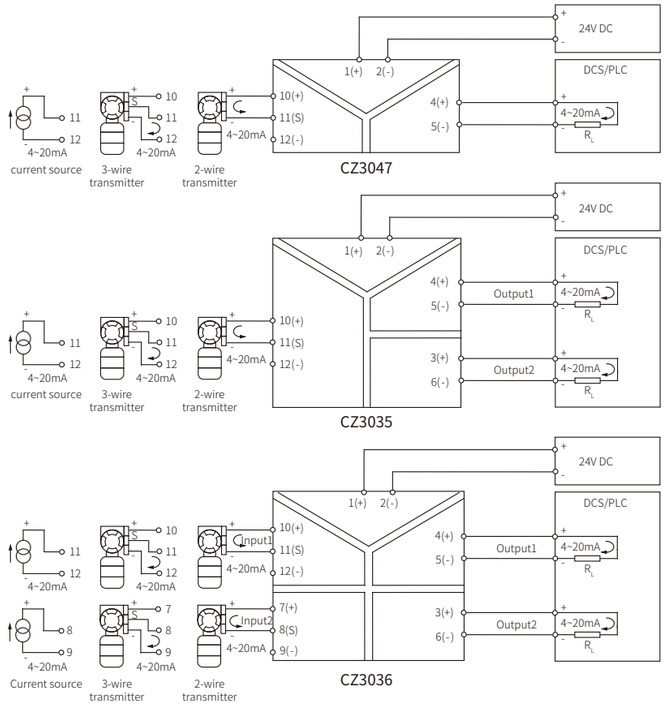
24V DC independent power supply
0/4~20mA current input
0/4~20mA current source output

	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



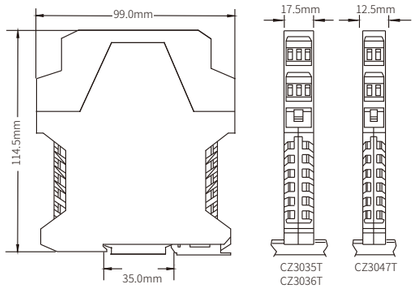
Analog Input(Sink Mode Output)

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



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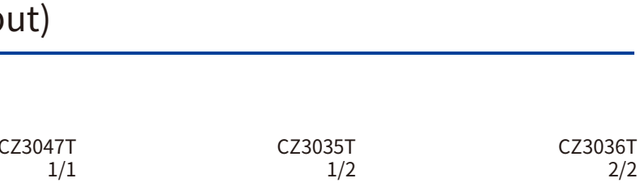
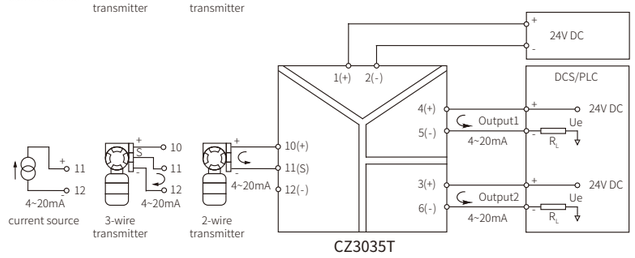
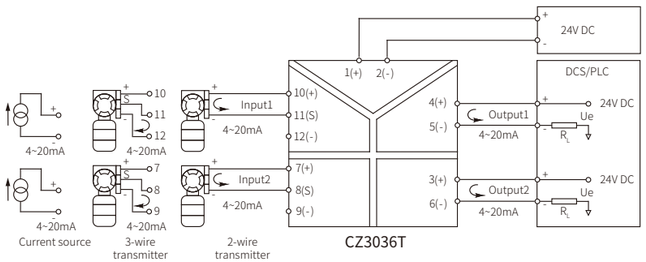






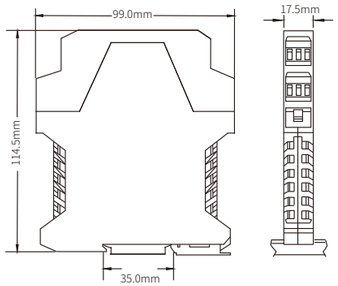
Analog Input(Loop Powered)

Features

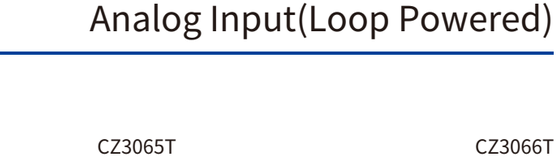
24V DC loop power supply
4~20mA current source input
4~20mA sink mode output

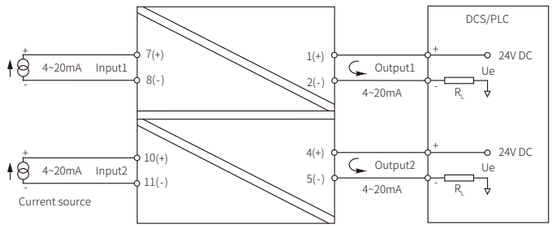
	CZ3065T 1/1	CZ3066T 2/2
Input		
Input Current	4~20mA	4~20mA
Input Impedance	⩽100Ω	⩽100Ω
Output		
Output Current	4~20mA	4~20mA
Voltage Drop	⩽14V	⩽14V
Load Resistance	$R_L \leqslant (U_e-14)/0.02$	$R_L \leqslant (U_e-14)/0.02$
General Parameters		
Loop Supply Voltage(U_e)	20~30V DC	20~30V DC
Power Reverse 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





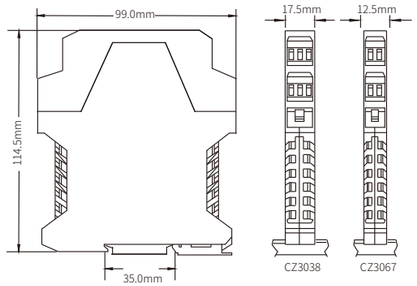
Analog Output

Features

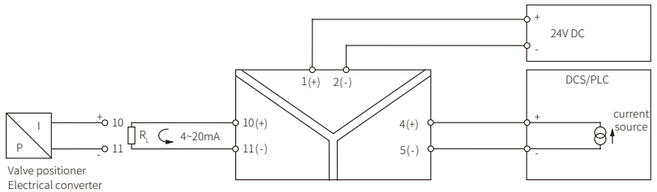
24V DC independent power supply
0/4~20mA current input/output
Output load up to 800Ω

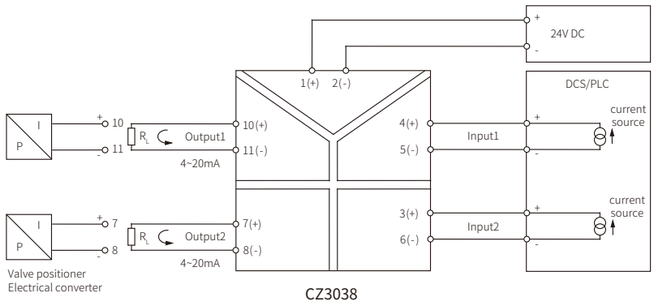
	CZ3067 1/1	CZ3038 2/2
Input		
Input Signal	0/4~20mA	0/4~20mA
Input Voltage Drop	⩽2V	⩽2V
Max. Input Current	＜30mA	＜30mA
Output		
Output Current/Load Resistance	0(4)~20mA / R_L⩽800Ω	0(4)~20mA / R_L⩽800Ω
Max.Output Current	＜30mA	＜30mA
Output Voltage/Load Resistance	0(1)~5V / R_L⩾330kΩ	0(1)~5V / R_L⩾330kΩ
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

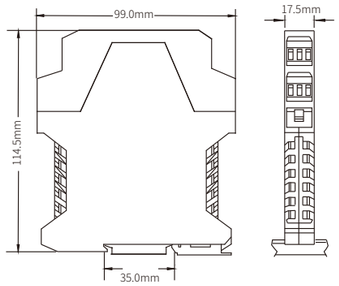
Features

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

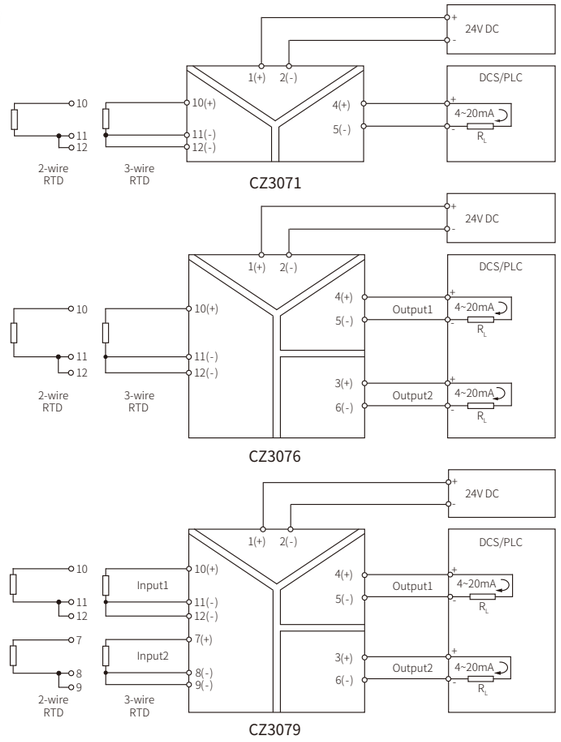
Note: Fault current of line break <4mA or other special requirements, need to be customized.

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

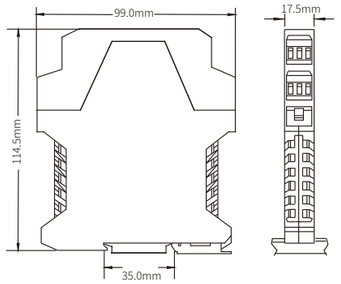
Features

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

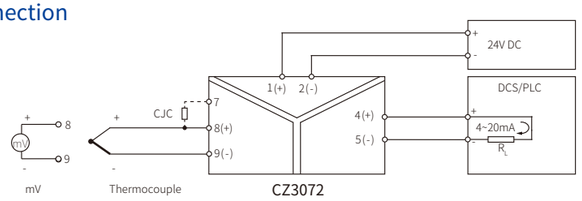
	CZ3072 1/1	CZ3074 1/2	CZ3079.TC 2/2
Input			
Input Signal(Customized mV signal)	T、E、J、K、N、R、S、B	T、E、J、K、N、R、S、B	T、E、J、K、N、R、S、B
Internal CJC Temperature Range	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C
CJC Precision	±1°C	±1°C	±1°C
Output			
Output Current/Load Resistance	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / 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.

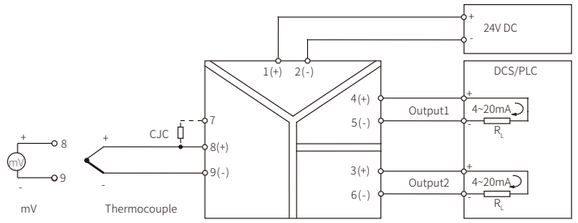
Dimensions



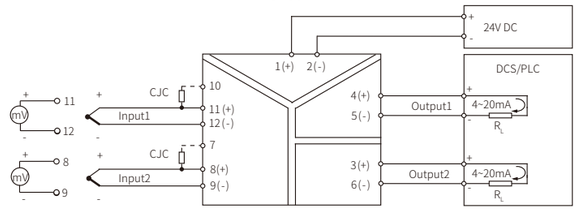
Connection



CZ3072



CZ3074



CZ3079.TC

RTD/TC Input(Loop Powered)

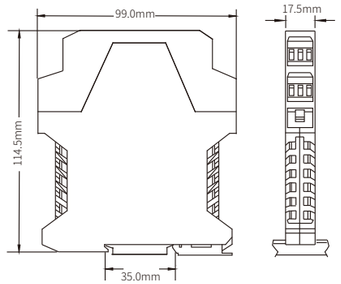
Features

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

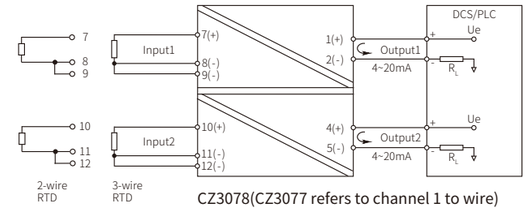
Note: Fault current of line break <4mA or other special requirements, need to be customized.

Dimensions

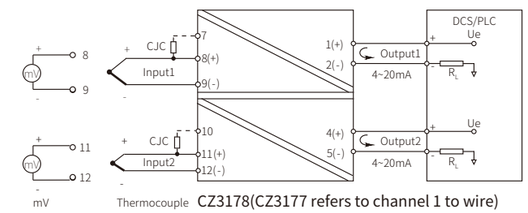


Note:
1. CZ3277/CZ3278 is universal temperature converter. Use standard terminal for RTD input.
2. Use CJC terminal for thermocouple input.9(CZ3079) should be shorted.

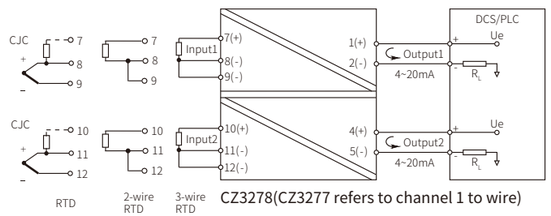
Connection



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

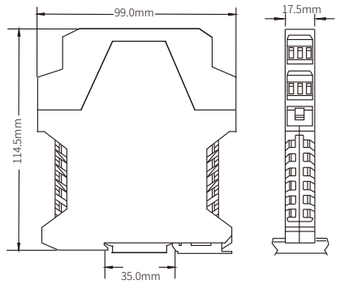
Features

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

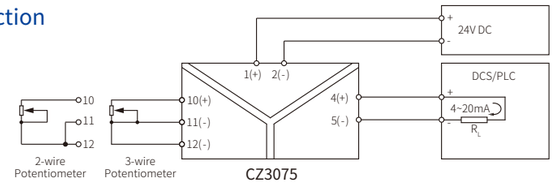
Note: Fault current of line break <4mA or other special requirements, need to be customized.

Dimensions

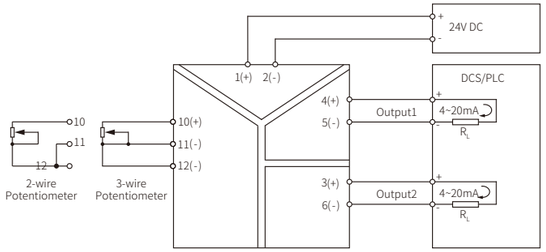


Note:
1. For 3-wire Input, keep the resistance of the three wires as equal as possible.
2. For 2-wire Input, terminal 11, 12(CZ3075/C3076.R) and 8, 9(CZ3079.R) should be shorted.

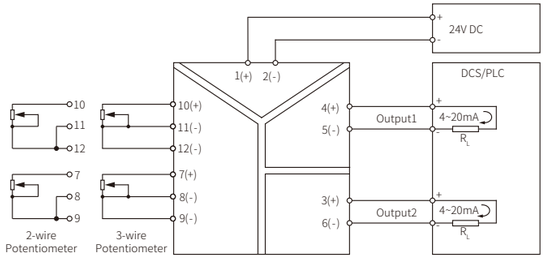
Connection



CZ3075



CZ3076.R



CZ3079.R

Pulse input

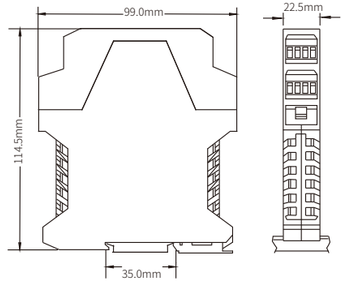
Features

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

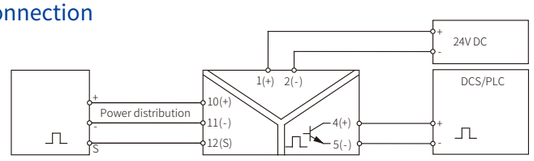
	CZ3051 1/1	CZ3052 2/2	CZ3053 1/2
Input			
Frequency Range	≤10kHz，Duty cycle≥30%	≤10kHz，Duty cycle≥30%	≤10kHz，Duty cycle≥30%
Pulse Voltage Level	4V≤V_H≤12V，V_L≤1V	4V≤V_H≤12V，V_L≤1V	4V≤V_H≤12V，V_L≤1V
Distribution Voltage(Specify when ordering)	No power distribution 5V or 12V or 24V@20mA	No power distribution 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.

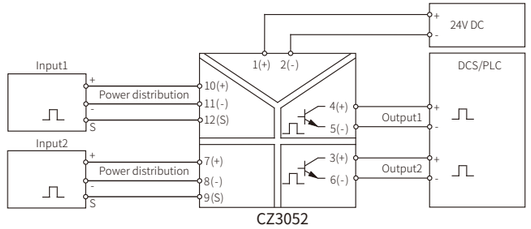
Dimensions



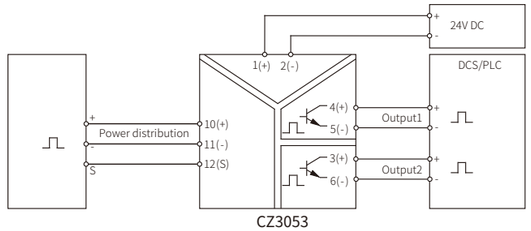
Connection



CZ3051



CZ3052



CZ3053

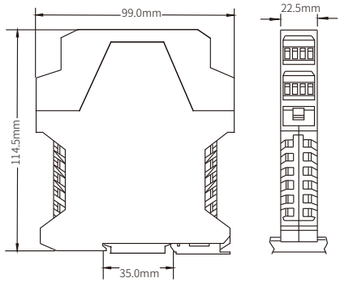
Frequency Converter

Features

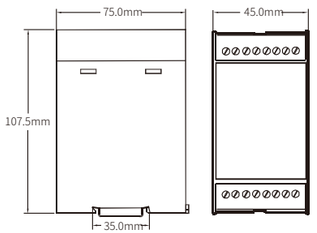
24V DC independent power supply
Acquisition of NPN, PNP, NAMUR, and frequency signals
Line fault detection(LFD)
Configurable by software(CZ3055) or membrane keypad(CZ3355)
LED display(CZ3355)

	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./℃	0.01% F.S./℃
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	NAMUR proximity switch，dry contact，frequency generator, PNP/NPN transistor outputs according to DIN 19234 standards	

Dimensions

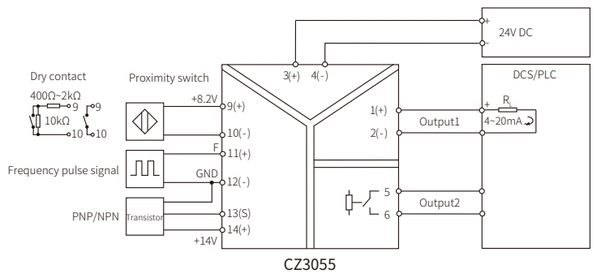


CZ3055

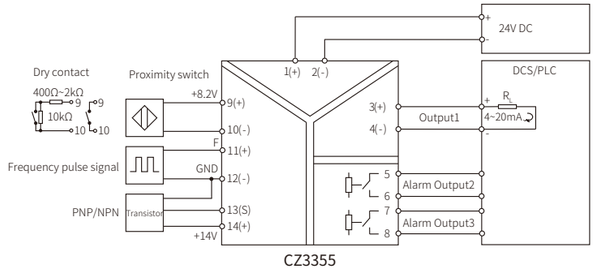


CZ3355

Connection



CZ3055



CZ3355

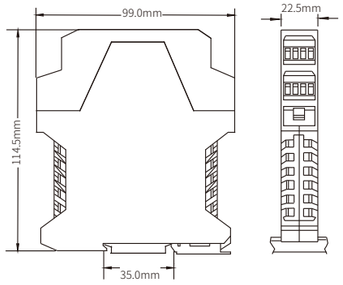
Vibration Transducer Input

Features

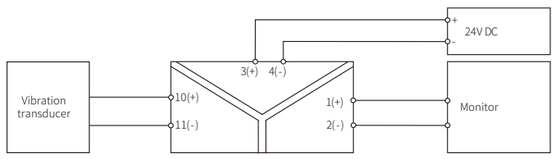
24V DC independent power supply
Vibration transducer input
-10~+10V voltage input/output

	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/℃
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

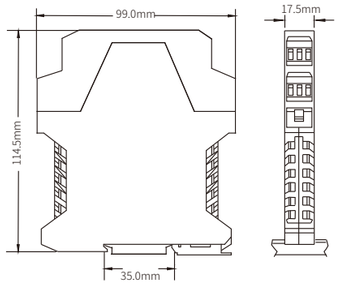
Features

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

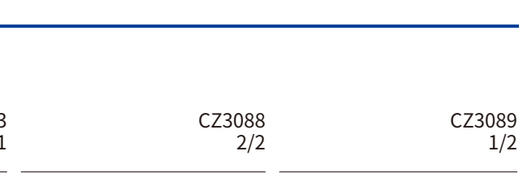
	CZ3083 1/1	CZ3088 2/2	CZ3089 1/2
Input			
Input Voltage	0~5V，1~5V，0~10V	0~5V，1~5V，0~10V	0~5V，1~5V，0~10V
Input Impedance	⩾100kΩ	⩾100kΩ	⩾100kΩ
Distribution Voltage(Specify when ordering)	No power distribution 10V or 15V@20mA	No power distribution 10V or 15V@20mA	No power distribution 10V or 15V@20mA
Output			
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

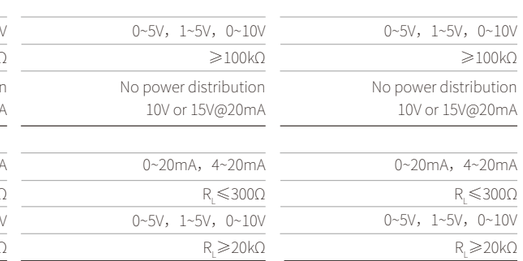
Note: CZ3088,CZ3089 can only order no power distribution module when current output.

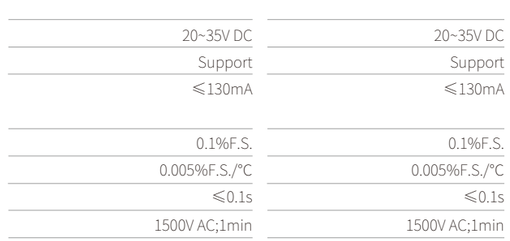
Dimensions



Connection







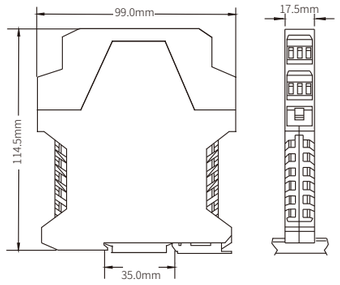
Communication Input

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



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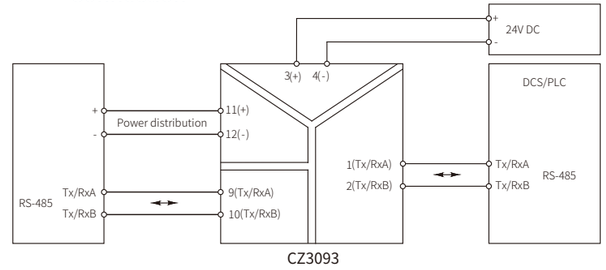


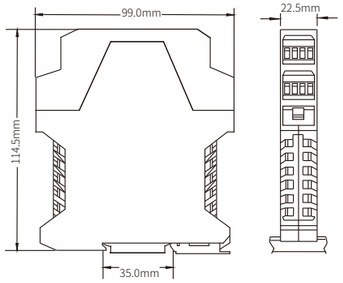
Signal Spliter

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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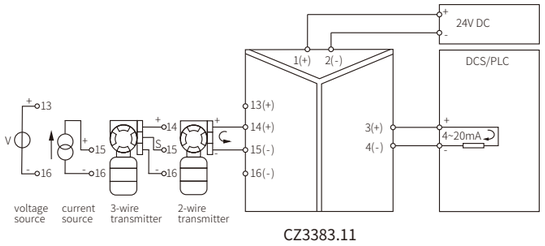
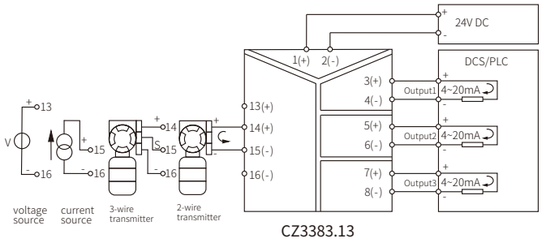


CZ3383.11



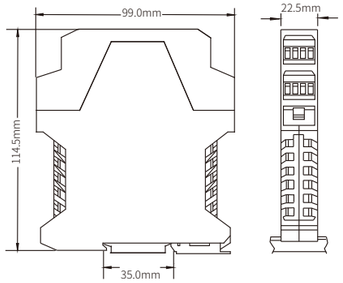
CZ3383.13

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



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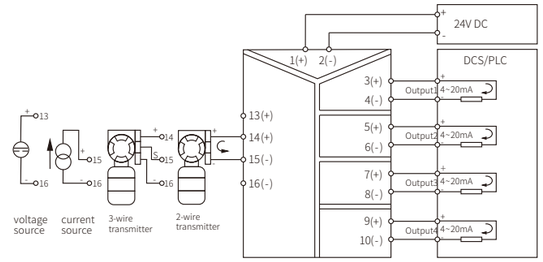
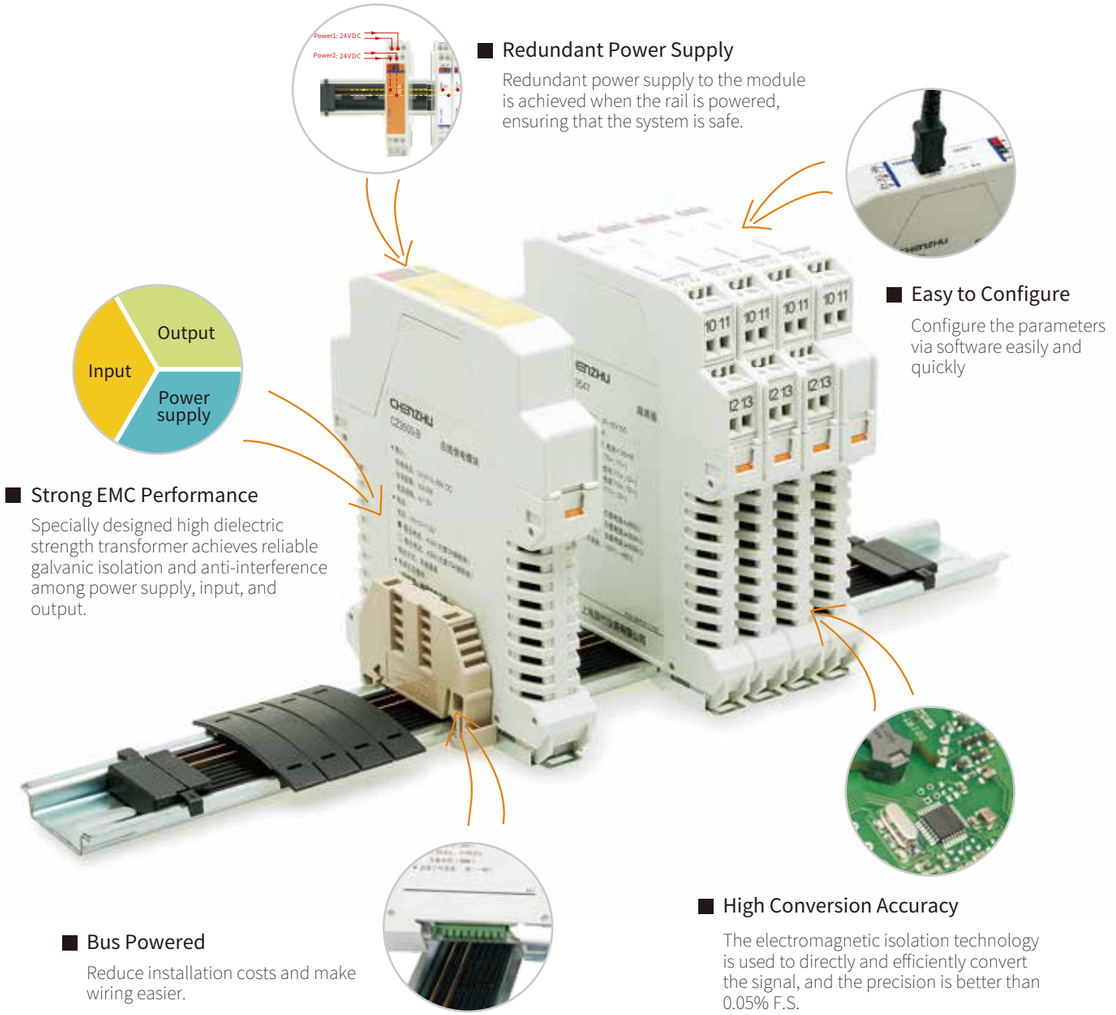


CZ3383

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.

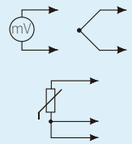
Field Instrument	Application	Module No.	Channels	Input	Output	Features	Page
	Analog Input	CZ3547	1/1	0/4~20mA	0/4~20mA	Independent powered	33
		CZ3535	1/2		0/1~5V		
		CZ3536	2/2				
	Analog Output	CZ3567	1/1	0/4~20mA	0/4~20mA	Independent powered	34
		CZ3538	2/2		0/1~5V		
	Temperature Converters	CZ3571	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

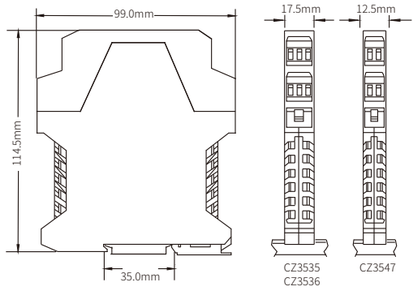
Analog Input

Features

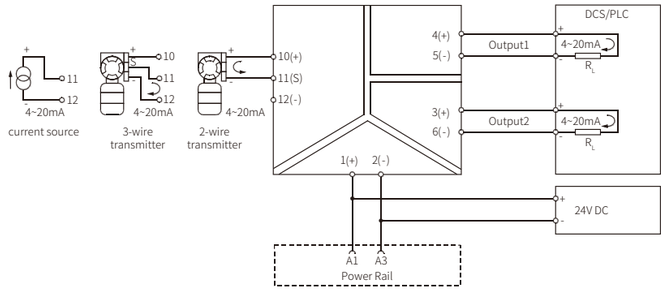
24V DC independent power supply
0/4~20mA current input
o/4~20mA current source output
Powerd via DIN bus or terminal

	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

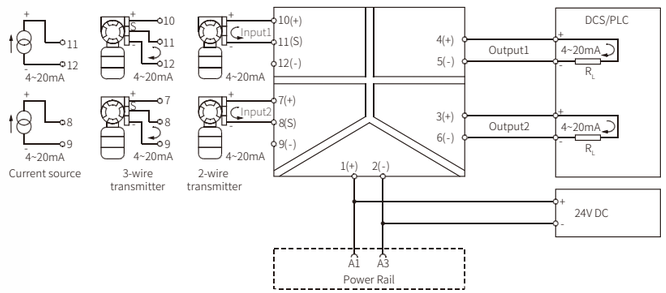
Dimensions



Connection



CZ3535(CZ3547 Output part only contains output 1)



CZ3536

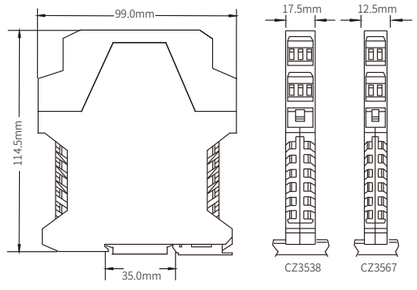
Analog Output

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



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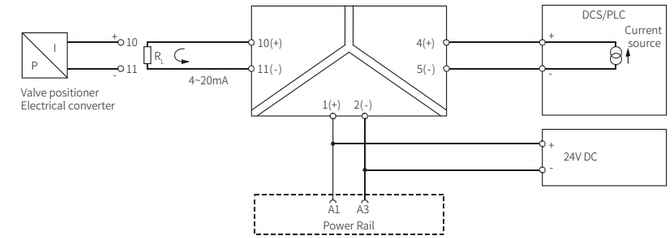
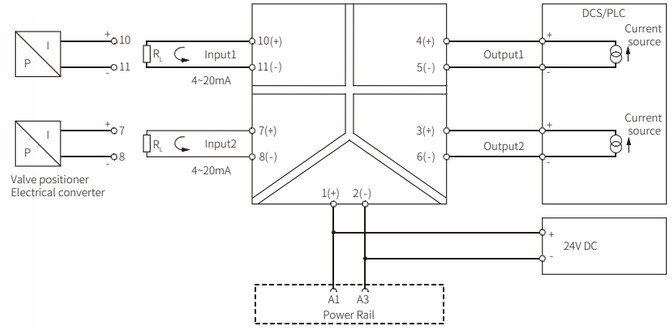


CZ3567



CZ3538

RTD Input

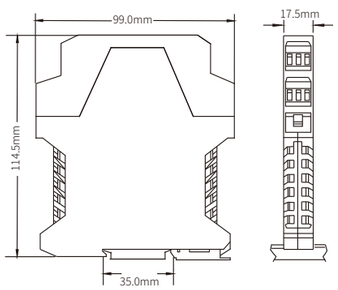
Features

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

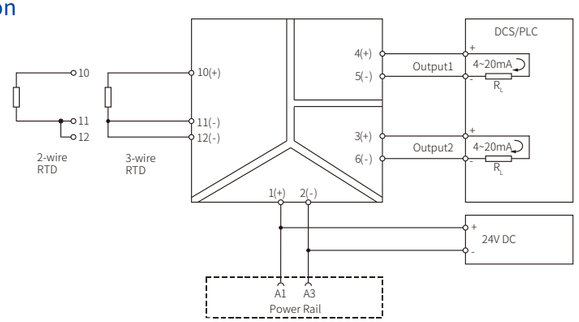
Note: Fault current of line break <4mA or other special requirements, need to be customized.

Dimensions

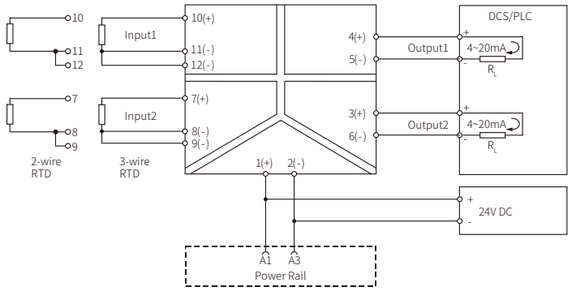


Note:
1. For 3-wire Input, keep the resistance of the three wires as equal as possible.
2. For 2-wire Input, terminal 11, 12(CZ3571/C3576), terminal 11, 12 and 8, 9(CZ3579) should be shorted.

Connection



CZ3576(CZ3571 Output part only contains output 1)



CZ3579

TC Input

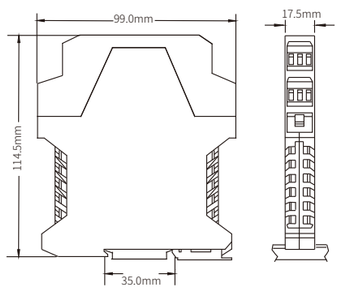
Features

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

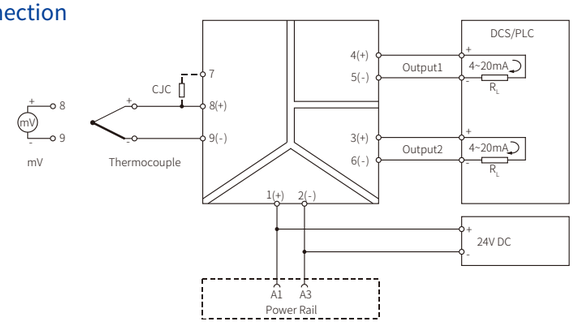
	CZ3572 1/1	CZ3574 1/2	CZ3579.TC 2/2
Input			
Input Signal(Customized mV signal)	T、E、J、K、N、R、S、B	T、E、J、K、N、R、S、B	T、E、J、K、N、R、S、B
Internal CJC Temperature Range	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C
CJC Precision	±1°C	±1°C	±1°C
Output			
Output Current/Load Resistance	0~20mA，4~20mA / R_L≤300Ω	0~20mA，4~20mA / 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.

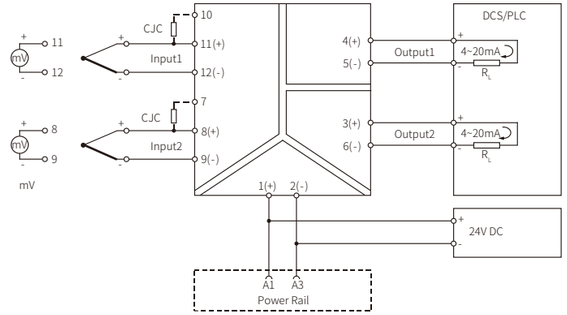
Dimensions



Connection



CZ3574(CZ3572 Output part 1)



CZ3579.TC

Potentiometer Input

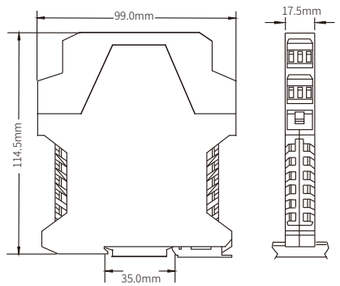
Features

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

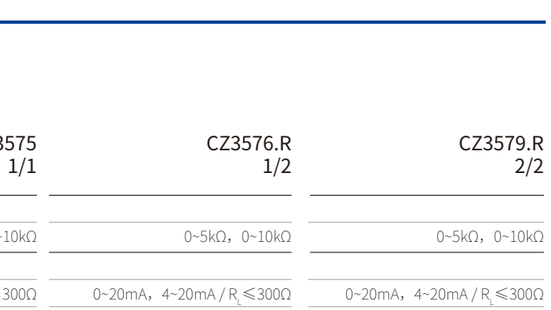
Note: Fault current of line break <4mA or other special requirements, need to be customized.

Dimensions

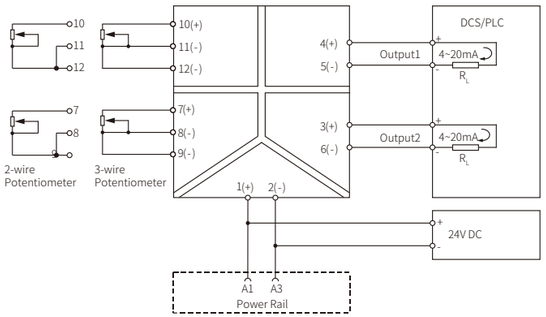


Note:
1. For 3-wire Input, keep the resistance of the three wires as equal as possible.
2. For 2-wire Input, terminal 11, 12(CZ3575/C3576.R), terminal 11, 12 and 8, 9(CZ3579) should be shorted.

Connection



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



CZ3579.R

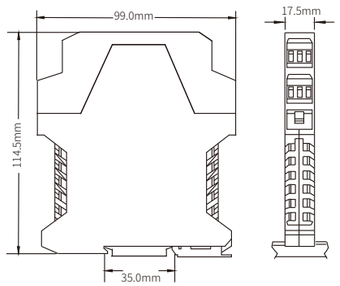
Redundant Power Feed Module

Features

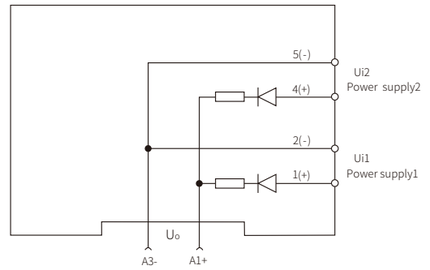
Used to deliver the power supply voltage to the DIN rail
Designed for application requiring redundant power
Supply rating 4 A or 8A, external fuse

	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

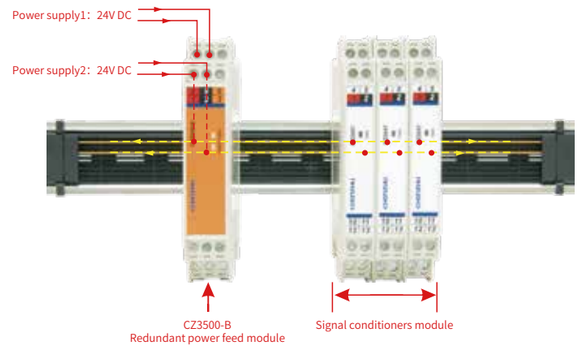
Dimensions



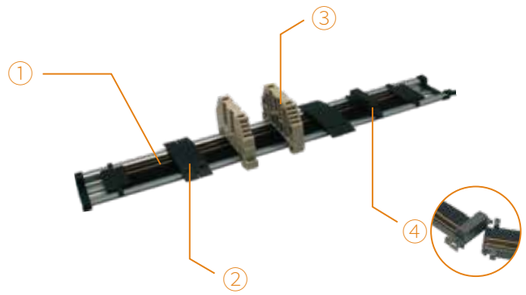
Connection



CZ3500-B

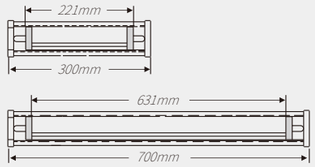


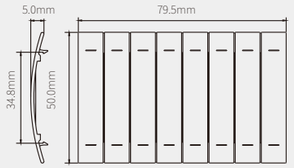
Accessories

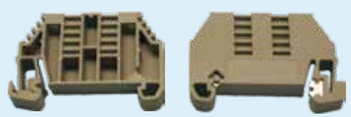
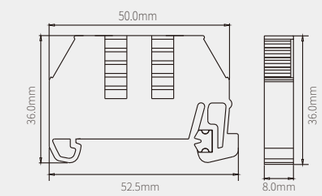


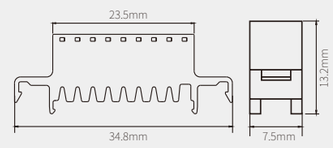
Componet:

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

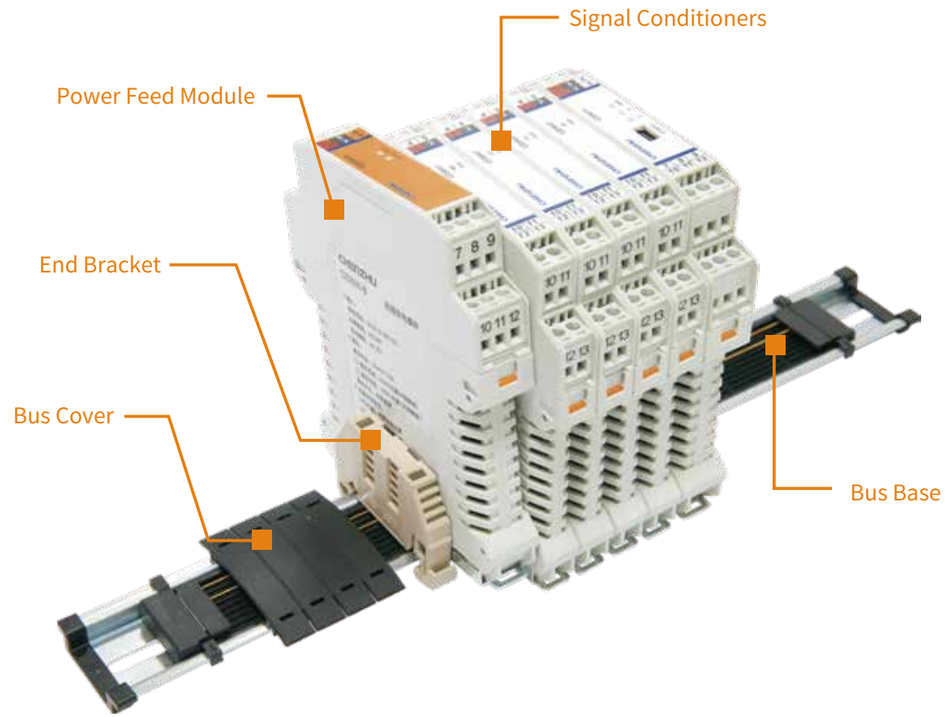
Bus cover	Dimensions	Description	
		Module no.	CZBR-C
		Function	Protect the exposed bus, can be split as needed

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: