

Ci-PP200

Profibus DP Signal Converter

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Summary

This product is a Profibus-DP protocol-based Fieldbus Isolator, in line with the Profibus DP protocol Standard, communication rate of (9.6K-6M)bps (optional (9.6K-12M)bps), 2-channel bus interface data forwarding, electrical signal isolation and cable system to provide a star link. The device can prolong the transmission distance of Profibus-DP bus, change the topology of bus, and have the performance of optical coupling isolation and reducing disturbance. This product features with industrial grade design, IP40 protection grade, wavy aluminum strengthening shell, 35mmDIN rail installation, DC (18~36V) wide power input (9~18VDC power model customizable), with relay alarm output, power supply redundancy and isolation protection etc.. -40~75 working temperature range, can meet the requirements of a variety of industrial sites.

Characteristic

- Provide 2-channel Profibus fieldbus, communication rate (9.6K-6M)bps (optional (9.6K-12M)bps)
- Support signal line short-circuit protection, fault self-recovery function
- 2 Ports isolation function, support star link and extend the Profibus-DP Fieldbus transmission distance
- Support electrical isolation, constant voltage 1000V and provide 4000V lightning protection function
- Provide 3 LED status indicators
- DC (18~36V) dual redundant power input (can be customized with 9~18VDC), With DC1500V voltage isolation and reverse connect protection
- IP40 protection, Metal case (wave grain aluminum reinforce case option), 35mmDIN-Rail Installation
- Operating Temperature: -40°C to 75°C suitable to various Industrial work situation

Specification

Bus data interface

- DB9F interface
- Bus data interface is fully compatible with Profibus-DP bus cable interface, communication rate: (9.6K-6M)bps (optional (9.6K-12M)bps)

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- Support signal line short-circuit protection, fault self-recovery function
- Provide 4000V lightning protection function
- Resistor: without terminal resistor, connect external when necessary.

Power

- DC (18~36V) dual redundant power input (can be customized with 9~18VDC), industrial standard voltage DC24V, consumption is less than 4W, With DC1500V voltage isolation and reverse connect protection, adopt 5 cores 5.08mm industrial terminal port (please use industrial standard power, otherwise it will occur unit error or damage).

Protection

- Relay: Fieldbus ports error Relay alarm output
- Contact rating: 1A @24V DC, Industrial Terminal port

Mechanical

- Dimensions (H×D×W): 136mm×104.8mm×52.8mm
- Weight: 800g
- Casing: IP40 protection, wave grain aluminum reinforce case option
- Installation: Wall mounting or DIN rail mounting

Environmental

- Operating Temperature: -40 °C ~75 °C (-40 °C ~85 °C optional)
- Storage Temperature: -40°C~85°C
- Ambient Relative Humidity: 5%~95%(non-condensing)

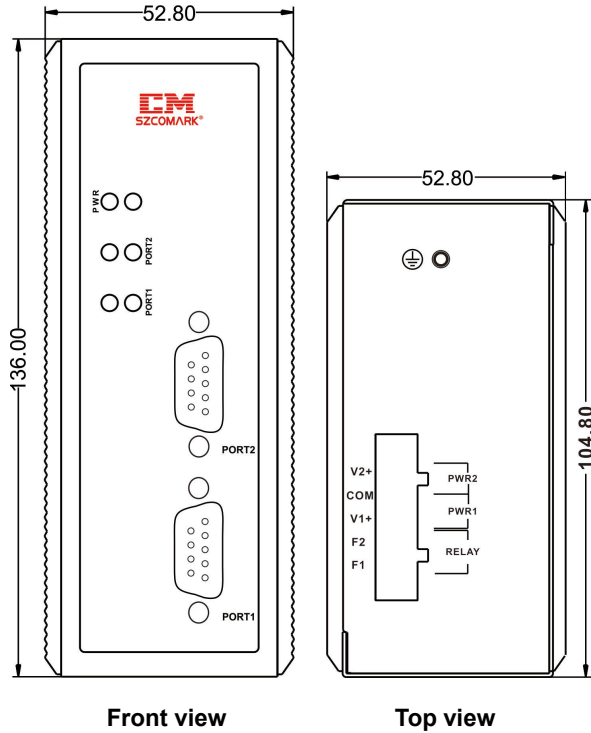
Warranty

- Warranty Period: 5 years

Certifications

- IEC61000-4-2(ESD): Power ±8KV Contact, ±15KV Air; Relay ±8KV Contact, ±15KV Air; Data Cable ±15KV Air
- IEC61000-4-4(EFT): Power ±4KV, Data Cable ±4KV
- IEC61000-4-5(Surge): Power ±2KV CM/ ±1KV DM, Relay ±2KV CM/ ±1KV DM
- IEC60068-2-27(Shock)
- IEC60068-2-32(Free Fall)
- IEC61000-6-2(General Industrial Standard)
- EN50121-4 (rail transit)

Overall Dimension



LED Indicators

LED	state	Description
PWR	off	Non-connect or error
	light	Power is ok
DP 1-2	off	Fieldbus is closed
	shine	Copper port is normal, can received data
	light	Copper Port is not working properly.

Terminal Resistor

The termination resistor is used to eliminate the signal reflection in the communication cable. In the actual configuration, the terminal resistor of the two terminals of the cable should be set to "ON" state, the terminal resistor of the intermediate node should be set to "OFF" state, otherwise it may lead to communication error. Due to the addition of the fiber optic converters, the cable is

divided to pieces, and the terminal resistor of the two terminals of every piece should be set to "ON" state. The node whose Terminal resistance is in the "ON" state is the cable terminal node, all connected to the A1, B1; According to the distance from the main station, the closer intermediate node should be connected to the A1, B1, others connected to A2, B2. All of the above are based on the Profibus-DP standard connection. It is recommended that users use the Profibus-DP standard connector and bus cable.

Connection

1. Bus cable connection method: electrical interface is a 9-pin Sub-D jack connector, which has a Pin buckle to fix the connector. The definition of the pin is in accordance with the Profibus standard. When connecting to this interface, it is recommended to use the Profibus bus's dedicated fast connector plug, not to connect the unused cable to the bus. The Profibus-DP standard bus cable connector(DB9-M) is directly inserted into the bus data interface (DB9-F) on the front panel of the photoelectric converter and fix it.

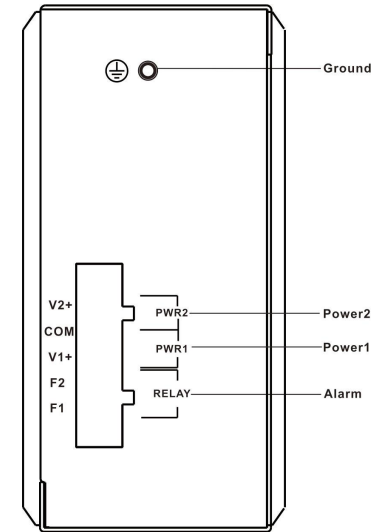
Appearance	Pin	Signal	Definition
	1	Shield	Shield or protect Ground
	2	-	-
	3	RxD/TxD -P	Data cable B
	4	-	-
	5	Ground	Data reference potential (ground)
	6	+5V Output	Power supply(+5V)
	7	-	-
	8	RxD/TxD -N	Data cable A
	9	-	-

2. Power and Relay alarm output connection:

- this device supports dual redundant input, V1 +, V2 + respectively connect the anode of power supply (DC18 ~36V), COM with cathode (double power sharing). (can be customized with 9~18VDC)
- Relay alarm output connection: F1, F2 in normal

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open. When the alarm is closed, make F1, F2 both contacted in series with external alarm circuit (e.g., buzzer, etc.).(When there is no electricity on device, the relay is closed.) As shown in the figure below.



DIN-Rail Installation

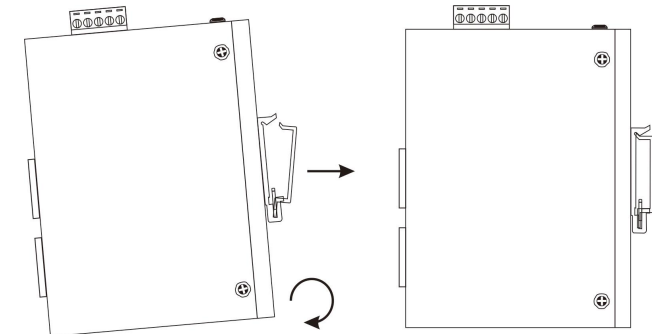
In order to use in industrial environments expediently, Ci-PP200 adopt 35mm DIN-Rail installation, the installation steps as follows:

Step 1: Examine the DIN-Rail attachment

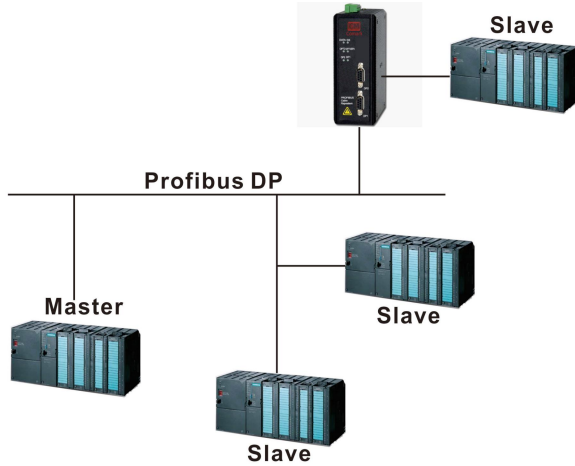
Step 2: Examine DIN Rail whether be firm and the position is suitability or not.

Step 3: insert the bottom of the DIN-RAIL into the slot, then insert the top of the DIN-RAIL into the slot.

Step 4: after insert the DIN-RAIL into the slot, check the device is installed into the slot firmly.



Typical Application



ground connection is via the landing screw on the sideboard, please use the professional landing line, which is less than 2.5 mm², and landing resistor is less than 50ohms.

Order Information

Part No.	Description
Ci-PP200	2 Profibus DP bus port, default communication rate is (9.6K-6M)bps (optional (9.6K-12M)bps).

Troubleshooting

Fault Symptoms	What to Do
PWR off	Check and ensure the power supply meets the requirement, and terminal wiring is correct or not.
DP 1~2 off	Profibus DP data communication is abnormal, check the connector.

Package Checklist

Please check accessories completely when open the box.

Packing list is as follows:

- Profibus DP signal converter (with industrial terminal block for power equipment)
- Product specification
- Product warranty card

Cautions

- Please use DC24V Industrial standard power(if customized with 9~18VDC, please use DC 12V Industrial standard power). Please use 0.75mm² above quality copper line.
- When relay alarm output, the voltage and current can exceed the rated one(1A@24VDC), otherwise, it will damage the unit.
- This device is precision communication instruction, please insure its ground connection well, the device