

YC-PW.02.08B **Bus Coupler**

Product Manual

Release: September 22, 2023

Version: V1.2



Figure 1. Bus Coupler

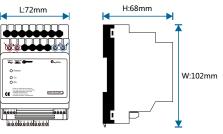


Figure 2. Dimensional Drawing - Front View Figure 3. Dimensional Drawing - Sideview

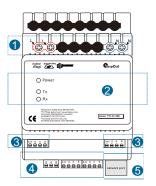


Figure 4. Product Information

Product Overview

Bus Coupler (see Figure 1) serves as a system power supply unit, typically installed in a distribution box. DIN rail installation, occupies 4P module units. It serves as a junction box-to-junction box cascading module. When the bus cascade exceeds 400 meters, this module must be additionally equipped. It features a 4-port expansion capability and provides a 24V/800mA power supply, which can deliver power to up to 6 devices.

Function Description

- Standard 35mm DIN rail installation: Occupies 4P module units.
- AC 110~250V (50/60Hz) wide voltage supply.
- Utilizes industrial-grade DC-DC isolated power module, providing 24V/800mA output.
- Equipped with isolated protection circuits, supports hot-swapping, and includes overvoltage and overload protection.
- Suitable for networking in systems with bus, tree, or star topologies when connecting distribution boxes.
- Features strong anti-interference capability, long transmission distance, and high speed (9600 baud rate).
- Effectively extends the bus length by up to 400 meters.

Precautions

- Use CAT5E or RVV4*0.75 four-core wire for bus wiring.
- After installation, check all connections to ensure they are correctly connected.

Product Information

Product Dimensions: See Figures 2 and 3

Product Wiring: See Figure 5

Product Information: See Figure 4

- 1. 220V access: AC 220V input mode, aperture can be connected to $\phi 4$ wire.
- 2. LED Indicators:
- Power: Power indicator light.
- Tx: Bus signal sending indicator light
- Rx: Bus signal receiving indicator light
- Bus Interface: 24V、G、A、B,Regardless of in and out, left in and right out, right in and left out, the maximum transmission distance is 200 meters.
- 4 Bus Interface:
- G、A、B the maximum transmission distance is 200 meters, which is used for bus signal input.
- 24V、G、A、B the maximum transmission distance is 200 meters, which is used for bus signal output.
- 5. Bus network port:
- Using 568B wiring mode, line order: 1. orange white, 2. orange, 3. green white, 4. blue, 5. blue white, 6. green, 7. brown white, 8 brown, a total of one network port, left in and right out, right in and left out, can be used to access the bus network port device.

Note: Network port line order definition, see page 2, bus specification.

Product Installation

See Figures 6-8

- Step 1. Secure the 35mm rail with screws.
- Step 2. Remove the snap-on cover from the bus coupler.
- Step 3. Press the entire module onto the rail and slide it until it is in the correct position, then snap the cover into place.

Safety Warning 🔔



- Tightening torque should not exceed 0.4 Nm.
- Input power wire: Max 4mm²: Load wire: Max 1mm².
- Installation location: Distribution box.
- Do not connect the YC-BUS interface incorrectly, as it may damage the equipment.
- The YC-BUS interface must not be connected to AC power; otherwise, it will damage all devices on the bus.
- Ensure a good ventilation environment.
- Do not expose to rain, contact with other liquids, or corrosive gases.

Packing List

YC-PW.02.08B*1/User Manual*1/Certificate of Conformity*1

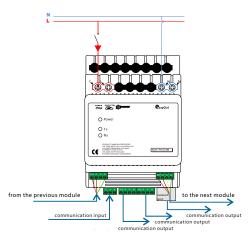


Figure 5. Product Wiring Diagram

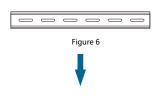




Figure 7



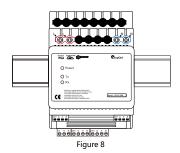


Figure 6-8.installation drawing

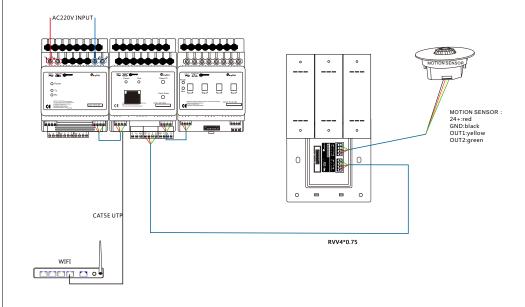
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Technical Parameters

Basic Parameters	
Power Input	AC 110~220V(50/60Hz)
Output Voltage	24VDC±10%
Output Current	0.8A/800mA
Extend Distance	effectively extend the distance by 400 meters
Bus Interface	5* bus interface, single interface extension 400 meter
Bus Port	1*RJ45 network port (with indicator light), Class B wiring (single port extension 400 meters)
Transmission Rate	9600 baud rate
Protection	overload and overvoltage protection
External Environment	
Operating Temperature	-5°C~45°C
Operating Relative Humidity	≤90%
Storage Temperature	-20°C~60°C
Storage Relative Humidity	≤93%
Product Specifications	
Dimensions (L*W*H)	72 mm*106 mm*68 mm
Net Weight	≤233 g/pcs
Enclosure Material	flame retardantPP
Installation Method	standard 35mm DIN rail mounting (see Figure 6-8)
Protection Level	NONE

System Diagram





Bus Specification

Bus interface	4-core wire: RVV4*0.75	UTP: CAT5/CAT5E
24V	RED	BROWN WHITE/BROWN
GND	BLACK	BLUE WHITE/BLUE
Α	YELLOW	ORANGE WHITE/GREEN WHITE
В	GREEN	ORANGE/GREEN