Industrial Ethernet Switch

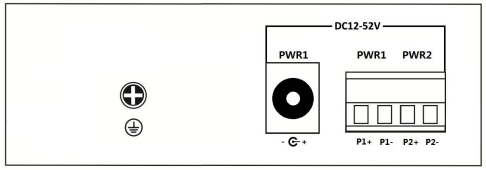
5FE Ethernet Switch

User Manual

Caution

The device contains precision components, so please handle it with care and avoid strong vibrations to prevent any impact on its performance. If you find that the device has been damaged during transportation or any parts are missing, please notify our company, and we will resolve the issue for you as soon as possible.

Input Power



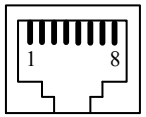
This product offers two ways of power inputs: 4-pin terminal block and DC-connector input, please refer to the printing mark for wiring. The 4-pin terminal block provides two direct-voltage powering DC12~52V with reverse polarity protection, the DC-connector input features 1 DC12~52V input without reverse polarity protection

Communication Interface

Ethernet Interface

The Fast Ethernet interface is located on the front panel of the device, with RJ45 as the interface type. The pinout for the RJ45 ports is defined in the diagram, and connections use either unshielded twisted pair (UTP) or shielded twisted pair (STP) cables, with a maximum distance of 100 meters. For 100 Mbps connections, Category 5 cables rated at 100Ω are used, while 10 Mbps connections can use Category 3, 4, or 5 cables, also rated at 100Ω.

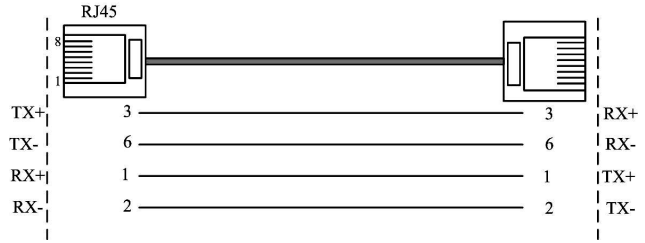
The RJ45 ports support automatic MDI/MDI-X operation, allowing for the use of straight-through cables to connect to PCs or servers and crossover cables to connect to other switches or hubs. In a straight-through cable (MDI), pins 1, 2, 3, and 6 are directly connected. For MDI-X ports on switches or hubs, a crossover cable is used: 1→3, 2→6, 3→1, and 6→2. The pin definitions for 10Base-T/100Base-TX in MDI/MDI-X applications are shown in the table.



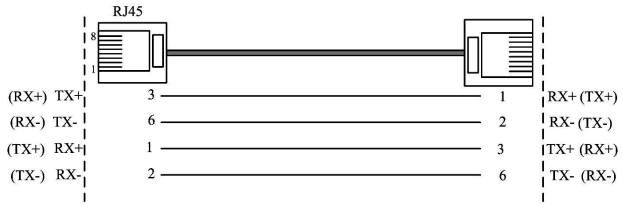
PIN No.	MDI Signal	MDI-X Signal
1	TX+	RX+
2	TX-	RX-
3	RX+	TX+
6	RX-	TX-
4, 5, 7, 8	—	—

Note: "TX±" refers to the transmit data ±, "RX±" refers to the receive data ±, and "—" indicates unused.

MDI(Straight-through cable):



MDI-X(Cross-over cable):



LED Indicator

The LED indicators on the front panel display the system operation and port status, making it easier to identify and troubleshoot issues. The specific meanings of the indicators are shown in the table.

Indicator Instruction		
Printing	Status	Status Indicators
PWR	On	Power (PWR) connected and operating normally
	Off	Power (PWR) not connected or operating abnormally
L/A(right)	On	Port has established a valid network connection
	Blinking	Port is in network transmission state
	Off	Port has not established a valid network connection

Installation

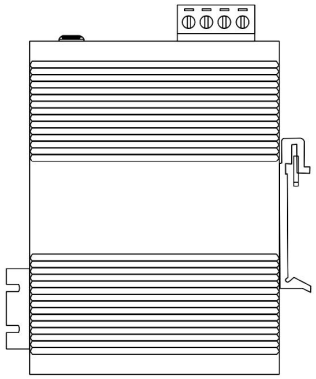
Before installation, confirm the operating environment of the device: power voltage, installation space, installation method, etc. Please carefully review the following installation requirements: Check for the necessary cables and connectors for installation. Verify that the cables are appropriately configured and in place (not exceeding 100 meters).

The product does not provide installation components; users must prepare the components for their chosen installation type, including screws, nuts, and tools, to ensure a secure installation.

Din Rail Installation

The device uses a 35mm standard DIN rail installation, which is very convenient for most industrial applications. The installation steps are as follows:

- Check if you have the necessary tools and accessories for DIN rail installation (this product includes installation accessories).
- Ensure that the DIN rail is securely mounted and that there is a suitable location for installing the product.
- Insert the lower part of the DIN rail mounting bracket into the DIN rail (the lower part has a spring support), and then snap the upper part of the mounting bracket onto the DIN rail (insert the lower part slightly, applying a bit of force to keep the device balanced while securing the upper part).
- After securing the DIN rail to the mounting bracket, check and confirm that the product is reliably installed on the DIN rail.



Cable Deployment

The cable layout must meet the following conditions:

- Before laying the cables, check whether the specifications, models and quantities of all cables meet the requirements.
- Before laying the cables, check whether the cables are damaged, whether there are factory records and quality assurance certificates to prove their quality.
- There should be no broken wires or joints in the middle of the cables.
- The cables should be arranged straight and neatly in the aisle, and the turns should be even, smooth and straight.
- The cables should be straight in the trough and should not go out of the trough to avoid blocking other inlet and outlet holes. They should be tied and fixed at the cable exiting the trough or at the cable bends.
- The user cables and power cables should be laid separately. When cables, power cables and ground cables are laid in the same trough, they cannot be overlapped or mixed. When the cables are too long, the cables must be placed in the middle of the wiring rack in a regular manner and cannot be pressed on other cables.
- When laying the pigtails, prevent the optical cables from tangling and try to reduce the turns as much as possible, and the turning radius should not be too small (too small a turn will cause serious link loss). The binding should be moderately tight and not too tight. When laying on the wiring rack, it should be placed separately from other cables.