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Make network communication more reliable

TNS5500D Series
Managed Industrial Ethernet Switch
Quick Installation Guide

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【Package Checklist】

Please check the integrity of package and accessories while first using the switch.

1. Industrial Ethernet switch
2. Quick installation guide
3. CD
4. Certification
5. Warranty card

If any of these items are damaged or lost, please contact our company or dealers, we will solve it ASAP.

【Product Overview】

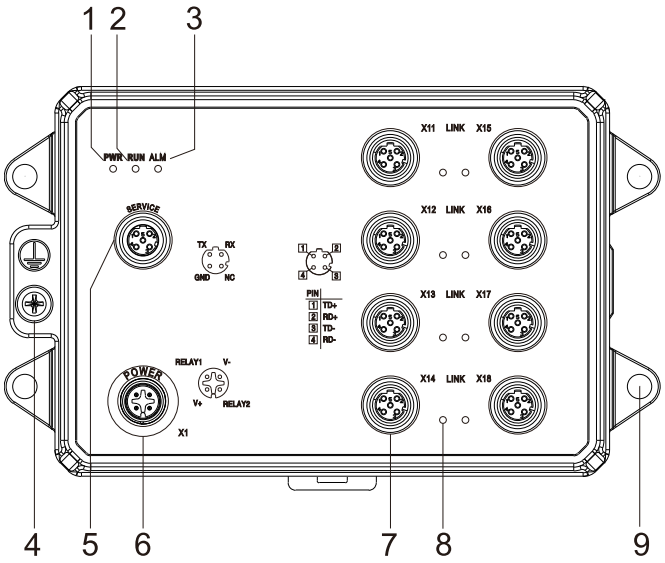
The products of this series are 8-port 100M layer-2 managed industrial Ethernet switches designed for rail transit industry. Models as follows:

Model I. TNS5500D-8T-P110 (8 100M M12, 110VDC).

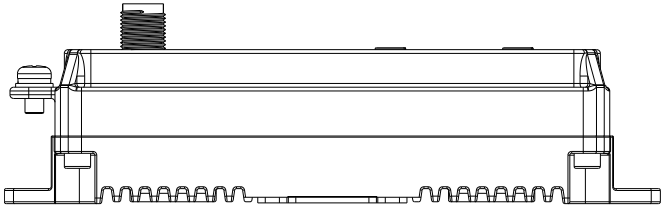
Model II. TNS5500D-8T-P24 (8 100M M12, 24VDC).

【Panel Design】

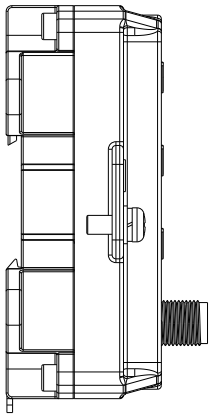
➢ **Front View**



➢ **Bottom view**



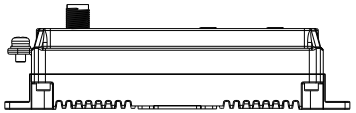
➢ **Right view**

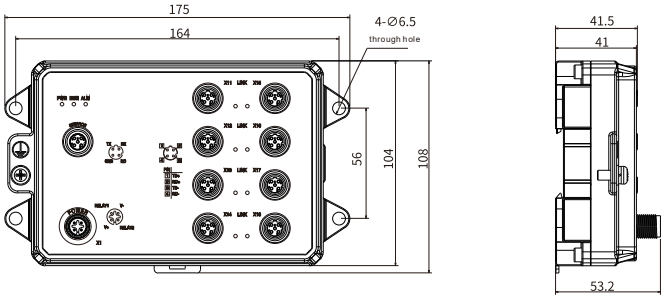


1. Power input status indicator PWR
2. Device running status indicator RUN
3. Relay alarm indicator ALM
4. Grounding screw
5. SERVICE debug serial port
6. Power supply input and relay output terminal blocks
7. 10/100Base-T(X) 100M copper port (X11-X18)
8. 100M copper port connection indicator (X11-X18)
9. Lugs

【Mounting Dimension】

Unit: mm





Notice Before Mounting:

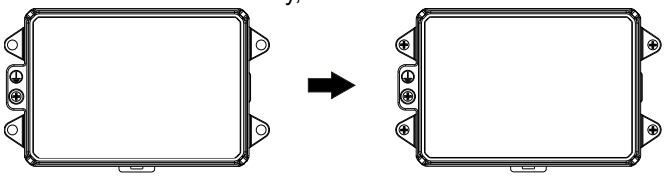
- Don't place or install the device in area near water or moisture, keep the relative humidity of the device surrounding between 5%~95% without condensation.
- Before powering on the device, check the power specifications supported by the device to prevent device damage due to overvoltage.
- The device surface temperature is high after running; please don't directly contact to avoid scalding.

【Wall-mounted Device Mounting】

Step 1 On the wall of device mounting, place the device on the wall for reference or refer to the mounting

dimension to mark two screw positions.

Step 2 Hang the device on the labeled wall; align the bolt to the labeled position, then screw the bolt to enhance stability, installation ends.



【Wall-mounted Device Disassembling】

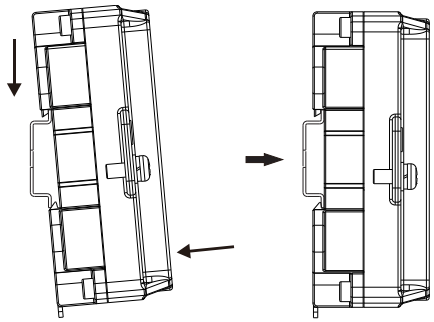
Step 1 Power off the device.

Step 2 Hold the device steady and unscrew the screw on the wall.

Step 3 Lift the device upward slightly; take out the device, disassembling ends.

【DIN-Rail Mounting】

The product adopts 35mm standard DIN-Rail mounting which is suitable for most industrial scenes, mounting steps are as follows:



Step 1 Check if the DIN-Rail spring bracket of the device is installed firmly.

Step 2 Clip the upper part of the DIN-Rail mounting kit, i.e. the fixed side, into the DIN rail.

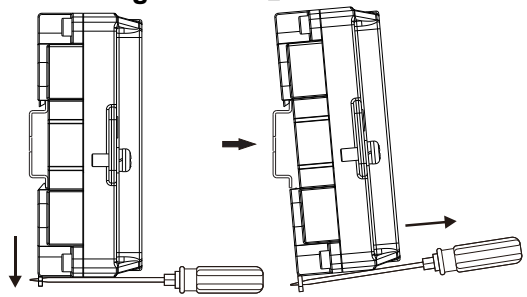
Step 3 Press the lower side of the device and insert the lower part of DIN-Rail mounting kit (the side with spring support) into DIN-Rail.

Tips:

The DIN-Rail spring support is a metal sheet that can move up and down, and there will be a sound after it is clamped in.

Step 4 Check and confirm the product is firmly installed on DIN rail, then mounting ends.

【Disassembling DIN-Rail】



Step 1 Power off the device.

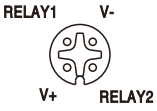
Step 2 Use a slot type screwdriver or other tools to move the DIN rail spring support downward; At the same time, move the lower side of the device outward and move out the lower part of the DIN rail mounting kit.

Step 3 Lift the device upward slightly, move out the upper part of DIN-Rail mounting kit. Disassembling ends.

Notice Before Powering on:

- Power ON operation: First insert the power supply terminal block into the device power supply interface, and then plug the power supply plug and power on.
- Power OFF operation: First, remove the power plug, then remove the wiring section of terminal block. Please pay attention to the above operation sequence.

【Power Supply Connection】



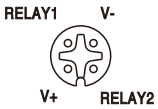
This series device provides 1 DC power input, and the interface adopts M12 A-Coded 4-Pin connector (male), in which the power supply occupies two pins V- and V+, which can be connected with M12 A-Coded 4-Pin slot (female).

- Model I power input range: 110VDC(66~154VDC);
- Model II power input range: 24VDC (9~36VDC).

The pin definitions of M12 (male) are shown as follows:

Definition	V+	V-	RELAY1	RELAY2
Description	Positive power input	Negative power input	Relay output terminal blocks	

【Relay Connection】



This series of device provides 1 M12 A-Coded 4-Pin connector (male) that supports 1 relay alarm output. RELAY1 and RELAY2 are a set of normally open contacts of the device alarm relay. They are open circuit in the state of normal non alarm, closed when any alarm information occurs. For example, they are closed when powered off, and send out alarm. The relay supports the output of network abnormality alarm. It can be connected to alarm light, alarm buzzer, or other switching value collecting devices, which can timely inform operators when the alarm occurs.

【Service Port Connection】

This series of device provides a program debugging port of M12 D-Coded 4-Pin (Female) connector, which can be connected with PC for CLI command management of the device. The interface adopts M12 D-Coded 4-Pin slot (male). The pin definitions of M12 are shown as follows:

Definition	TX	RX	NC	GND
Description	RS-232 send signal	RS-232 receive signal	Reserved	Ground

【Communication Interface Connection】

This series of device provides 8 10/100Base-T(X) interfaces, the interface type is M12 D-Coded 4-Pin slot (female). The definitions of M12 pin are as follows:

Pin No.	**Pin Definition**	**Pin Description**

1	TD+	Positive send data of 100M Ethernet
2	RD+	Positive receive data of 100M Ethernet
3	TD-	Negative send data of 100M Ethernet
4	RD-	Negative receive data of 100M Ethernet

【Checking LED Indicator】

The series of devices provide LED indicators to monitor its operating status, which has simplified the overall troubleshooting process. The function of each LED is described in the table below:

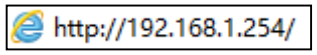
LED	Indicate	Description
PWR (X1)	ON	PWR is connected and running normally
	OFF	PWR is disconnected and running abnormally
RUN	ON	The device is powering on or the device is abnormal.
	OFF	The device is powered off or the device is abnormal
	Blinking	Blinking 1 time per second, system is running normally
ALM	ON	Port link has alarm
	OFF	Port link has no alarm
Link (X11-X18)	ON	Ethernet port has established a valid network connection
	Blinking	Ethernet port is in an active network status
	OFF	Ethernet port has not established valid network connection

【Logging in to WEB Interface】

This device supports WEB management and configuration. Computer can access the device via Ethernet interface. The way of logging in to device's configuration interface via IE browser is shown as below:

Step 1 Configure the IP addresses of computer and the device to the same network segment, and the network between them can be mutually accessed.

Step 2 Enter device's IP address in the address bar of the computer browser.



Step 3 Enter device's username and password in the login window as shown below.

Step 4 Click "OK" button to login to the WEB interface of the device.

Note:

- The default IP address of the device is "192.168.1.254".
- The default user name and password of the device are "admin".
- If the username or password is lost, user can restore it to factory settings via management software; all modified configurations will be cleared after restoring to factory settings, so please backup configuration file in advance.
- Please refer to user manual for specific configuration method of logging in to WEB interface and other configurations about network management function.

【Specification】

Panel	
Power supply interface	M12(Male), 4-Pin A-Coded, the power supply occupies two pins, V- and V+
Relay interface	M12 (Male), 4-Pin A-Coded, the relay occupies two pins, RELAY1 and RELAY2
100M Ethernet port	10/100Base-T(X), M12(Female) 4-Pin D-Coded, Automatic Flow Control, Full/Half Duplex Mode, MDI/MDI-X Autotunning
Service debugging port	M12 (Female), 4-Pin A-Coded
Indicator	Power indicator, running indicator, alarm indicator, interface indicator
Switch Property	
Backplane bandwidth	7.6G
Cache size	1Mbit
MAC address table	8K
Power Supply	
Input power supply	M12 A-Coded 4-Pin (male) connector • Model I: 110VDC (66~154VDC) • Model II: 24VDC (9~36VDC)
Power Consumption	
No-load	2.1W@24VDC
Full-load	3.8W@24VDC
Working Environment	
Working temperature	-40 ~ 75℃, in which working ≥10 minutes at 85℃
Storage temperature	-40~85℃
Working humidity	5%～95% (no condensation)
Protection grade	IP67(metal shell)