



TNS5800 Series Layer 3 Rack-Mounted EN50155 Industrial Ethernet Switch Quick Installation Guide

【Package Checklist】

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

- | | |
|----------------|------------------|
| 1. Switch ×1 | 2. Lugs |
| 3. Certificate | 4. 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 layer 3 EN50155 rack-mounted industrial Ethernet switches. For convenience, the products of this series adopt the following number on the left in this guide, please confirm the number of your product:

Model I. TNS5800-8P4GT-2P110-N (8 100M PoE M12 + 4 Gigabit M12, 110VDC dual power supply input)

Model II. TNS5800-8GP4GT-2P110-N (8 Gigabit PoE M12 + 4 Gigabit M12, 110VDC dual power supply input)

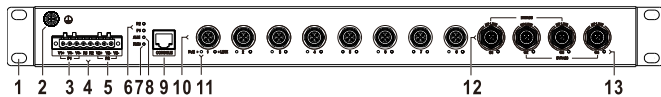
Model III. TNS5800-16P4GT-2P110-N (16 100M PoE M12 + 4 Gigabit M12, 110VDC dual power supply input)

Model IV. TNS5800-16P4GT-2P24-N (16 100M PoE M12 + 4 Gigabit M12, 24VDC dual power supply input)

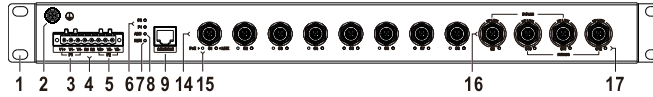
Model V. TNS5800-16GP4GT-2P110-N (16 Gigabit PoE M12 + 4 Gigabit M12, 110VDC dual power supply input)

【Panel Design】

➤ Front view

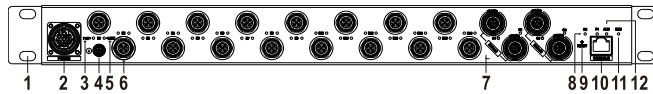


Model I

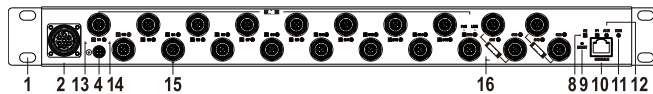


Model II

1. Lugs
2. Grounding screw
3. Power P1 input terminal (P1)
4. Relay alarm output terminal block
5. Terminal block for power P2 input (P2)
6. Power supply indicator (P1-P2)
7. Running indicator (RUN)
8. Alarm indicator (ALM)
9. CONSOLE port
10. 100M PoE M12 interface (1--8)
11. PoE indicator (1--8)
12. Gigabit Bypass M12 interface (Bypass: G1-G3, G2-G4)
13. Ethernet port indicator (1-8, G1-G4)
14. Gigabit PoE M12 interface (G1-G8)
15. PoE indicator (G1-G8)
16. Gigabit Bypass M12 interface (Bypass: G9-G11, G10-G12)
17. Ethernet port indicator (G1-G12)



Model III, Model IV



Model V

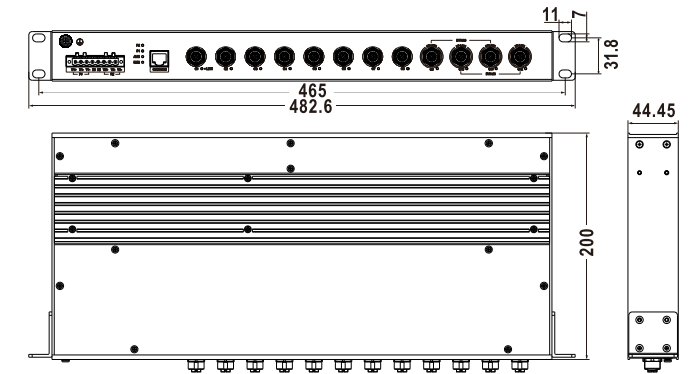
1. Lugs
2. Power supply input and relay output interface
3. PoE indicator (E1-E16)
4. Grounding screw
5. Ethernet port indicator (E1-E16, G1-G4)
6. 100M PoE M12 interface (E1-E16)

7. Gigabit Bypass M12 interface (Bypass: G1-G2, G3-G4)
8. Power supply indicator (P1-P2)
9. RESET button
10. CONSOLE port
11. Running indicator (RUN)
12. Alarm indicator (ALM)
13. PoE indicator (G1-G16)
14. Ethernet port indicator (G1-G20)
15. Gigabit PoE M12 interface (G1-G16)
16. Gigabit Bypass M12 interface (Bypass: G17-G18, G19-G20)

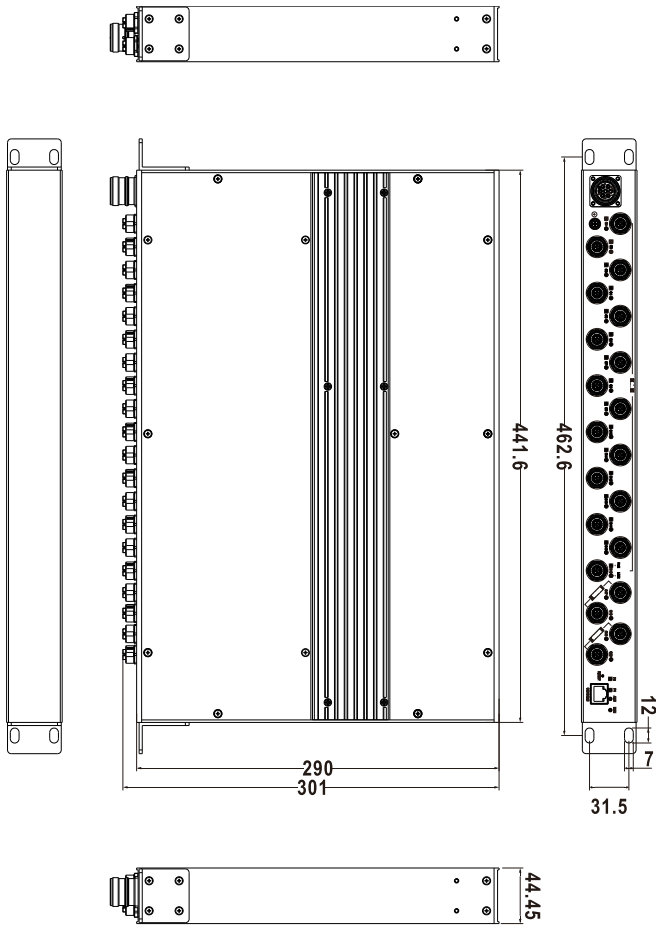
【Mounting Dimension】

Unit: mm

➤ Model I and Model II



➤ Model III, Model IV and Model V

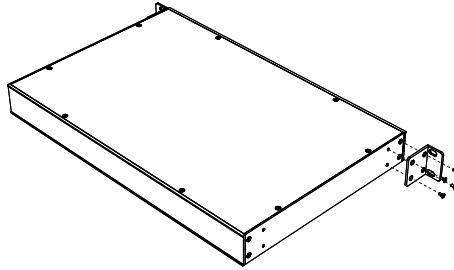


Notice Before Mounting:

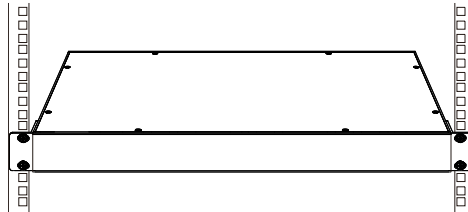
- Don't place or install the device in area near water or moisture, keep the relative humidity of the device surrounding between 5%~95% without condensation.
- Before powering on the device, check the power specifications supported by the device to prevent device damage due to overvoltage.
- The device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

【Install Rack-mounted Device】

- Step 1** Select the device mounting location to ensure enough size.
- Step 2** Adopt bolts to install the mounting lugs in the device position as figure below



- Step 3** Place the device on the rack surface plate; adopt 4 screws to mount the right and left mounting lugs on the rack.



- Step 4** Check and confirm the product is firmly installed on the rack, then mounting ends.

【Disassembling Device】

- Step 1** Power off the device.
- Step 2** Unscrew the fixed mounting lug screw on the rack.
- Step 3** Shift out the device from rack, disassembling ends.



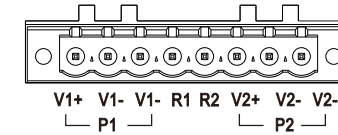
Notice Before Powering On:

- 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.

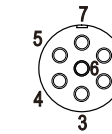
【Power Supply Connection】

➤ Model I and Model II



The Model I and Model II provide two independent DC power supply systems, P1 and P2, which support reverse connection protection and power redundancy backup. Power interface adopts 8-pin 5.08mm pitch terminal blocks (includes 6-pin power supply), pin definition are shown as above. Power supply input range: 110VDC (66~156VDC)

➤ Model III and Model V

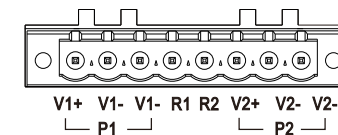


The Model III and Model V provide two independent DC power supply systems, P1 and P2, which support reverse connection protection and power redundancy backup. The power supply interface adopts M23 7-Pin pin (male) connector. Input voltage of power supply: 110VDC The pin definitions of M23 (male) are shown as follows:

Pin No.	1	2	3	4	5	6	7
Definition	V1+	V1-	V2+	V2-	R1	GND	R2

【Relay Connection】

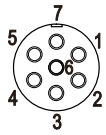
➤ Model I and Model II



The Model I and Model II adopt 8-pin 5.08mm pitch terminal blocks and support 1 relay alarm output, the relay occupies 2 pins, pin definition is shown in the above figure. R1 and R2 are a group of normally open contacts of the device alarm relay, which is open in normal no-alarm state and closed when any alarm information appears. For example, they are closed when powered off, and send out alarm. The relay supports the output of DC power supply alarm information or network abnormality alarm. It can be connected to alarm light or alarm buzzer or other switching value

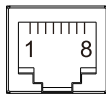
collecting devices, which can timely inform operators when the alarm occurs.

➤ Model III, Model IV, and Model V



The Model III, Model IV, and Model V provide 7-pin M23 interface, pin 5 and 7 are relay pins. The relay is a group of normally open contacts, which is open in normal no-alarm state and closed when any alarm information occurs. For example, they are closed when powered off, and send out alarm. The device supports 1 relay alarm information output that can output network abnormality alarm. It can be connected to alarm light or alarm buzzer or other switching value collecting devices, which can timely inform operators when the alarm occurs.

【Console Port Connection】



Provide 1 program debugging port based on RS232 serial port which can conduct device CLI command management after connecting to PC.

The interface adopts RJ45 port, the pin definition as follows:

Pin No.	2	3	5
Definition	TXD	RXD	GND

【Communication Interface Connection】

➤ 100M M12 Interface



The Model I and III device provide 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.	Definition	Pin Description
1	TX+	Positive send data of 100M Ethernet
2	RX+	Positive receive data of 100M Ethernet
3	TX-	Negative send data of 100M Ethernet
4	RX-	Negative receive data of 100M Ethernet

➤ Gigabit M12 interface

Provide 10/100/1000Base-T(X) interfaces, the interface type is M12 X-Coded 8-Pinslot (female).

The Model III, Model IV, and Model V support PoE power supply, single port supports up to 30W PoE power output, PoE power supply Pin 1 and 2 are positive, 3 and 4 are negative.

The products of this series support two groups of Bypass functions, and the Bypass ports are shown below.

Model	Bypass
Model I	G1-G3, G2-G4
Model II	G9-G11, G10-G12
Model III	G1-G2, G3-G4
Model IV	G1-G2, G3-G4
Model V	G17-G18, G19-G20

The pin definitions of M12 are shown as follows:

Pin No.	Definition	Description
1	D0+ (DA+)	Positive bi-directional data of Gigabit Ethernet group 1
2	D0- (DA-)	Negative bi-directional data of Gigabit Ethernet group 1
3	D1+ (DB+)	Positive bi-directional data of Gigabit Ethernet group 2
4	D1- (DB-)	Negative bi-directional data of Gigabit Ethernet group 2
5	D3+ (DD+)	Positive bi-directional data of Gigabit Ethernet group 4
6	D3- (DD-)	Negative bi-directional data of Gigabit Ethernet group 4
7	D2- (DC-)	Negative bi-directional data of Gigabit Ethernet group 3
8	D2+ (DC+)	Positive bi-directional data of Gigabit Ethernet group 3

【Checking LED Indicator】

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
P1/P2	ON	PWR P1/2 is connected and running normally
	OFF	PWR P1/2 is disconnected and running abnormally
ALM	ON	Power supply or port link has alarm
	OFF	Power supply or port link has no alarm
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
LINK	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
PoE	ON	POE port is powering other PD devices normally
	OFF	POE port is not powering other PD devices

【Logging in to WEB Interface】

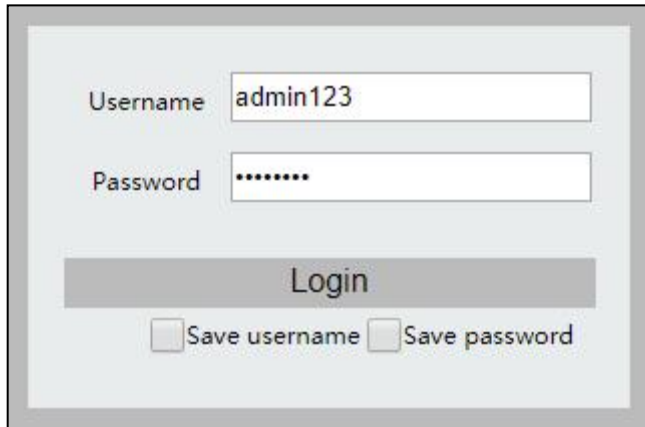
Support WEB management and configuration. Computer can access the device via Ethernet interface. The way of logging in to device's configuration interface via IE browser is shown as below:

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.

 <http://192.168.1.254/>

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



Step 4 Click “Login” 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 username and password of the device are “admin123”.
- 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	
Gigabit PoE M12	10/100/1000Base-T(X), M12 (Female), 8-Pin X-Coded, automatic flow rate control, full/half duplex mode, MDI/MDI-X autotuning; The maximum capacity of a single port is 30W PoE power supply output. Pin 1 and 2 of PoE power supply are positive, while pin 3 and 4 are negative
Gigabit M12	10/100/1000Base-T(X), M12(Female), 8-Pin X-Coded, Automatic Flow Control, Full/half Duplex Mode, MDI/MDI-X Autotuning; support two groups of Bypass
100M PoE M12	10/100base-T(X), M12 (Female), 4-Pin D-Coded, automatic flow control, full/half duplex mode, MDI/MDI-X automatic detection; The single port supports up to 30W PoE power supply output. Pin 1 and 3 of PoE power supply are positive, while pin 2 and 4 are negative
Console port	CLI command line management port (RS-232), RJ45
Alarm port	8-pin 5.08mm pitch terminal blocks (relay occupies 2 pins) or 7-pin Male M23 port (relay occupies 2 pins) , support 1 relay alarm output, current loading capacity is 1A@30VDC or 0.3A@125VAC

Indicator	Power indicator, alarm indicator, running indicator, interface indicator, PoE indicator
Switch Property	
Backplane bandwidth	128G
cache size	12Mbit
MAC address table	16K
Power Supply	
Model I, Model II	<ul style="list-style-type: none"> • Power input: 110VDC(66~156VDC), dual power supply redundancy, support anti-reverse connection protection • Connection method: 8-pin 5.08mm pitch terminal blocks (includes 6-pin power supply)
Model III, Model V	<ul style="list-style-type: none"> • Power input: 110VDC, dual power supply redundancy, support anti-reverse connection • Connection method: 7-PIN Male M23 interface (includes 4-pin power supply)
Model IV	<ul style="list-style-type: none"> • Power input: 24VDC(18~36VDC), dual power supply redundancy, support anti-reverse connection protection • Connection method: 7-PIN Male M23 interface (includes 4-pin power supply)
Power Consumption	
Full-load (without PoE)	<20W
Full-load (with PoE)	<120W

Working Environment	
Working temperature	-40~75℃
Storage temperature	-40~85℃
Working humidity	5%~95% (no condensation)
Protection grade	IP40 (metal shell)

【Disposal of Waste Electrical and Electronic Equipment (WEEE 2012/19/EU)】

(Applicable in the EU-member states)



The crossed-out wheeled bin symbol on the equipment or its packaging indicates that the product, at the end of its service life, shall not be mixed with unsorted municipal waste but should be collected separately, in accordance with local laws and regulations.

A proper separate collection of end-of-life equipment for the subsequent recycling, treatment and environmentally compatible disposal, will help prevent potential damage to the environment and human health, facilitating the reuse, recycling and/or recovery of its component materials.

Private users should contact their vendor or municipal waste management service and ask for disposal information.

Professional users should contact their suppliers and check the terms of their selling agreement.

This product must not be disposed of with other commercial waste.

Users' cooperation in the correct disposal of this product will contribute to saving valuable resources and protecting the environment.