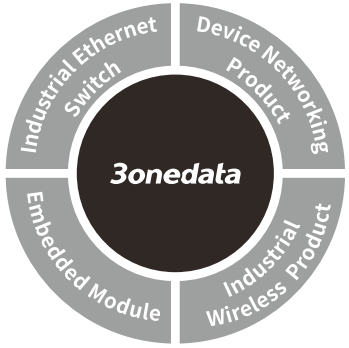
3onedata
Make network communication more reliable

TNS5800B-16T4GT-P24
Layer 3 Wall Mounting 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 Switch ×1
2. Warranty card
3. Certificate

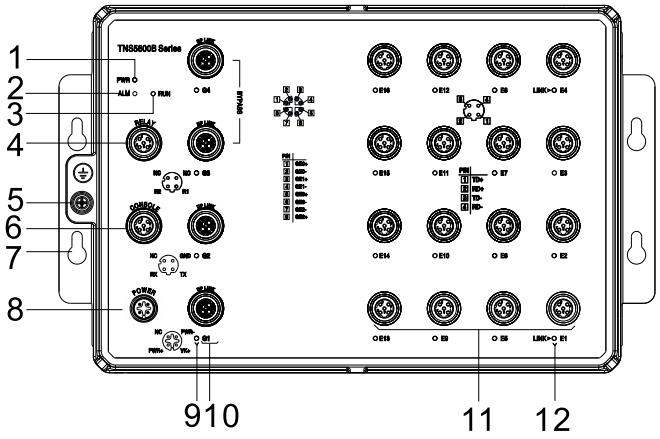
If any of these items are damaged or lost, please contact our company or dealers, we will solve it ASAP.

【Product Overview】

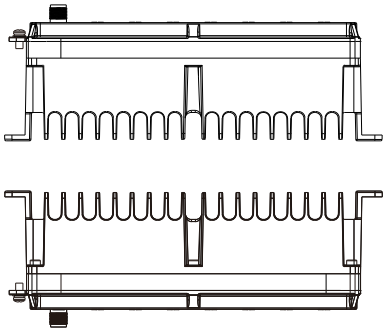
This product is a Layer 3 wall-mounted public transportation ITxPT industrial Ethernet switch, model TNS5800B-16T4GT-P24 (16 100M M12 + 4 Gigabit M12 with one pair of Bypass function, 24VDC (12~31.2VDC) power input).

【Panel Design】

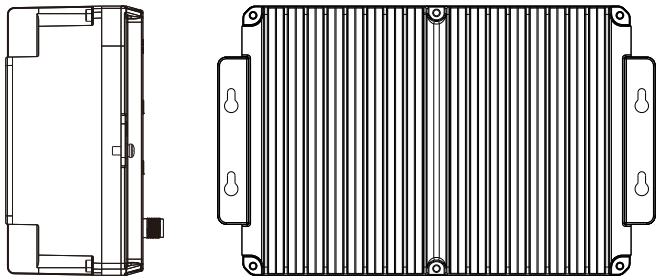
➢ **Front view**



➢ **Bottom view and top view**



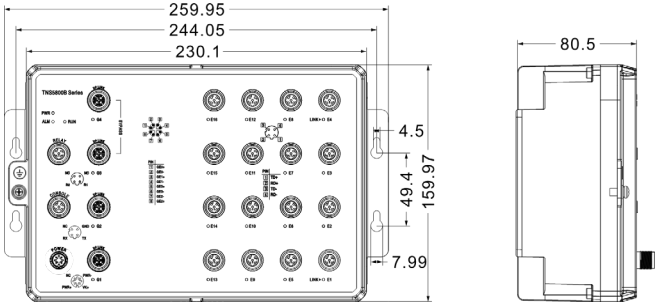
➢ **Left view and rear view**



1. Power supply indicator PWR
2. Alarm indicator (ALM)
3. Running indicator (RUN)
4. Relay alarm output interface
5. Grounding screw (M5)
6. CONSOLE port
7. Lugs
8. Power input interface (POWER)
9. Gigabit M12 interface indicator (G1-G4)
10. Gigabit Bypass M12 interface (One pair of Bypass: G3-G4)
11. 100M M12 interface (E1-E16)
12. 100M M12 interface indicator (LINK: E1-E16)

【Mounting Dimension】

Unit: mm



Notice Before Mounting:

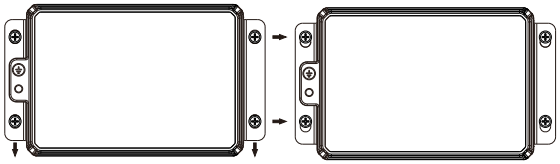
- Don't place or install the device in area near water or moisture, keep the relative humidity of the device surrounding between 5%~95% without condensation.
- Before powering on the device, check the power specifications supported by the device to prevent device damage due to overvoltage.
- The device 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 fix them with a certain gap.

Step 3 Slide the device down to hang on the screw, then tighten the screw, and the installation is finished.



【Wall-mounted Device Disassembling】

Step 1 Power off the device.

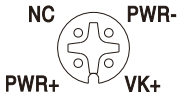
Step 2 Hold the device steadily and screw out the bolt in the wall.

Step 3 Take out the device, 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 device supports single DC power input. The power supply interface adopts M12 A-Coded 4-Pin pin (male) connector, and the power input range is 24VDC (12~31.2VDC). The pin definitions are shown as follows:

Pin Definition	Description
PWR+	Positive power input
PWR-	Negative power input
VK+	When the input power is 0~1VDC, the device stops operating.
NC (reserved)	Grounding

【Relay Connection】



This device provides 1 M12 D-Coded 4-Pin slot (female) that supports 1 relay alarm output. R1 and R2 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: the relay supports the output of 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. The pin definitions of relay are shown in the figure.

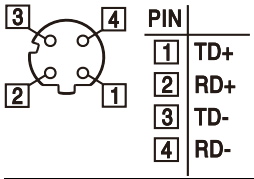
【Console Port Connection】



The device provides 1 program debugging port based on RS232 serial port which can conduct device CLI command management after connecting to PC. The interface adopts M12 D-Coded 4-Pin slot (female). The pin definitions of M12 are shown in the figure.

【Communication Interface Connection】

➢ **100M M12 Interface**



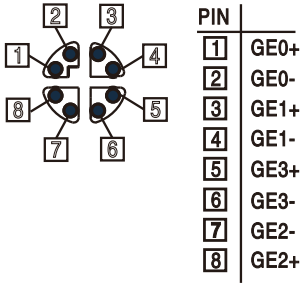
This device provides 10/100Base-T(X) interface, the interface type is M12 D-Coded 4-Pin slot (female). The definitions of M12 pin are as follows:

Pin No.	Definition	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

➢ **Gigabit M12 interface**

This device provides 10/100/1000Base-T(X) interfaces, the interface type is M12 X-Coded 8-Pin slot (female). One pair of Bypass interface is supported, G3 and G4.

The pin definitions of M12 are shown as follows:



Pin No.	Definition	Description
1	GE0+	Positive bi-directional data of Gigabit Ethernet group 1
2	GE0-	Negative bi-directional data of Gigabit Ethernet group 1
3	GE1+	Positive bi-directional data of Gigabit Ethernet group 2
4	GE1-	Negative bi-directional data of Gigabit Ethernet group 2
5	GE3+	Positive bi-directional data of Gigabit Ethernet group 4
6	GE3-	Negative bi-directional data of Gigabit Ethernet group 4
7	GE2-	Negative bi-directional data of Gigabit Ethernet group 3
8	GE2+	Positive bi-directional data of Gigabit Ethernet group 3

【Checking LED Indicator】

The device provides 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	ON	PWR is connected and running normally
	OFF	PWR is disconnected and running abnormally
ALM	ON	Port link has alarm

	OFF	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 (E1-E16, G1-G4)	ON	Ethernet port has established a valid network connection
	Blinking	Ethernet port is in an active network status
	OFF	Ethernet port has not established a valid network connection

【Logging in to WEB Interface】

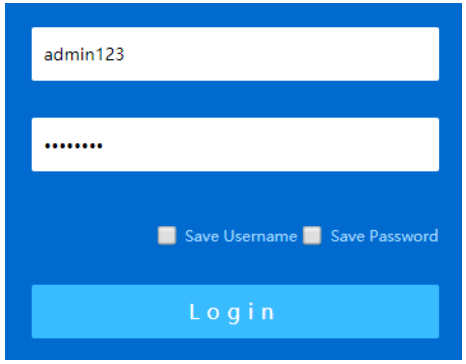
This device supports WEB management and configuration. Computer can access the device via Ethernet interface. The way of logging in to device's configuration interface via IE browser is shown as below:

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.

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 / 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 M12	10/100/1000Base-T(X), M12(Female), 8-Pin X-Coded, Automatic Flow Control, Full/half Duplex Mode, MDI/MDI-X Autotuning, support one pair of Bypass function.
100M M12	10/100Base-T(X), M12(Female), 4-Pin D-Coded, Automatic Flow Control, Full/half Duplex Mode, MDI/MDI-X Autotuning
Console port	CLI command line management port (RS-232), M12(Female), 4-Pin D-Coded
Alarm port	M12(Female), 4-Pin D-Coded, support 1 relay alarm output, with current load capacity of 1A@30VDC or 0.3A@125VAC
Indicator	Power indicator, alarm indicator, running indicator, interface indicator, PoE indicator
Switch Property	
Backplane bandwidth	128Gbps
Buffer size	12Mbit
MAC address table	16K
Power Supply	
Power input	M12(Male), 4-Pin A-Coded 24VDC (12~31.2VDC)
Power Consumption	
No-load at normal temperature	10.12W@24VDC
Full-load at normal temperature	12.25W@24VDC
Working Environment	
Working temperature	-40~75℃
Storage temperature	-40~85℃
Working humidity	5%~95% (no condensation)
Protection grade	IP67(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.