



IES5024

Industrial Ethernet switch Hardware Installation Guide

【Introduction】

IES5024 is a type of plug-and-play industrial Ethernet switch which supports 24 RJ45 Ethernet Ports. IES5024 adopt our patent technology SW-Ring for the purpose accomplishing redundancy for Ethernet ring network (self-recovery time <20ms) to enhance the reliability of the network. Furthermore, IES5024 support numerous intelligent network management functions, including QoS, VLAN, Port Trunking, velocity configuration and alarm enabling functions. To satisfy applications in different industrial environments, IES5024 can also provide wide temperature type in accommodation with limit temperature (-40 ~ 75°C).

【Packing List】

The IES5024 switch is shipped with following items.

- IES5024 Ethernet switch(Plus Terminal Block) × 1
- Hardware Installation Guide × 1
- DIN-Rail setting fittings(wall mounting for optional)

【Features】

Technology

- Standard IEEE802.3/802.3u/802.3x/IEEE802.1Q/IEEE802.1p/IEEE802.3D/IEEE802.3W
- Support SW-Ring(Patent technology) self-recovery time<20ms

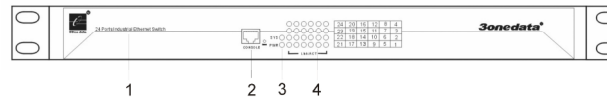
- Support IEEE802.1Q VLAN
- Support IEEE802.1P QoS, support WRR
- Support IGMP, port trunking and port mirroring
- Support WEB management, easy to management
- Support 8K MAC address

Reliable Industrial Grade Design

- 40~75°C operating temperature range
- No fan design
- IP30 protection
- 19 inch rack mounting

【Panel Layout】

Front panel



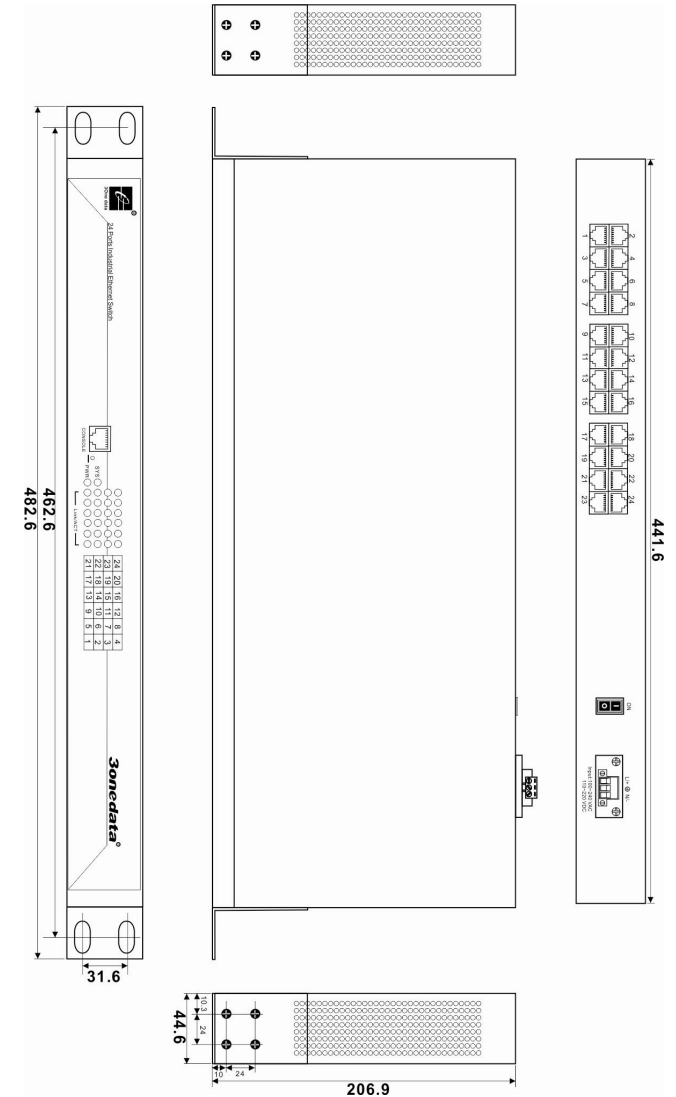
Back panel



- Product marking
- Console port
- power/system LED
- Link/ACT LED
- 100BaseT(X) Ethernet ports
- power switch ON/OFF
- power input terminal block

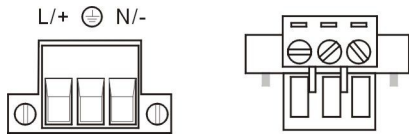
【Dimension】

IES5024



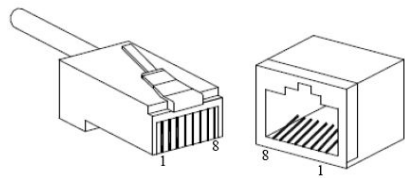
【Power Input】

IES5024 provide 3 bits terminal blocks as AC power input (85~264 V) and DC power input (100~300 V), terminal diagram is as below,

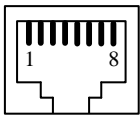


【Communication Connector】

IES5024 provides 24 10/100BaseT(X) Ethernet ports
10/100BaseT(X) Ethernet port
The pinout of RJ45 port display as below, connect by UTP or STP. The connect distance is no more than 100m. 100Mbps is used 100 Ω of UTP 5 , 10Mbps is used 100 Ω of UTP 3,4,5.



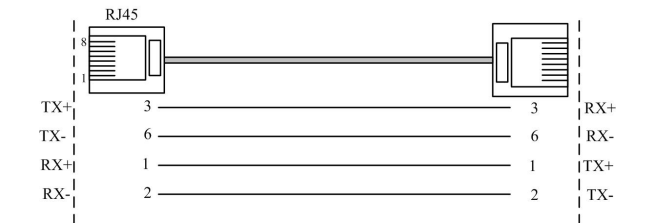
RJ 45 port support automatic MDI/MDI-X operation. can connect the PC, Server, Converter and HUB .Pin 1,2,3,6 Corresponding connection in MDI. 1→3,2→6,3→1,6→2 are used as cross wiring in the MDI-X port of Converter and HUB. 10Base-T/100Base-TX are used in MDI/MDI-X, the define of Pin in the table as below.



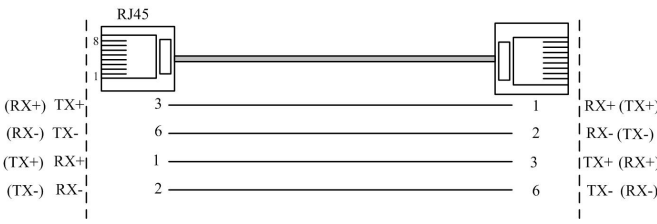
NO.	MDI signal	MDI-X signal
1	TX+	RX+
2	TX-	RX-
3	RX+	TX+
6	RX-	TX-
4、5、7、8	—	—

Remark: “TX±” Transmit Data±, “RX±” Receive Data±, “—” Not Use.

MDI (straight-through cable)



MDI-X (Cross over cable)



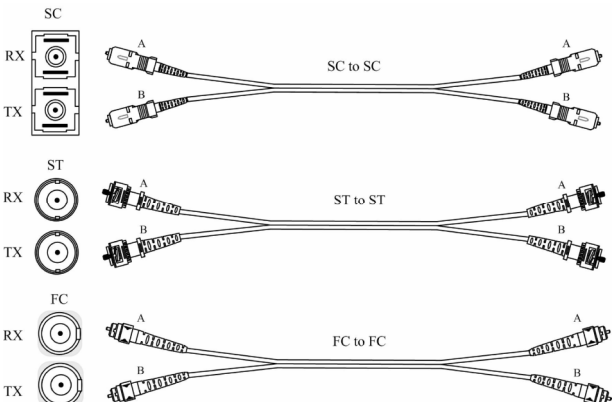
MDI/MDI-X auto connection makes IES5024 easy to use for customers without considering the type of network cable.

100Base-FX Fiber port

100Base-FX full-duplex SM or MM port, SC/ST type .The fiber port must be used in pair, TX (transmit) port connect remote switch’s RX(receive) port; RX(receive) port connect remote switch’s TX(transmit) port.

The optical fiber connection supports the line to instruct enhance the reliability of network effectively.

Suppose: If you make your own cable, we suggest labeling the two sides of the same line with the same letter (A-to-A and B-to-B, shown as below, or A1-to-A2 and B1-to-B2).



【LED Indicator】

IES5024 LED indicator light on the front panel.
the function of each LED is described in the table as below.

System Indication LED		
LED	State	Description
PWR (green)	ON	Power is being supplied to power input PWR input
	OFF	Power is not being supplied to power input PWR input
SYS (green)	ON	System is running well
	OFF	System is not running well
Link/ACT (green)	ON	Port connection is active
	Blinking	Data transmitted
	ON	Port connection is not active

【Installation】

Before installation, confirm that the work environment meet the installation require, including the power needs and abundant space. Whether it is close to the connection equipment and other equipments are prepared or not.

1. Avoid in the sunshine, keep away from the heat fountainhead or the area where in intense EMI.
2. Examine the cables and plugs that installation requirements.
3. Examine whether the cables be seemly or not (less than 100m) according to reasonable scheme.
4. Screw, nut, tool provide by yourself.

- power: DC 110~220V or AC 100~240V (47~63Hz)
- environment: Working temperature -40~75℃
Relative humidity 5%~95%

Wiring Requirements

Cable laying need to meet the following requirements,

1. It is needed to check whether the type, quantity and specification of cable match the requirement before cable laying;
2. It is needed to check the cable is damaged or not, factory records and quality assurance booklet before cable laying;
3. The required cable specification, quantity, direction and laying position need to match construction requirements, and cable length depends on actual position;
4. All the cable cannot have break-down and terminal in the middle;
5. Cables should be straight in the hallways and turning;
6. Cable should be straight in the groove, and cannot beyond the groove in case of holding back the inlet and outlet holes. Cables should be banded and fixed when they are out of the groove;
7. User cable should be separated from the power lines. Cables, power lines and grounding lines cannot be overlapped and mixed when they are in the same groove road. When cable is too long, it cannot hold down other cable, but structure in the middle of alignment rack;
8. Pigtail cannot be tied and swerved as less as possible. Swerving radius cannot be too small (small swerving causes terrible loss of link). Its banding should be moderate, not too tight, and should be separated from other cables;
9. It should have corresponding simple signal at both sides of the cable for maintaining.

【Specification】

Technology

Standard: IEEE802.3、IEEE802.3u、802.3x、IEEE802.1Q、IEEE802.1p、IEEE802.3D、IEEE802.3W

Processing type: Store and Forward

Flow control: IEEE802.3x control, backpressure control

MAC address: 8K

Interface

RJ45 port: 10Base-T/100Base-TX, flow control, full/half duplex, auto-negotiation work mode, MDI/MDI-X auto-connection

Console port: Debug Serial port

LED indicator: power (PWR)、CPU state (System), Link/ACT

Power

Input Voltage: DC100~300V or AC 85~264V

Input Current: 0.25A (@110VAC/VDC)

Type of input: 3 bits terminal blocks

Overload Current Protection: 4.0A

Mechanical

Shell: Black Metal Case

Installation: 19" 1U rack

Dimension (L*H*D): 441.6mm×44.6mm×206.9mm

Working Environment

Operating Temperature: -40~75℃

Storage Temperature: -40~85℃

Relative Humidity: 5%~95%(non-condensing)

Approvals

Safety: UL508

EMI: FCC Part 15, CISPR (EN55022) class A

EMS: EN61000-4-2 (ESD), Level 4

EN61000-4-3 (RS), Level 3

EN61000-4-4 (EFT), Level 4

EN61000-4-5 (Surge), Level 4

EN61000-4-6 (CS), Level 3

EN61000-4-8, Level 5

Shock: IEC 60068-2-27

Free fall: IEC 60068-2-32

vibration: IEC 60068-2-6

Warranty: 5 Years

【Certifications】



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