3One data

IES1016

16-port 10/100M Industrial Ethernet Switch

Hardware Installation Guide

Introduction:

The IES1016 series of industrial Ethernet switches consists of 16-port Ethernet switches that provide an economical solution for your industrial Ethernet connection.

The IES1016 switches have an operating temperature range of -10 to 60°C, and are designed with low consumption and without fan. The rugged hardware design makes the IES1016 series perfect for ensuring that your Ethernet equipment can withstand the rigors of industrial applications.

Packing List:

The IES1016 switch is shipped with following items.

1. Ethernet switch IES1016 (plus terminal block) × 1
2. Hardware Installation Guide × 1
3. Product Warranty Statement × 1

Features:

High Performance Network Switching Technology

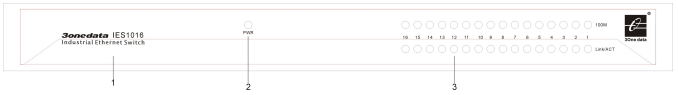
1. 10/100BaseT(X)(RJ45)
2. Support IEEE802.3/802.3u/802.3x
3. Store and Forward switching process type
4. Support auto negotiation speed, F/H duplex mode, and auto send data control
5. Plug-and-play , auto MDI/MDI-X connection
6. Support 8K MAC address

Industrial Grade Reliability

1. Operating temperature range from -10 to 60°C
2. Designed without fan
3. IP30, rugged high-strength metal case
4. 19-inch rack mounting

Panel Layout:

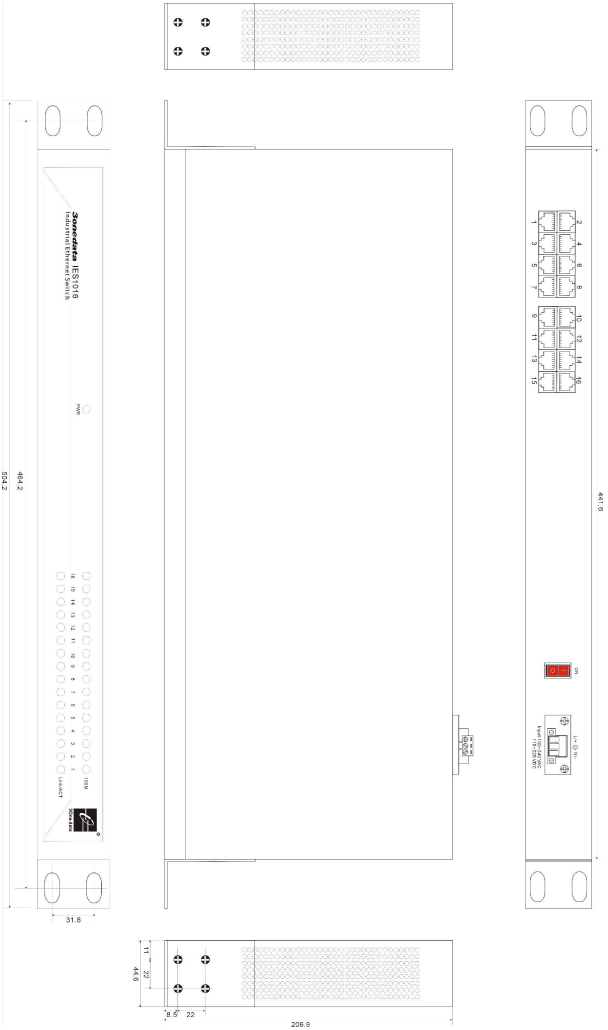
Front panel



Rear panel

1. Model Name
2. Power input PWR LED
3. 100Mbps LEDs, Link/ACT LEDs
4. 10/100BaseT(X) ports
5. Power ON/OFF switch
6. Terminal block for power inputs

Dimension(unit=mm):

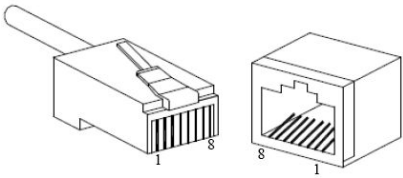


Communication connector:

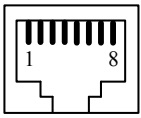
IES1016 series have 16 10/100BaseT(X) Ethernet ports(RJ45)

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 100Ω of UTP 5 , 10Mbps is used 100Ω of UTP 3,4,5。



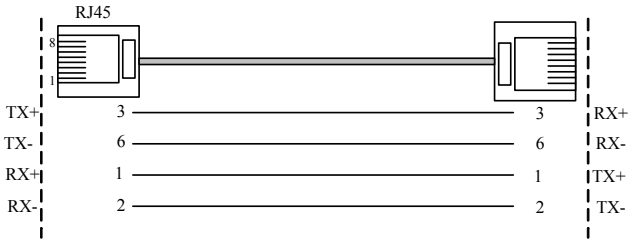
RJ 45 port support automatic MDI/MDI-X operation. can connect the PC, Server, Converter and HUB .Pin 1,2,3,6 Corresponding connection in MDI. 1→3,2→6,3→1,6→2 are used as cross wiring in the MDI-X port of Converter and HUB. . 10Base-T/100Base-TX are used in MDI/MDI-X, the define of Pin in the table as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



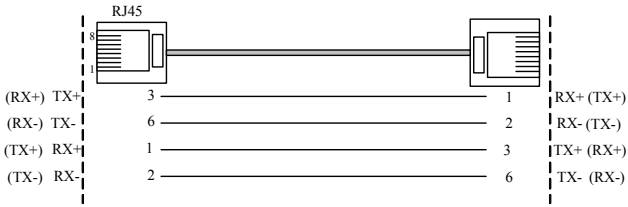
NO.	MDI signal	MDI-X signal
1	TX+	RX+
2	TX-	RX-
3	RX+	TX+
6	RX-	TX-
4,5,7,8	—	—

Note: “TX±”transmit data±, “RX±”receive data±, “—”not use

MDI(straight-through cable)



MDI-X(Cross over cable)

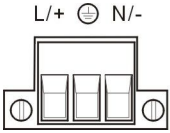


LED Indicator:

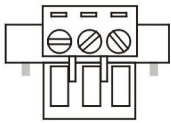
LED indictor light on the front panel of IES1016 Series .the function of each LED is described in the table as below.

System indication LED		
LED	State	Description
PWR (GREEN)	ON	Power is being supplied
	OFF	Power is not being supplied
	OFF	abnormality
100M (GREEN)	On	Port's 100Mbps link is active
	Off	Port's 10Mbps link is active
Link/ACT (GREEN)	On	TP port's link is active
	blinking	Data is being transmitted
	Off	TP port's link is inactive

Power input：



Top view



Front view

The right two contacts of the 3-contact terminal block connector on the IES1016's rear panel are used for AC(85~264V) or DC(100~300V) inputs. Top and front views of one of the terminal block connectors are shown here.

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.

Installation require as below

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 for yourself.
5. Power need: DC100~300V or AC85~264V
6. Environment: -10°C to 60°C
   Storage Temperature: -40°C to 85°C
   Relative humidity 10% to 95%

Wiring Requirements

Be sure to disconnect the power cord before installing and/or wiring your Ethernet Switch.

Calculate the maximum possible current in each power wire and common wire. Observe all electrical codes dictating the maximum current allowable for each wire size. If the current goes above the maximum ratings, the wiring could overheat may causing serious damage to your equipment. You should also pay attention to the following items:

1. Use separate path to route wiring for power and devices. If power wiring and device wiring paths must cross make sure the wires are perpendicular at the intersection point.
2. NOTE: Do not run signal or communications wiring and power wiring in the same wire conduit. To avoid interference, wires with different signal characteristics should be routed separately.

3. You can use the type of signal transmitted through a wire to determine which wires should be kept separate. The rule of thumb is that wiring that shares similar electrical characteristics can be bundled together.

4. Keep input and output wiring separated. It is strongly advised

that you label wiring to all devices in the system when necessary.

Specifications:

Interface

RJ45 Ports: 10/100BaseT(X) auto connection, Full /Half duplex or force work mode, and support MDI/MDI-X connection

LED Indicators: PWR, Link/ACT, 100M

Technology

Standard：IEEE802.3、IEEE802.3x、IEEE802.3u

Forwarding and Filtrate Rate: 148810pps

transmit type ： Store and Forward switching process type

Support 8K MAC Address

Power

Input Voltage: DC100~300V or AC85~264V

Input Current: 0.1A

Overload Current Protection

Connection: 3 bit terminal block

Mechanical

Dimensions (L×W×H): 441.6mm×44.6mm×206.9mm

Packaging: IP 30 protection, metal case

Installation: 19-inch rack mount

Environmental

Operating Temperature: -10°C to 60°C

Storage Temperature : -40°C to 85°C

Ambient Relative Humidity: 10% to 95% (non-condensing)

Approvals

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

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

EN61000-4-3(RS), Level 4

EN61000-4-4(EFT), Level 4

EN61000-4-5 (Surge), Level 4

EN61000-4-6 (CS), Level 4

EN61000-4-8,100A/m

EN61000-4-12

Shock: IEC 60068-2-27

Free Fall: IEC 60068-2-32

Vibration: IEC 60068-2-6

Warranty: 5 years

Certifications:

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