

IES205G

Unmanaged 1000M Industrial Ethernet Switch

Instruction

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Introduction

IES205G is a kind of unmanaged industrial Ethernet Switches, which supports 5 10/100/1000M RJ45 ports. It adopts fanless, low-power design, IP30 protection and high tensile corrugated metal shell so that it can perform more stable. It complies with FCC, CE standards and the design requirements of industrial level 4. Rail-mount installation and the operating temperature range from -25 °C to 70 °C meet the needs of various industrial field, which can provide reliable, efficient solutions for your Ethernet device connection.

Packing List

The first time use this product, please check the packaging is intact or not and the attachment is complete or not at first.

- ◎ 3onedata IES205G Ethernet Switch(with terminals) x1
- ◎ Instruction x1
- ◎ accessories of Din-rail installation

Please handle with care for there are precision components in the device, and it's better to protect the device from excessive vibration to avoid affecting its performance. If you find that the device is damaged or any parts of it is missing

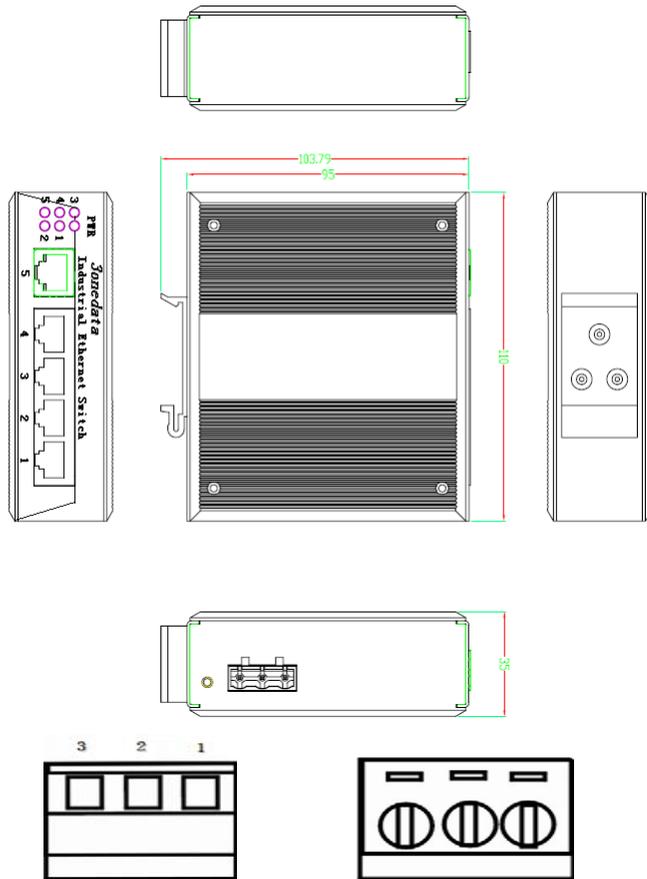
during transportation, please notify the Company or the Company's distributor, we will give you proper solution as soon as possible.

Features

- ◎ Support IEEE802.3, IEEE802.3u, IEEE802.3z, IEEE802.3ab
- ◎ Support the MDI/MDI-X automatic connection
- ◎ Support store and forward switching mode
- ◎ 12~36V DC power input
- ◎ Operating temperature: -25~70°C
- ◎ Industry-standard design, IP30 Protection, high tensile corrugated shell

Panel Layout

IES205G:



Top view

Vertical view

The lower panel of IES205G provides three-digit industrial terminals(1,2,3), 2 is the enclosure grounding, among them 1 and 3 are

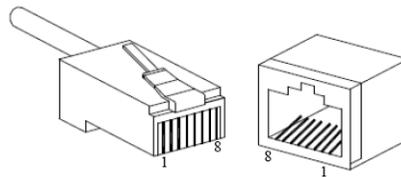
12VDC~36VDC power input.

Communication Interface

IES205G provides 5 10/100/1000BaseT(X) Ethernet ports(RJ45).

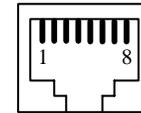
10/100/1000BaseT(X) Ethernet interface

10/100/1000BaseT(X) Ethernet interface is located on the front panel, and the interface type is RJ45. The pin distribution of RJ45 are defined as the figure, the connection adopts Unshielded Twisted Pair(UTP) or Shielded Twisted Pair(STP), the connecting distance does not exceed 100 meters. 1000Mbps connection uses 100 Ω Category 5 cable, Category 5e, Category 6 cable, 100Mbps uses 100 Ω Category 5 cable, while what 10Mbps uses to connect are 100 Ω Category 3, 4, 5 cables.



RJ45 ports support auto MDI/MDI-X operation, you can connect PC or server with through-line cable. In the direct line(MDI), pin 1, 2, 3, 6 connect correspondingly; for MID-X ports of switch or hub, crossover cable are used: 1—3, 2—6, 3—1, 6—2. 10Base-T/100Base-TX pin

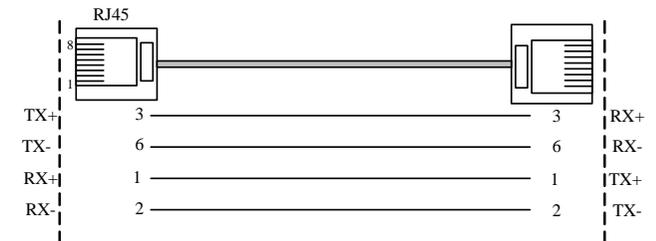
definitions of MDI/MDI-X applications are shown in the table:



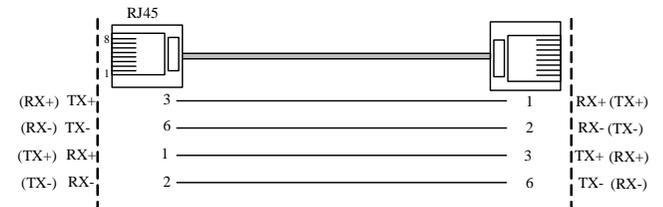
Pin NO.	MDI signal	MDI-X signal
1	TX+	RX+
2	TX-	RX-
3	RX+	TX+
6	RX-	TX-
4、5、7、8	—	—

Note: “TX±” is sending data±, “RX±” is receiving data±, “—” is unused.

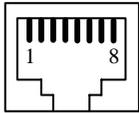
MDI(through-line cable)



MDI-X (crossover cable):



1000Base-T(X) Pin definition of MDI/MDI-X application are shown in the table.



Pin NO.	MDI signal	MDI-X signal
1	TX-D1+	RX-D1+
2	TX_D1-	RX_D1-
3	RX_D2+	TX_D2+
4	BI_D3+	BI_D3+
5	BI_D3-	BI_D3-
6	RX_D2-	TX_D2-
7	BI_D4+	BI_D4+
8	BI_D4-	BI_D4-

LED Indicator

The LED indicator on the front panel of IES205G can indicate the running system and the operation status, which makes it easy to find and solve problems, the specific meaning of indicator are shown in the table.

System Indication LED		
LED	State	Description
PWR (green light)	on	Power is connected/ functioning well
	off	Power is not connected or not functioning well
Link (green light)	on	Electronic port links successfully
	off	No electronic port link
	Blinking	Electronic port has data transmission

Installation

To confirm appropriate working environment before installation, including power requirement, sufficient space, proximity to other devices to be connected or not and other equipments are in the place or not. Please confirm the following installation requirements :

- ◎ Avoid direct sunlight, be away from heat sources or areas with strong electromagnetic affection
- ◎ Check cables and connectors needed for installation
- ◎ According to reasonable configuration

requirements, check whether the cable is in place(less than 100m)

◎ Product does not provide installation components, users need to prepare the selected type of installation components: screws, nuts and tools to ensure reliable installation

◎ Power: 24V DC power supply(12~36V DC)

◎ Environment:

Working Temperature: -40~85℃

Humidity: 5%~95%

Din-rail installation

35mm standard din-rail installation has been used, it is very convenient in most industrial applications, the installation steps are as follows:

◎ Check the Din-rail installation accessories(This product has provided installation accessories)

◎ Check the Din-rail is fixed and firm, whether there is a suitable location to install the product

◎ Put the Din-rail connector's bottom of the product accessory into the Din-rail(lower part with spring support), then put the upper part of the connector into the Din-rail(put a little lower part into it, put the device into the upper part with

gentle press in a balanced manner)

◎ After put the Din-rail into the Din-rail connector, check and confirm that the product has been mounted securely to a Din-rail

Cable Laying

Cable laying should meet the following conditions:

- ◎ Check all cable specifications, models and quantity meet the demand or not before cable laying.
- ◎ Check the cable is damaged or not , whether has factory leaving record and quality assurance or other quality certificate.
- ◎ Required laying cables' specifications, quantity, direction, laying position are adhere to construction requirements, laying length should be based on the actual location.
- ◎ The laying cable do not have broken line or connector in the middle
- ◎ Cables should be straight int the aisle neatly inside, turning uniform, smooth and flat.
- ◎ Cable in the channel should be straight, not beyond the channel in order to avoid shelter other inlet and outlet holes, cable out of the groove part or cable bend part should be bundled and fixed.

◎ User cables and power cord lay separately. Cable, power cord, ground lay in the same channel can not be folded or blended. If the cable is too long, it must be placed in the middle of the cable frame regularly rather than pressed on other cables.

◎ The end of the cable should be labeled appropriately, and the identify content must be clear and concise to have convenient Maintenance.

Specification

Technology

Standard: IEEE802.3, IEEE802.3u, IEEE802.3z, IEEE802.3ab

Interface

Gigabit electrical interface: 10/1000/1000Base-TX, RJ45, MDI/MDI-X auto-detect

Exchange Property:

Transmission method: store and forward

Backplane Bandwidth: 12G

Cache Size: 1Mbits

MAC Address Table: 1K

Indicator

Interface Indicator: Link1、 Link2、 Link3、 Link4、 Link5

Power Indicator: PWR

Transmission Distance

UTP: 100M(standard CAT5/CAT5e cable)

Power

Input Voltage: 24V DC(12~36V DC)

Input Current: 0.15A@24VDC

Access Terminal: 3-pin 7.62mm pitch terminal block

No-load Power: 0.7W@24VDC

Full Power: 3.6W@24VDC

Support reverse polarity protection

Support overcurrent

Working Environment

Working Temperature: -25~70°C

Storage Temperature: -40~85°C

Humidity: 5%~95%(no condensation)

Mechanical Structure

Shell: IP30 protection grade, high-strength corrugated metal casing

Installation: Din-rail

Weight: 350g

Size(W×H×D): 102mm×91mm×35mm

Industry Standard

Shock: IEC60068-2-27

Free Fall: IEC60068-2-32

Shake: IEC60068-2-6

Warranty Period: 5 years

Approvals: CE, FCC, RoHS, UL508(Pending)

Please visit <http://www.3onedata.com> to check the latest product certification.