

# Industrial Unmanaged Ethernet Switch

## IES-1080 / 1062 Series User's Manual



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# **Getting to Know Your Switch**

## **1.1 About the IES-1080 / 1062 unmanaged Industrial Switch**

The IES-1080 / 1062 series are reliable unmanaged industrial switches which can work under wide temperature, dusty environment and humid condition.

## **1.2 Hardware Features**

- 10/100/1000Base-T(X) Gigabit Ethernet port
- 10/100Base-T(X) Ethernet port
- 100Base-FX Fiber port
- 1000Base-X Fiber port
- Redundant three DC power inputs (two on terminal block & one on power jack)
- Casing: IP-30
- Dimensions(W x D x H) : 52 mm(W)x 106 mm( D )x 144 mm(H)
- Operating Temperature: -40 to 70°C
- Storage Temperature: -40 to 85°C
- Operating Humidity: 5% to 95%, non-condensing



# Hardware Installation

## 2.1 Installation Switch on DIN-Rail

Each switch has a DIN-Rail kit on rear panel. The DIN-Rail kit helps switch to fix on the DIN-Rail. It is easy to install the switch on the DIN-Rail:

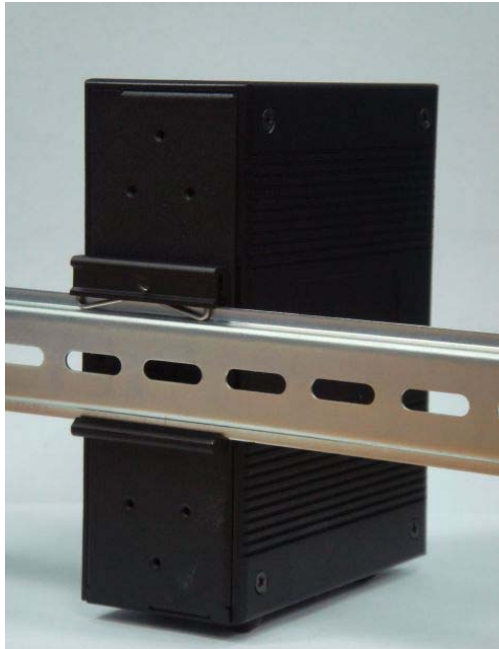
### 2.1.1 Mount IES-1080 / 1062 series on DIN-Rail

Step 1: Slant the switch and mount the metal spring to DIN-Rail.





Step 2: Push the switch toward the DIN-Rail until you heard a “click” sound.



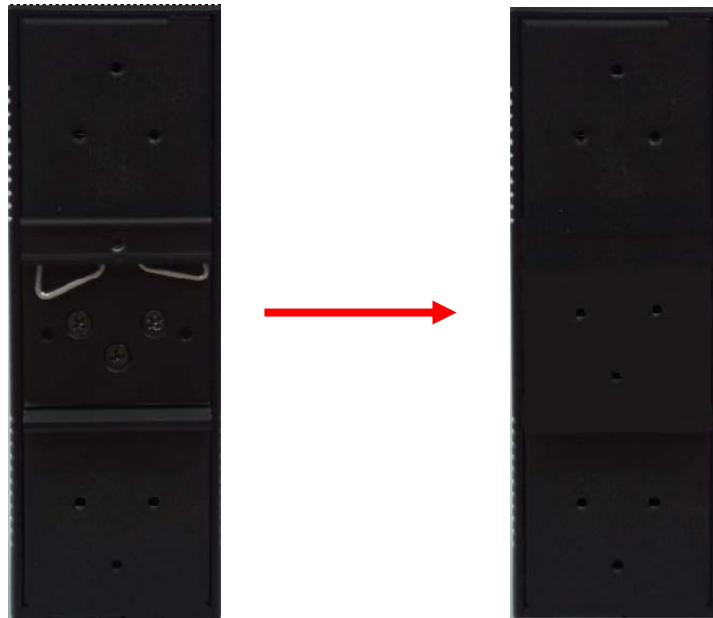
## 2.2 Wall Mounting Installation

Each switch has another installation method for users to fix the switch. A wall mount panel can be found in the package. The following steps show how to mount the switch on the wall:

### 2.2.1 Mount IES-1080 / 1062 series on wall



Step 1: Remove DIN-Rail kit.

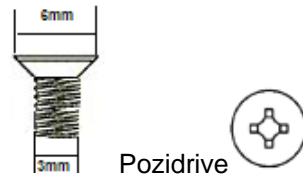


Step 2: Use 6 screws that can be found in the package to combine the wall mount panel. Just like the picture shows below:





The screws specification shows in the following two pictures. In order to prevent switches from any damage, the screws should not larger than the size that used in the switches.



Step 3: Mount the combined switch on the wall.





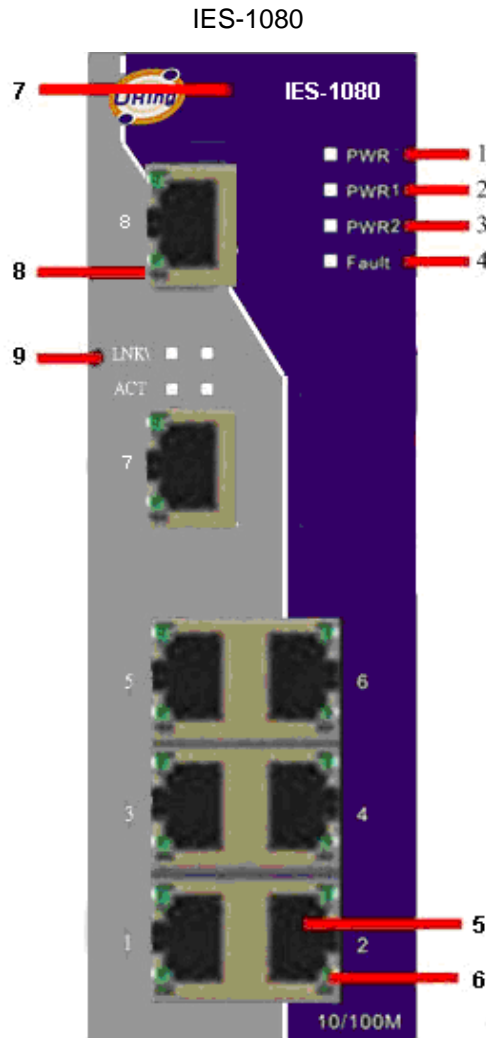


# Hardware Overview

## 3.1 Front Panel

The following table describes the labels that stick on the IES-1080 / 1062 series.

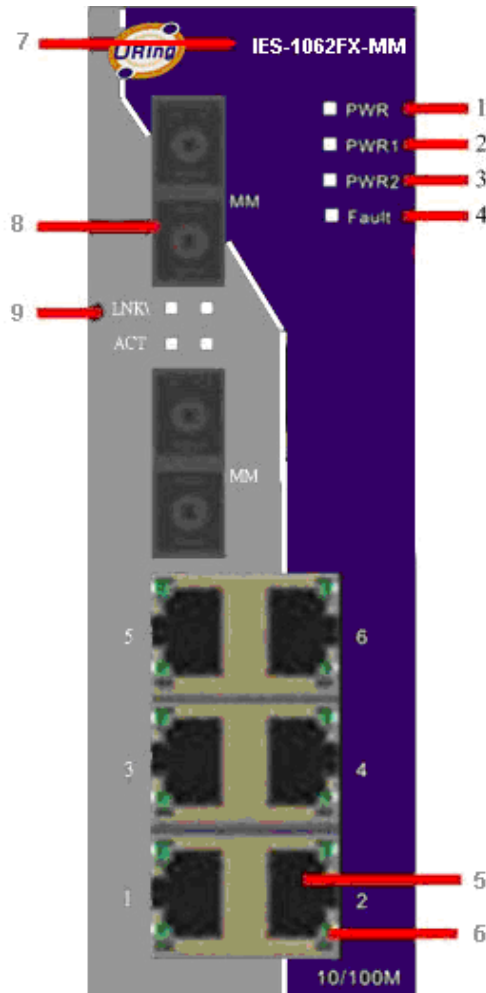
Port	Description
<b>10/100 RJ-45 fast Ethernet ports</b>	10/100Base-T(X) RJ-45 fast Ethernet ports support auto-negotiation. Default Setting : Speed: auto Duplex: auto
<b>Gigabit port</b>	2 1000 BASE-T Giga ports.(IES-1062GT)
<b>Fiber port</b>	1000BaseX for IES-1062GF-MM, IES-1062GF-SS 100BaseFX for IES-1062FX-MM, IES-1062FX-SS



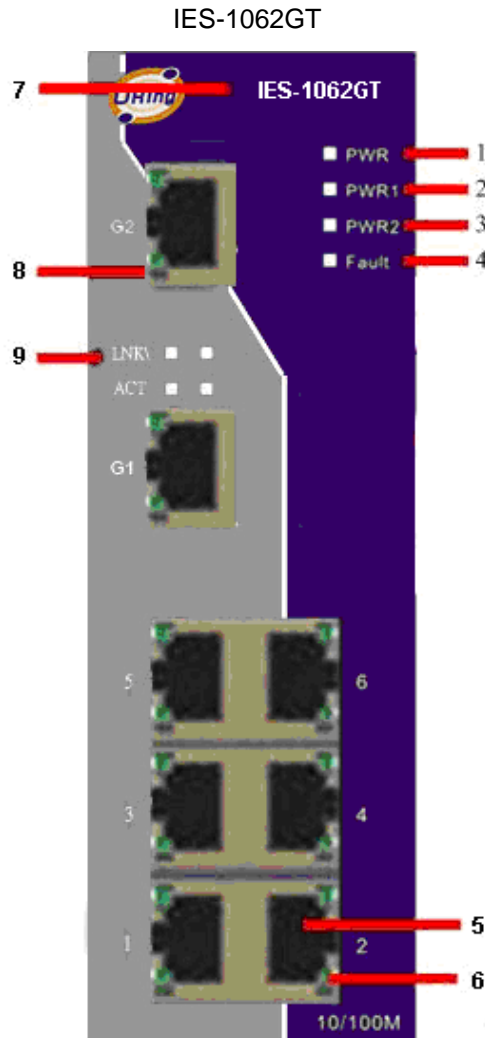
1. LED for PWR. When the Power on, the green led will be light on.
2. LED for PWR1. When the PWR1 links, the green led will be light on.
3. LED for PWR2. When the PWR2 links, the green led will be light on.
4. LED for Fault Relay. When the power fault occurs, the amber LED will be light on.
5. 10/100Base-T(X) Ethernet ports.
6. LED for Ethernet ports status.
7. Model name
8. 10/100Base-T(X) Ethernet ports
9. LED for Ethernet ports status.



IES-1062FX (Single-mode, multi-mode)



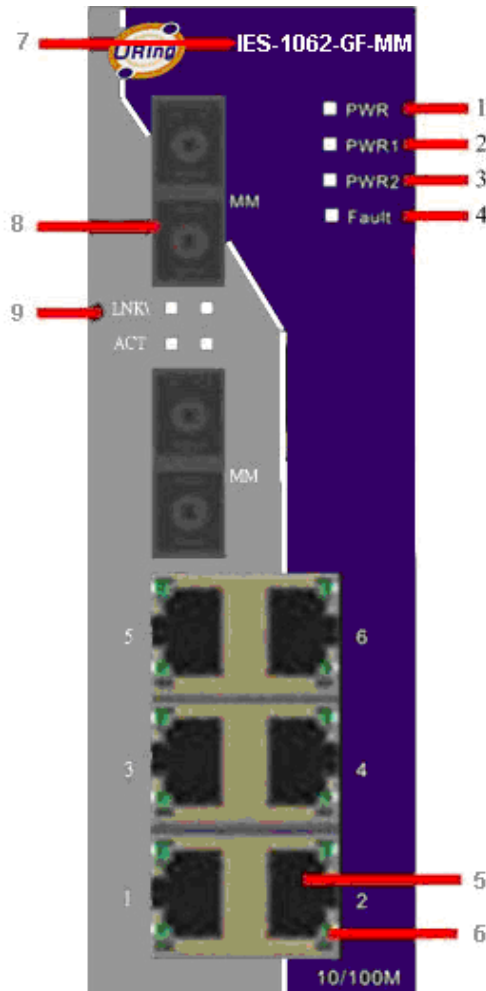
1. LED for PWR. When the Power on, the green led will be light on.
2. LED for PWR1. When the PWR1 links, the green led will be light on.
3. LED for PWR2. When the PWR2 links, the green led will be light on.
4. LED for Fault Relay. When the power fault occurs, the amber LED will be light on.
5. 10/100Base-T(X) Ethernet ports..
6. LED for Ethernet ports status.
7. Model name
8. 100BaseFX fiber port.
9. LED for fiber port.



1. LED for PWR. When the Power on, the green led will be light on.
2. LED for PWR1. When the PWR1 links, the green led will be light on.
3. LED for PWR2. When the PWR2 links, the green led will be light on.
4. LED for Fault Relay. When the power fault occurs, the amber LED will be light on.
5. 10/100Base-T(X) Ethernet ports..
6. LED for Ethernet ports status.
7. Model name
8. 1000Base-T Ethernet port.
9. LED for gigabits Ethernet port.



IES-1062GF (Single-mode, multi-mode)



1. LED for PWR. When the Power on, the green led will be light on.
2. LED for PWR1. When the PWR1 links, the green led will be light on.
3. LED for PWR2. When the PWR2 links, the green led will be light on.
4. LED for Fault Relay. When the fault occurs, the amber LED will be light on.
5. 10/100Base-T(X) Ethernet ports..
6. LED for Ethernet ports status.
7. Model name
8. 1000BaseX gigabits Fiber port.
9. LED for gigabits Fiber port.



### 3.2 Front Panel LEDs

LED	Color	Status	Description
<b>PWR</b>	Green	On	DC power connected
<b>PWR1</b>	Green	On	DC power module 1 activated.
<b>PWR2</b>	Green	On	DC power module 2 activated.
<b>Fault</b>	Amber	On	Fault relay. Power failure or Port down/fail.
10/100Base-T(X) Fast Ethernet ports			
<b>LNK / ACT</b>	Green	On	Port link up.
		Blinking	Data transmitted.
<b>Duplex</b>	Amber	On	Port works under full duplex.
Gigabit Ethernet ports / Fiber ports			
<b>LNK</b>	Amber	On	Port link up.
<b>ACT</b>	Green	Blinking	Data transmitted.

### 3.3 Bottom Panel

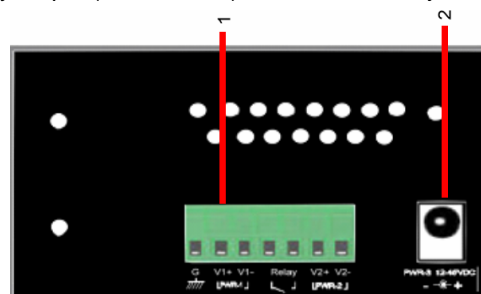
The bottom panel components of IES-1080 / 1062 series are shown as below:

1. Terminal block includes: PWR1, PWR2 (12-48V DC) and Relay output (1A@24VDC).
2. Power jack for PWR3 (12-45VDC).

PWR1, PWR2 (12-48V DC) and

Relay output (1A@24VDC).

Power jack for PWR3 (12-45VDC)

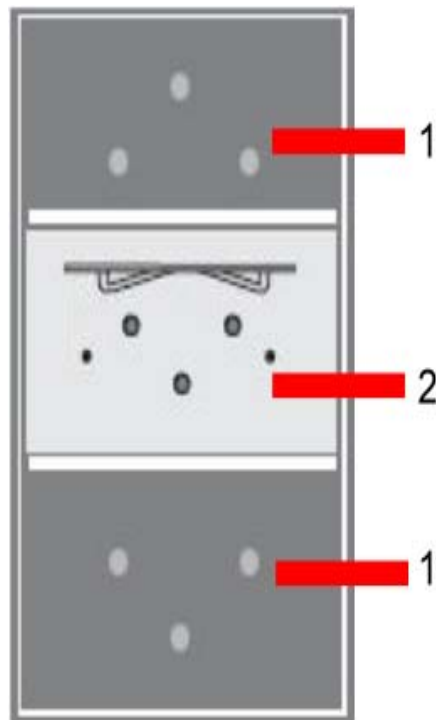




### 3.4 Rear Panel

The rear panel components of IES-1080 / 1062 Series are showed as below:

- 1.Screw holes for wall mount kit.
- 2.DIN-Rail kit





# Cables

## 4.1 Ethernet Cables

The IES-1080 / 1062 series switches have standard Ethernet ports. According to the link type, the switches use CAT 3, 4, 5, 5e UTP cables to connect to any other network device (PCs, servers, switches, routers, or hubs). Please refer to the following table for cable specifications.

Cable Types and Specifications

Cable	Type	Max. Length	Connector
10BASE-T	Cat. 3, 4, 5 100-ohm	UTP 100 m (328 ft)	RJ-45
100BASE-TX	Cat. 5 100-ohm UTP	UTP 100 m (328 ft)	RJ-45
1000BASE-TX	Cat. 5/Cat. 5e 100-ohm UTP	UTP 100 m (328ft)	RJ-45

### 4.1.1 100BASE-TX/10BASE-T Pin Assignments

With 100BASE-TX/10BASE-T cable, pins 1 and 2 are used for transmitting data, and pins 3 and 6 are used for receiving data.

RJ-45 Pin Assignments

Pin Number	Assignment
1	TD+
2	TD-
3	RD+
4	Not used
5	Not used
6	RD-
7	Not used
8	Not used





The IES-1080 / 1062 series switches support auto MDI/MDI-X operation. You can use a straight-through cable to connect PC and switch. The following table below shows the 10BASE-T/100BASE-TX MDI and MDI-X port pin outs.

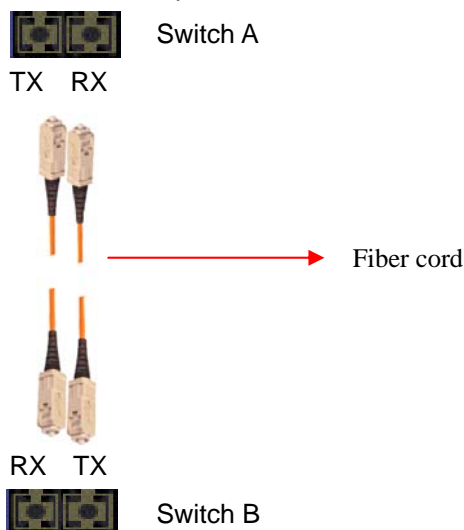
MDI/MDI-X pins assignment

Pin Number	MDI port	MDI-X port
1	TD+(transmit)	RD+(receive)
2	TD-(transmit)	RD-(receive)
3	RD+(receive)	TD+(transmit)
4	Not used	Not used
5	Not used	Not used
6	RD-(receive)	TD-(transmit)
7	Not used	Not used
8	Not used	Not used

**Note:** “+” and “-” signs represent the polarity of the wires that make up each wire pair.

## 4.2 Fibers

The following four models, IES-1062FX-MM, IES-1062GF-MM, IES-1062FX-SS, IES-1062 GF-SS, have fiber optical ports. The fiber optical ports are in multi-mode or single-mode with SC connector. Please remember that the TX port of Switch A should be connected to the RX port of Switch B.





# Technical Specifications

<b>Technology</b>	
Ethernet Standards	802.3 - 10BaseT, 802.3u - 100BaseTX, 100BaseFX, 802.3z - 1000BaseLX 802.3ab - 1000BaseTX, 802.3x - Flow Control
MAC addresses	8192
Flow Control	IEEE 802.3x Flow Control and Back-pressure
Processing	Store-and-Forward
<b>Interface</b>	
RJ45 Ports	10/100Base-T(X), Auto MDI/MDI-X
Giga Fiber Ports	1000 Base-X (SC Connector) Multi-Mode: 0 to 550m, 850 nm (50/125 $\mu$ m to 62.5/125 $\mu$ m) Single-Mode: 0 to 10km, 1310 nm (9/125 $\mu$ m)
Giga Ports	10/100/1000 Base-T(X), Auto MDI/MDIX
Fiber Ports	100 Base-FX (SC Connector) Multi-Mode: 0 to 2 km, 1310 nm (50/125 $\mu$ m to 62.5/125 $\mu$ m) Single-Mode: 0 to 30km, 1310 nm (9/125 $\mu$ m)
LED Indicators	Per Unit : Power(Green) RJ45 Ports:



	Per Port : Link/Activity(Green/Blinking Green), Full duplex(Amber) Giga Ports: Per Port : Activity(Green),Link (Amber)
<b>Power Requirements</b>	
Power Input Voltage	PWR1/2: 12 ~ 48VDC in 7-pin Terminal Block PWR3: 12 ~ 45VDC in Power Jack
Reverse Polarity Protection	Present at terminal block
Power Consumption	8 Watts Max
<b>Environmental</b>	
Operating Temperature	-40 to 70°C
Storage Temperature	-40 to 85°C
Operating Humidity	5% to 95%, non-condensing
<b>Mechanical</b>	
Dimensions(W x D x H)	52 mm(W)x 106 mm(D)x 144 mm(H)
Casing	IP-30 protection
<b>Regulatory Approvals</b>	
Regulatory Approvals	FCC Part 15, CISPER (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS)
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
<b>Warranty</b>	5 years