

ESUGS4-G1-B

Quick Start Guide



Rev 1803

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1 INTRODUCTION

1.1 ESUGS4-G1-B Introduction

ESUGS4-G1-B is an unmanaged PoE/PoE+ industrial Ethernet switch with 5*10/100/1000M auto sensing electrical ports. Four of the copper ports support PoE/PoE+, with up to 30W output on each PoE port. Industrial level 3 protection design and IP40 enclosure protection makes the product suitable for applications in harsh environments.

1.2 Features

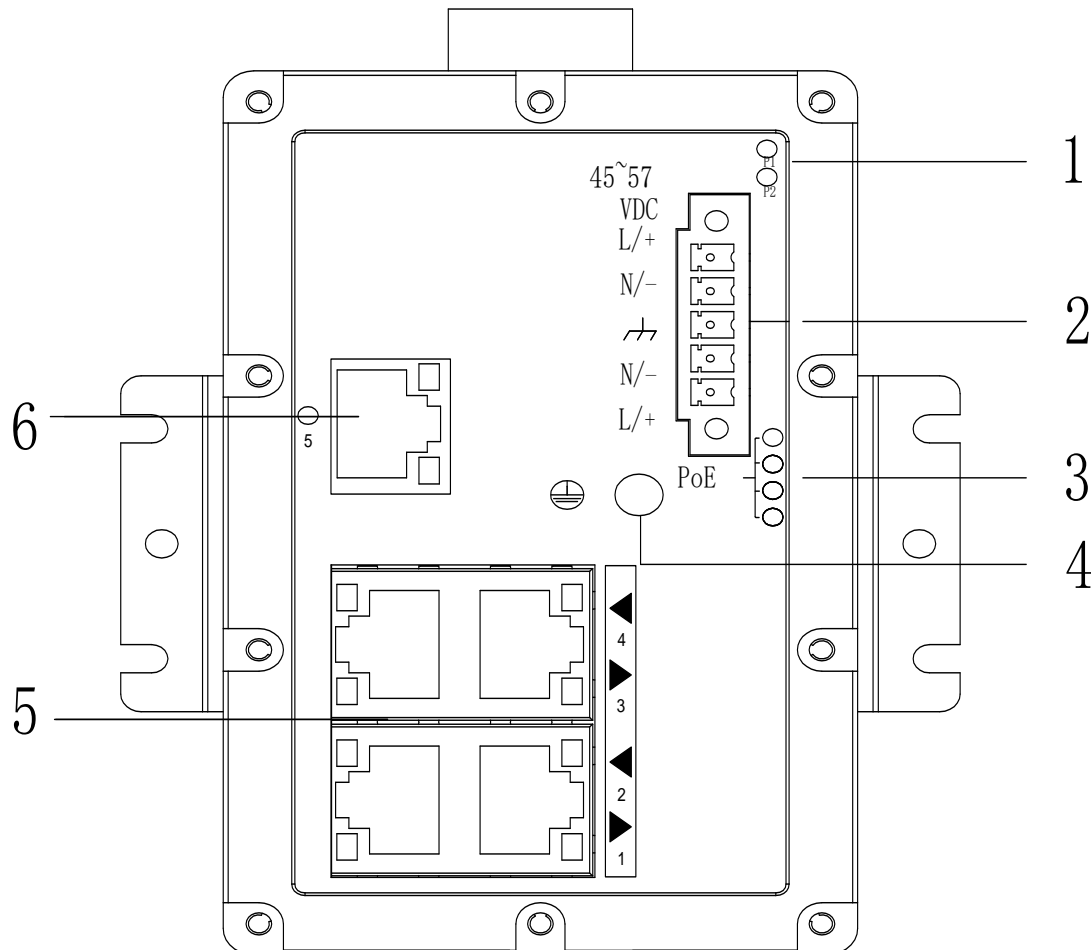
- Unmanaged industrial switch
- 5*10/100/1000Base-T ports
- 4 ports support IEEE802.3af&at
- Dual 45~57VDC power input
- Overload current protection and reverse polarity protection
- Level 3 ESD protection
- IP-40 housing design
- Operation temperature: -40~+75°C
- Support DIN-rail or wall mounted
- Unique DIN mount design makes mount and removal easy.
- Installation: Plug-and-play, no setting required

1.3 Specifications

Ethernet	
10/100/1000Base-T	5 (4 with PoE+)
PoE Standard	IEEE802.3af/at
Switch Performance	
Architecture	Store and forward
Switch Capacity	10Gbps
Power	
Redundant Input Power	45~57VDC, 5-pin screw terminal
Power Consumption (Max.)	< 5W (without PoE)
PSE Type	End span
PoE Budget	Each port up to 30W
Overload Current Protection	Present
Reverse Polarity Protection	Present
Mechanical	
Enclosure	IP40
Dimensions (W x D x H)	62 x 102 x 100 mm
Weight	0.6kg
Environment	
Storage Temperature	-40°C to +85°C (-40°F to 185°F)
Operating Temperature	-40°C to +75°C (-40°F to 167°F)
Operating Humidity	5% to 95% non-condensing

2 PANEL VIEWS

2.1 Front Panel View



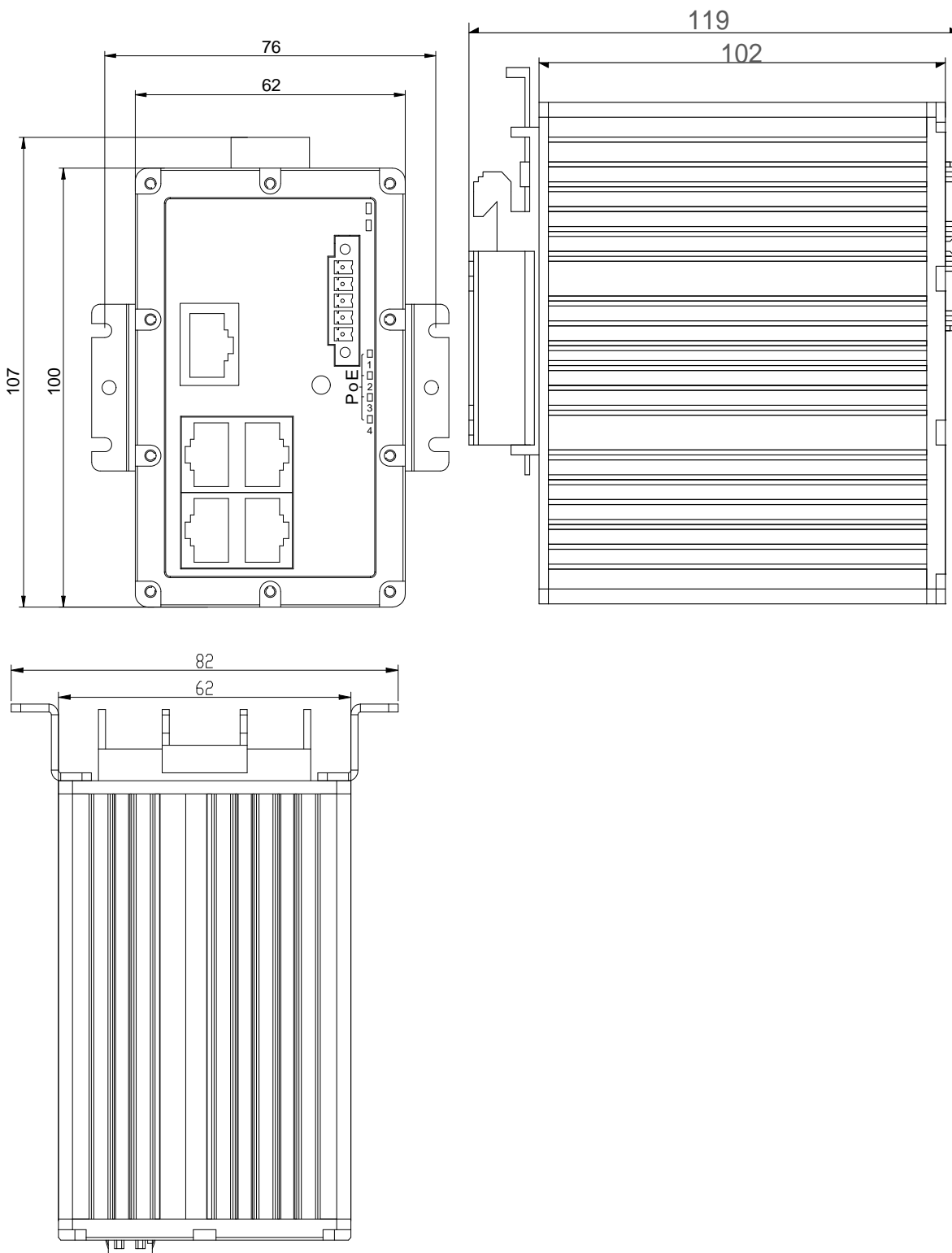
1. Power status indicator
2. 45~57VDC power input
3. PoE status indicator
4. Grounding screw
5. 10/100/1000Base-T port (PoE): #1 ~ #4
6. 10/100/1000Base-T port: #5

▲ WARNING: This product **MUST** be mounted to a well-grounded mounting surface such as a metal panel.

2.2 Status Indicator LED

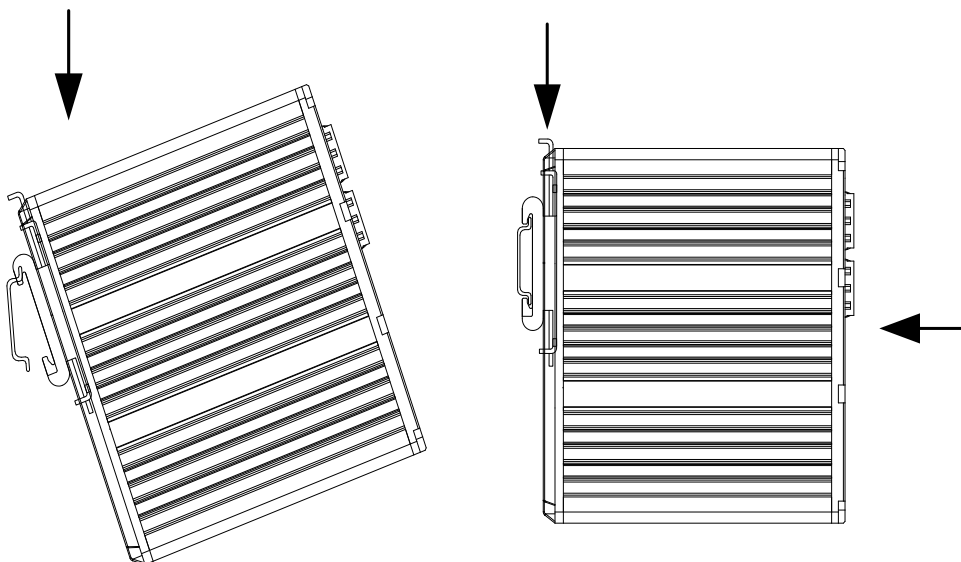
LED	Color	Status	Description
P1	Orange	On	Power is being supplied
		Off	Power is not being supplied
P2	Orange	On	Power is being supplied
		Off	Power is not being supplied
PoE1-4	Green	On	The corresponding port's PoE power on
		Off	The corresponding port's PoE power off
10/100/1000Base-T(X)			
SPD	Green	On	Speed indicator for 1000Mbps
		Off	Speed indicator for 10/100Mbps
LINK/ACT	Orange	On	The corresponding port's link is active
		Blinking	Data is being transmitted
		Off	The corresponding port's link is inactive

3 DIMENSIONS (UNIT: mm)



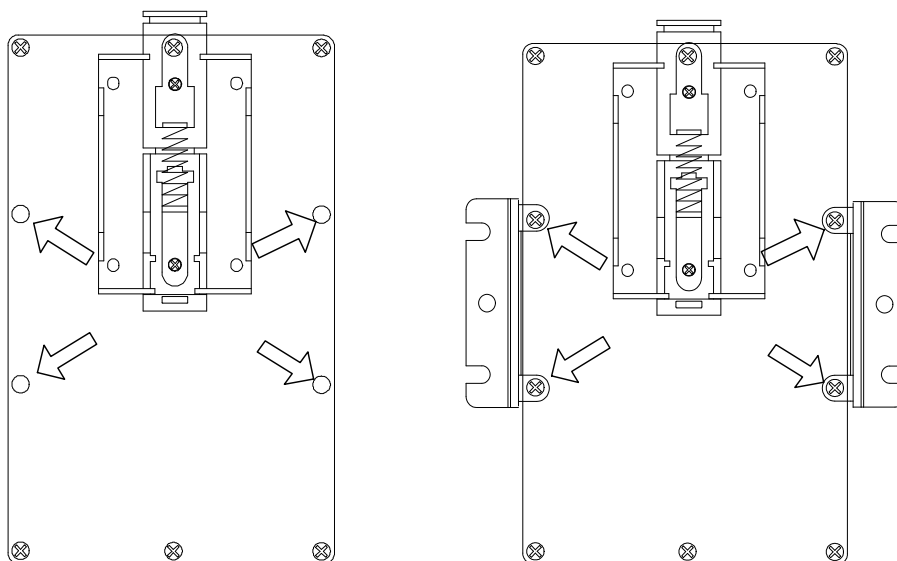
4 MOUNTING

4.1 DIN Mounting



Very simple: Press the clamp, insert into rail then loosen hand

4.2 Wall Mounting



Step 1

Step 2

Step 1: Loosen the 4 screws on the rear panel;

Step 2: Mount the accessories on the rear panel;

Step 3: Fix the switch on the wall.

4.3 Items for Attention

- **Operating Ambient:** If the product is installed in a closed rack, the inside operating ambient temperature of the rack may be higher than outside. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum operating temperature specified by the manufacturer.

- **Air Flow:** Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

- **Circuit Overloading:** Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring.

- **Reliable Earthing:** Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

4.4 Grounding

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection from ground screw to the grounding surface prior to connecting devices.

5 CABLE

5.1 Ethernet Cable

The product uses standard Ethernet cable. Depending on the connection type, you can choose CAT3, 4, 5e, 6 UTP cable to connect to other network devices (computers, servers, switches, routers, hubs, etc.). The cable properties are listed in the following table.

Cable	Type	Max Length	Connector
10BASE-T	Cat.3, 4, 5 100-ohm	UTP 100 m (328 ft)	RJ-45
100BASE-T	Cat.5 100-ohm UTP	UTP 100 m (328 ft)	RJ-45
1000BASE-T	Cat.5/Cat.5e/6 100-ohm UTP	UTP 100 m (328ft)	RJ-45

10/100/1000Base-T Pin Allocation

For 10/100/1000Base-T cable, pin 1 and 2 send data, pin 3 and 6 receive data.

10/100Base-T RJ-45 Pin Definition

Pin Number	Signal	PoE
1	TD+	PoE+
2	TD-	PoE+
3	RD+	PoE-
4	null	
5	null	
6	RD-	PoE-
7	null	
8	null	

1000Base-T RJ-45 Pin Definition

Pin Number	Signal	PoE
1	BI_DA+	PoE+
2	BI_DA-	PoE+
3	BI_DB+	PoE-
4	BI_DC+	
5	BI_DC-	
6	BI_DB-	PoE-
7	BI_DD+	
8	BI_DD-	

This switch supports MDI / MDIX auto-flip function. The following table lists the 10/100/1000Base-T MDI/MDI-X port pin output.

10/100Base-T MDI/MDI-X Pin Definition

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

1000Base-T MDI/MDI-X Pin Definition

Pin Number	MDI Port	MDI-X Port	PoE
1	BI_DA+	BI_DB+	PoE+
2	BI_DA-	BI_DB-	PoE+
3	BI_DB+	BI_DA+	PoE-
4	BI_DC+	BI_DD+	
5	BI_DC-	BI_DD-	
6	BI_DB	BI_DA-	PoE-
7	BI_DD+	BI_DC+	
8	BI_DD-	BI_DC-	