ESMGS8-C2-B
Quick Start Guide

KBC

data delivered

Rev 1709

Index

1 INTRODUCTION

1.1 ESMGS8-C2-B INTRODUCTION

ESMGS8-C2-B is a managed PoE/PoE+ Industrial Ethernet switch with 8*10/100/1000M auto sensing electrical ports and 2 *1000M Comb ports. The switch supports PoE/PoE+. Each of the 8 electrical port outputs up to 30W. The switch supports Ethernet Ring Protection Switching (ERPS) as well as STP/RSTP/MSTP. It also supports Web-based network management, VLAN, QoS, SNMP, IGMP snooping etc. Rugged design with IP40 enclosure and industrial level 3 protection makes it suitable for applications such as Intelligent Transportation System, IP surveillance and industrial networks.

1.2 FEATURES

- 8* 10/100/1000Base-T Ethernet ports (PoE)
- 2 Gigabit Comb ports
- Support EPRS (typical recovery time < 30ms with 250 units of connection)
- Support different redundancy protocols and standards STP / RSTP / MSTP
- Support SNMPv1/v2c/v3 & RMON & Port base/802.1Q VLAN network management
- Support IGMP Snooping multicast function
- Support WEB, Telnet, SSH, Console (CLI)
- Support open and close port, binding MAC and port
- Support 802.1x network access control
- Support 802.1Q protocol, Isolate network flow
- Support Radius Centralized password management
- Support IEEE802.3af/at standard
- Overload current protection and reverse polarity protection
- IP40 enclosure protection
- Unique DIN mount design makes mount and removal easy
- Both POE and Non-POE models are available

1.3 SPECIFICATIONS

Ethernet	
10/100/1000Base-T	8
1000Base-FX SFP	2 (Comb ports)
PoE standard	IEEE802.3af/at

Switching Performance	
Architecture	Store and Foreword
Bandwidth	24Gbps
Power	
Redundant Input Power	Dual DC inputs. 45~57VDC, 5-pin screw terminal
Power Consumption (Max.)	< 10W (Without PoE output)
PSE type	End Span
POE Port	Each port up to 30W
Overload Current Protection	Present
Reverse polarity protection	Present
Mechanical	
Enclosure	IP40
Dimension (W x D x H)	68mm (W) x 105mm (D) x 146mm (H)
Weight	0.9kg
Environment	
Storage Temperature	-40 to +85ºC (-40 to 185ºF)
Operating Temperature	-40 to +75ºC (-40 to 167ºF)
Operating Humidity	5% to 95% Non-condensing

2   PANEL VIEWS

2.1 **Front panel view**
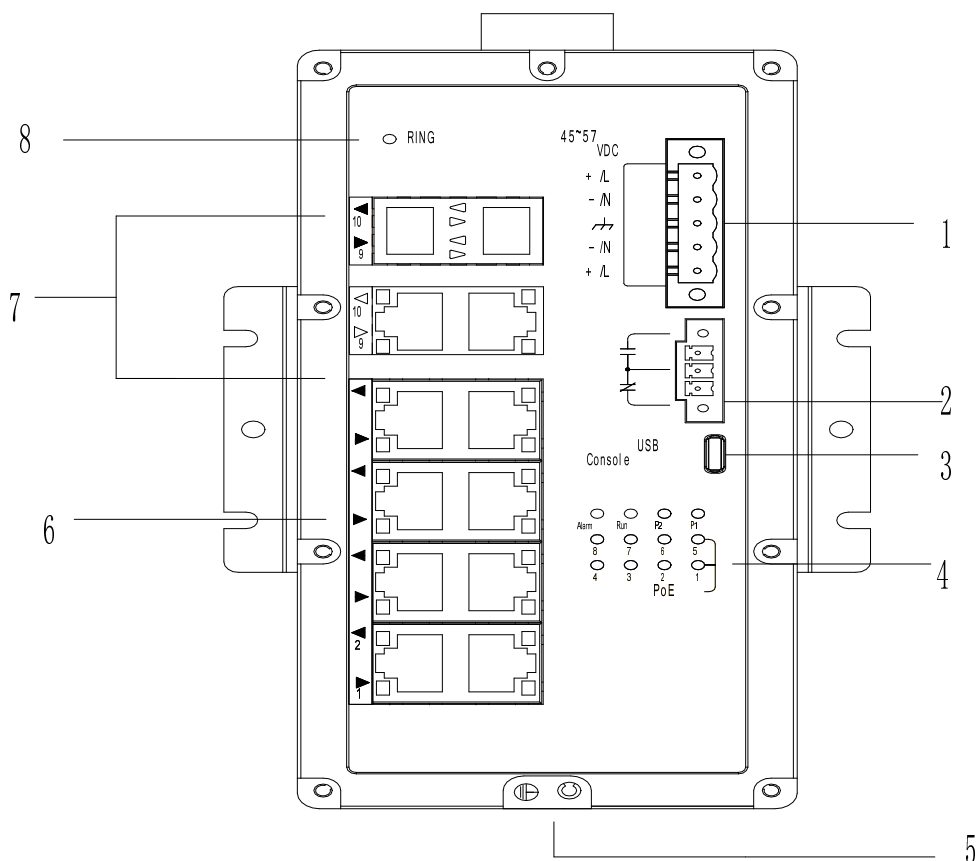
1.   45~57VDC power input
2.   Alarm output terminal block (one is normal open and the other is normal close)
3.   USB console
4.   PWR, Alarm and Run status indication
5.   Ground screw
6.   10/100/1000Base-T port: #1 ~ #8
7.   Comb port: #9 ~ #12
8.   Ring status indication

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

Status indicator LED

LED	Color	Status	Description
Run	Green	On	System running lights, the system normally solid green
Alarm	Green	On	Warning lamp

P1	Orange	On	Power 1 is being supplied
		Off	Power 1 is not being supplied
P2	Orange	On	Power 2 is being supplied
		Off	Power 2 is not being supplied
PoE1-8	Green	On	The corresponding port's PoE power on
		Off	The corresponding port's PoE power off
Comb port			
LINK	Green	On	Port connected
ACT	Orange	Blinking	Data is being transmitted
10/100/1000Base-T(X)			
SPD	Green	On	Speed indicator for 1000Mbps
		Off	Speed indicator for 100Mbps and 10Mbps
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 <u>DIMENSIONS (UNIT=mm)</u>
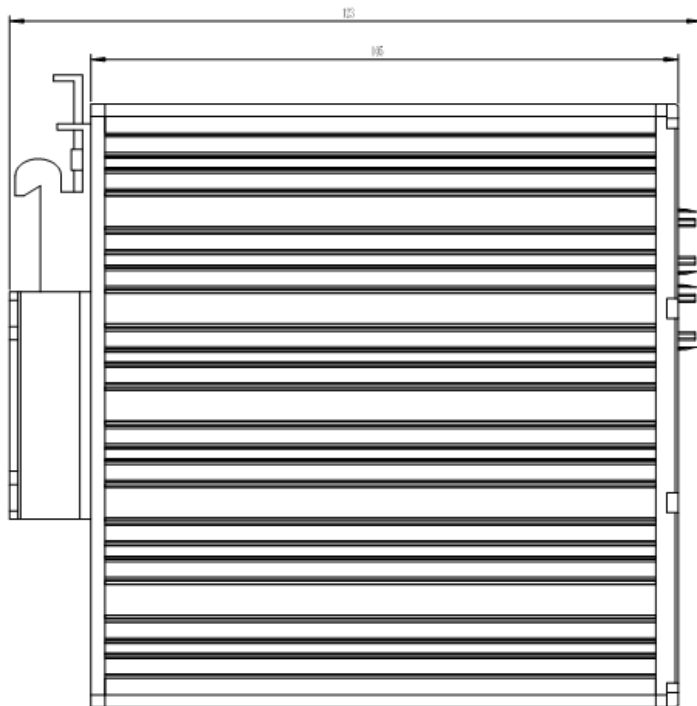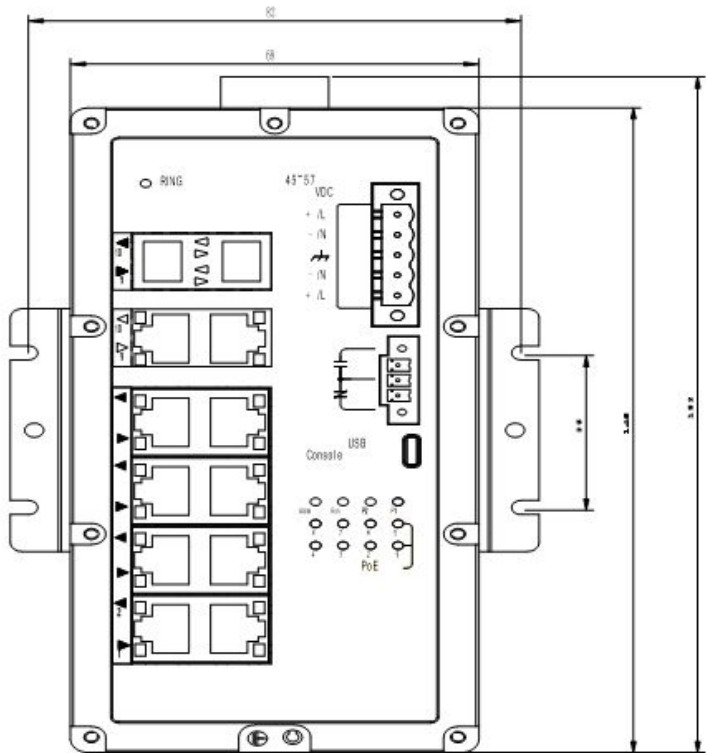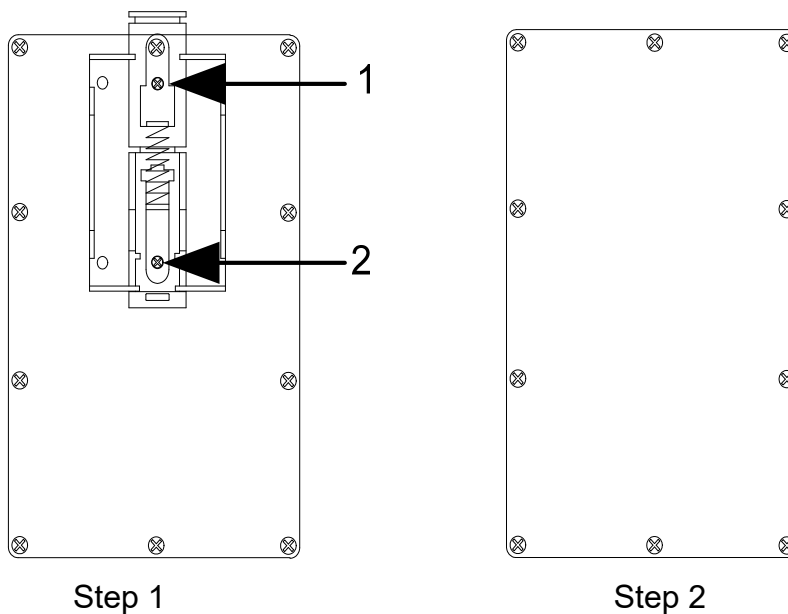
4   MOUNTING

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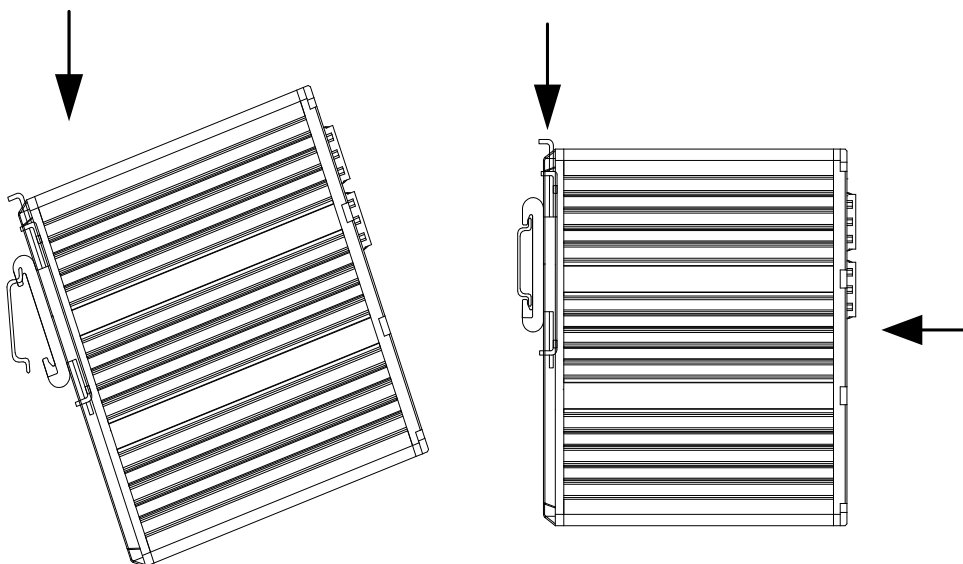
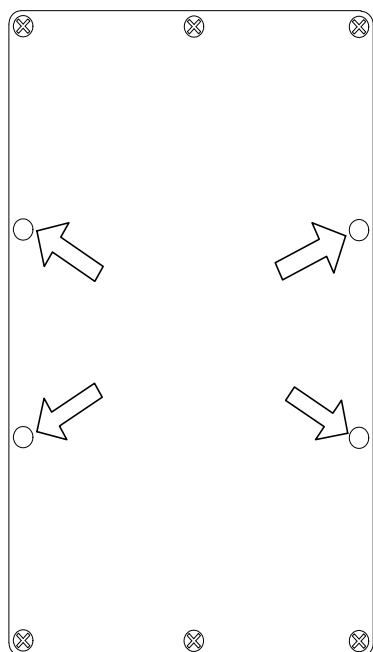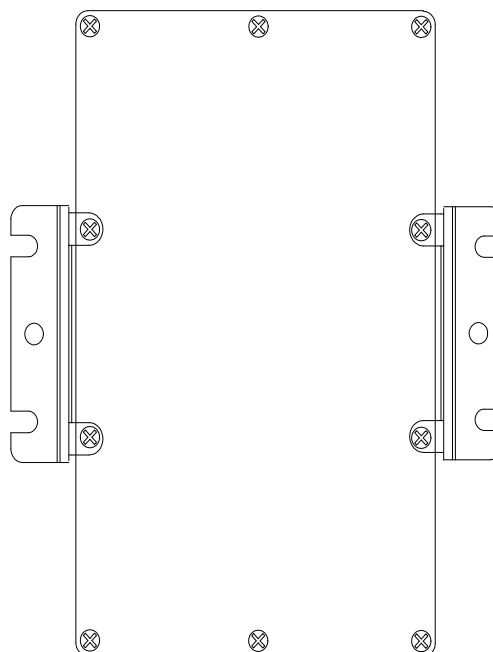Very simple: Press the clamp, insert into rail then loosen hand

4.2   Wall mounting

Step 1   Step 2

Step 3   Step 4

Step 1: Remove the guide rail fastener;

Step 2: Remove the DIN clamp in the rear panel;

Step 3: Find the wall mounting accessory, and loosen these 4 screws in the Switch.

Step 4: Mounting the accessory on the rear panel;

Step 5: Fixed 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.). Make sure that the cable properties in the following form.

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/6 100-ohm UTP	UTP 100 m (328ft)	RJ-45

100BASE-TX / 10BASE-T Pin Allocation

100BASE-TX / 10BASE-T Cable, pins 1 and 2 to send data, receive data pin 3,6

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

5.2 SFP port

SFP port supports both electrical and optical SFP modules. Selecting right SFP modules (rate, MM/SM, 1 fiber/2 fibers) based on application. Please notice that 1000M SFP port supports 1000Mbps only.

Need Help?

Please visit our website http://www.kbcnetworks.com or contact your nearest KBC office or dealer.

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