MICROSENS

User Manual

MS657140X
Industrial Fast Ethernet Switch
8x 10/100Base-TX

CE MARKING

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022 class A for ITE, the essential protection requirement of Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

Company has an on-going policy of upgrading its products and it may be possible that information in this document is not up-to-date. Please check with your local distributors for the latest information. No part of this document can be copied or reproduced in any form without written consent from the company.

Trademarks:
All trade names and trademarks are the properties of their respective companies.

MICROSENS

Introduction

This ruggedized Industrial Fast Ethernet Switch is equipped with eight 10/100Base-TX Fast Ethernet ports. With its multi-purpose design, it can also be used for DIN-Rail or wall-mounted. It is an ideal unit for IP surveillance, traffic monitoring and security applications in critical environment. It can tolerate -40°C to 75°C in harsh environment to perform a reliable network.

Housing Dimensions
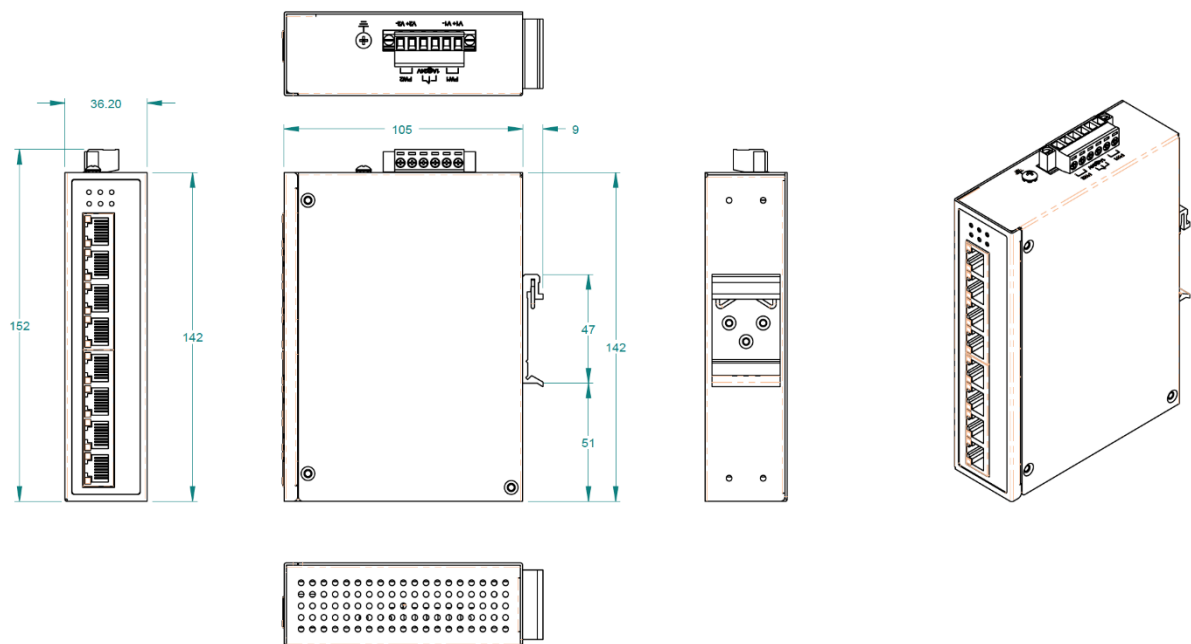
NOTE:
Housing dimension is for the purpose of showing product length, width, height, DIN-rail, and terminal block's position and dimension. The exact TX or fiber port numbers vary by models

---

Installation package

This unit can be installed by DIN-rail mounted or wall-mounted. DIN-rail brackets and wall-mounted bracket are included.

Two wall mount brackets

Din-rail bracket

6-pin terminal block
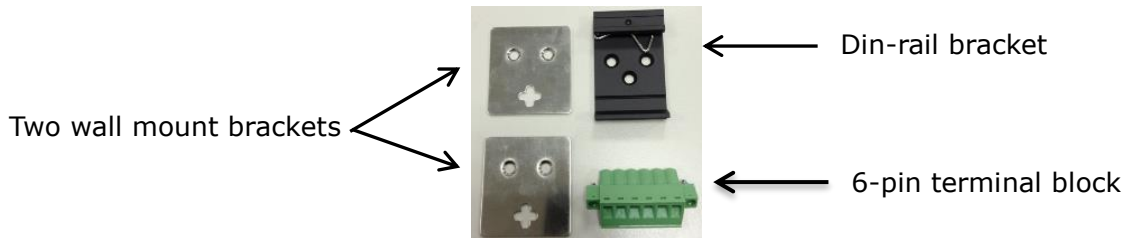
Power connection

This unit provides a 6-pin terminal block. It can be operated using 48-56VDC power source. Always make sure your input voltage is within this supported voltage range.

To make power connection – Follow the printed polarity for V1+, V1-, V2+, V2- and ground. Connect positive wire to V+, connect negative wire to V-, and connect ground/earth to grounding screw as shown.

Relay: You may use 24V@1A relay connection to your external device for special purpose. When two powers are connected, the relay is in OPEN mode. If only one of the power sources is connected, the relay change to SHORT mode.

Connecting procedure

STEP 1:   Connect ground/earth to grounding screw.
STEP 2:   Pull out 6-pin terminal block in the included mounting kit package.
STEP 3:   Connect power wire to V1+, V1-, V2+, and V2- with correct polarity.
          Possibly connect alarm relay.
STEP4:   Plug the connector into terminal block socket shown above.

WARNING: Always SHUTS OFF power source to connect power wire.
WARNING: Any exceeded input voltage will not make this unit function and may damage this unit.

Front view
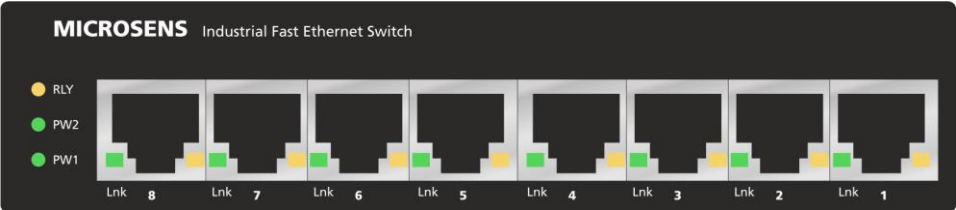
LEDs

Per unit:

LED	Colour	Description
PW1	Green	On: power 1 is connected
PW2	Green	On: power 2 is connected
SW	Amber	Indicates relay status On: only PW1 or PW2 is connected Off: both power ports are supplied

Per port:

LED	Colour	Description
Link/Activity	Green	On: valid link established Flashing: data transmission

Note: The amber port LED is not used!

Specification

IEEE Standards	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE802.3x Flow Control and Back Pressure
Switch Architecture	Back-plane (Switching Fabric): 1.6Gbps
Data Processing	Store and Forward
Flow Control:	IEEE 802.3x Flow Control and Back Pressure
MAC address Table Size	1K
Packet Buffer Size	1M
Network Connector :	8x RJ-45 10/100Base-TX Auto-negotiation and MDI/MDI-X auto-crossing at all ports
Network Cable	UTP/STP min. Cat.5e cable
	EIA/TIA-568 10-ohm (100m)
Protocol	CSMA/CD
LED	Per unit: PW1, PW2, RLY (relay) Per port: Link/activity
Reverse polarity protection	Present
Overload current protection	Present
Power Supply	12-56 VDC redundant power input
Alarm Relay Contact	Relay outputs with current carrying capacity of 1 A @24VDC, Relay in short circuit mode when two power are connected. In open circuit mode when only one power supply is connected.
Power Consumption (typ.)	3 W@48 VDC full load

Removable Terminal Block	6-pin terminal block 2x redundant power, alarm relay Wire range: 0.34mm^2 to 2.5mm^2 Solid wire (AWG):12-24/14-22 Stranded wire (AWG): 12-24/14-22 Torque:5lb-In/0.5Nm/0.56Nm Wire Strip length: 7-8mm
Operating Temperature	-40℃ to 75℃ fully tested.
Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-40℃ to 85℃
Housing	Rugged metal, IP30 protection
Case dimension	36.2 x 105 x 142 mm (w x d x h)
Installation mounting	DIN-rail mounting and wall mounting
Vibration	EN 50155 / EN 60068-2-6
Shock	EN 50155 / EN 60068-2-27
Free Fall	EN 50155 / EN 60068-2-32
Safety	EN60950-1
EMC/EMS	CE
EMI	CE EN 55022 Class A