MSM-508F Series NEW

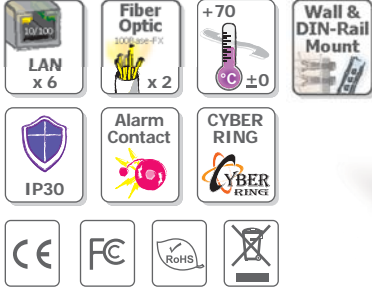## 8-Port Industrial Ethernet Layer 2 Managed Switch with 2-Fiber Port

Highlight Information ▶▶▶▶

MSM-508FC/FCS Series

MSM-508FT Series

LAN x 6 | Fiber Optic 100Base-FX x 2 | +70 °C ±0 | Wall & DIN-Rail Mount

IP30 | Alarm Contact | CYBER RING

CE FC RoHS

● Introduction

The MSM-508F series is an 8-Port Industrial Ethernet Layer 2 Managed Switch with 2-Fiber Port that secures data transmission by using fiber optic transmission to provide immunity from EMI/RFI interference. It is perfect solution for applications where transmission must be protected from electrical exposure, surges, lightning or chemical corrosion.

It can be managed through RS-232 port via serial console or Ethernet port using telnet or Web browser. In addition, the switch supports a lot of powerful managed functions, such as 802.1Q Tag-based VLAN, Port-based VLAN, 802.1p QoS (Quality of Service), Port Trunking, Spanning Tree, Cable Testing and Port Mirroring.

Built-in ICP DAS Cyber-Ring technique that enable multiple switches to be placed into a redundant ring. The switch detects and recovers from a fiber or copper link failure within approximately 300 ms – for the majority of applications a seamless process. Modbus/TCP, Modbus/RTU and OPC supported, SCADA application can monitor status of Ethernet and fiber port with Modbus or OPC protocol.

MSM-508F provides two power inputs that can be connected simultaneously to live DC power sources. If one of the power inputs fails, the other live source acts as a backup to automatically support the MSM-508F's power needs. And, the relay output facility can deliver warning signal while dual power or network link failure.

● Features

- Automatic MDI/MDI-X crossover for plug-and-play
- Each port supports both 10/100 Mbps speed auto negotiation
- Store-and-forward architecture
- Full duplex IEEE 802.3x and half duplex backpressure flow control
- 3.2 Gbps high performance memory bandwidth
- Frame buffer memory: 1 Mbit
- Integrated look-up engine with dedicated 2048 unicast MAC addresses
- Supports $+12 V_{DC} \sim +48 V_{DC}$ Power failure alarm by relay output
- Supports operating temperatures from 0 °C ~ +70 °C
- DIN-Rail mount and Screw hole for wall mounting kit

● Specifications

Models	MSM-508FC/FCS Series	MSM-508FT Series
Technology		
Standards	IEEE 802.3, 802.3u, 802.3x	
Processing Type	Store & forward, wire speed switching	
MAC Addresses	2048	
Memory Bandwidth	3.2 Gbps	
Frame Buffer Memory	1 Mbit	
Flow Control	IEEE 802.3x flow control, back pressure flow control	
Protocol	VLAN, QoS, Port Trunk, SMTP, TELNET	
Interface		
RJ-45 Ports	10/100 Base-TX auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection	
Fiber Optics Port	100 Base-FX	
LED Indicators	10/100M, Link/Act, Full duplex/Half duplex (Fiber Port)	
Ethernet Isolation	1500 V_{rms} 1 minute	
Frame Ground for EMS Protection	Yes	
Multi Mode	Multi Mode Fiber Cables: 50/125, 62.5/125 or 100/140 µm	
	Distance: 2 km, (62.5/125 µm recommended) for full duplex	
	Wavelength: 1300 or 1310 nm	
	Min. TX Output: -20 dBm	
	Max. TX Output: -14 dBm	
	RX Sensitivity: -34 ~ -31 dBm	
Single Mode	Single Mode Fiber Cables: 8.3/125, 8.7/125, 9/125 or 10/125 µm	
	Distance: 15 km, (9/125 µm recommended) for full duplex	
	Wavelength: 1300 or 1310 nm	
	Min. TX Output: -15 dBm	
	Max. TX Output: -8 dBm	
	RX Sensitivity: -36 ~ -31 dBm	
Ethernet Transmission Distance	Ethernet: 2-pair UTP/STP Cat.3, 4, 5, EIA/TIA-568 100 Ω	
	Fast Ethernet: 2-pair UTP/STP Cat. 5, EIA/TIA-568 100 Ω	
COM1	RS-232 (TXD, RXD and GND); Non-isolation	
COM2	RS-485 (D2+, D2-; self-tuner ASIC inside); Non-isolation	
Digital Input/Output		
Digital Input	3-channel, Wet Contact, L: +11 V_{DC} Max., H: +19 V_{DC} ~ +30 V_{DC}	
Digital Output	3-channel, Open Collector, Sink/NPN, 30V/100 mA Max.	
Power		
Input Voltage Range	+12 V_{DC} ~ +48 V_{DC} (Non-isolation redundant input)	
Power Consumption	0.3 A @ 24 V_{DC}, +/-5% arrowed with 100M Full duplex	
LED Indicator	Yes	
Protection	Power reverse polarity protection	
Frame Ground for EMS Protection	Yes	
Mechanical		
Casing	Metal (IP30 Protection)	
Dimensions (W x L x H)	47 mm x 140 mm x 175 mm	47 mm x 142 mm x 175 mm
Installation	DIN-Rail or Wall Mounting	
Environmental		
Operating Temperature	0 °C ~ +70 °C	
Storage Temperature	-20 °C ~ +85 °C	
Ambient Relative Humidity	10% ~ 90% RH, non-condensing	
Include Cable		
CA-090510 x 1		

Managed Ethernet Switches   MSM-508F Series

● LED Functions

Standard RJ-45 female connectors are provided. A standard RJ-45 plug cable is all that is necessary to connect your device to the unit since switch that supports auto crossover.

MSM-508F Series LED Indicator Functions

LED	Color	Description
Master	Red On	The switch is master of ring network
	Red Off	The switch is slave of ring network
PWR1	Orange On	Power input 1 is alive
	Orange Off	Power input 1 is offline
PWR2	Green On	Power input 2 is alive
	Green Off	Power input 2 is offline
Ethernet Port	Orange On	Link to 100 Mbps
	Orange Off	Link to 10 Mbps
	Orange Blink	Backup Port
	Green Blink	Data Transmission
Fiber Port	Green Blink	Fiber is active port
	Green Off	Fiber backup port

● Serial Port

10-Pin RJ-45 Serial Port Pin-Out
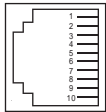
Pin#	Signal Name	Function
1	NC	No Connection
2	NC	No Connection
3	NC	No Connection
4	GND	RS-232 Ground
5	TXD	RS-232 TXD
6	RXD	RS-232 RXD
7	NC	No Connection
8	NC	No Connection
9	NC	No Connection
10	NC	No Connection

● Appearance

Redundant power inputs
Relay output, Digital Input/Output, RS-485

RJ-45 serial port
Mode selection
LED indicators

Fiber port

RJ-45 Ethernet
LED indicators

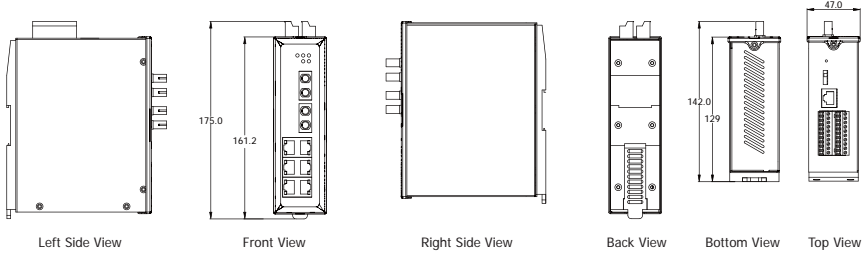Metal casing

DIN-Rail

Screw hole for wall mounting kit
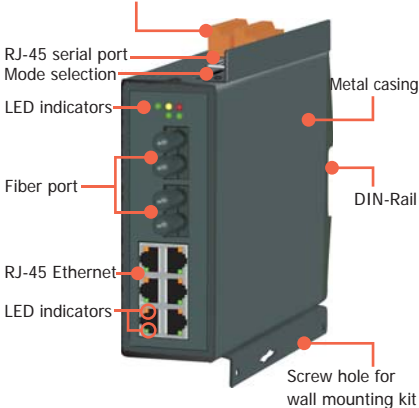
● Redundant Power Inputs

Both power inputs can be connected simultaneously to live DC power sources.
If one power source fails, the other live sourceacts as a backup, and automatically supplies all of MSM-508F series power needs.

MSM-508F Series

PWR2

Back-up Power supply

Relay Output

PWR1

+24 V_{DC} Power supply

PWR2 PWR1 Master
P2_Link P1_Link

MSM-508F
Real-Time
8-Port 10/100M
Managed Switch

Ring Pair 1

Ring Pair 2

Terminal Block

1   11

10   20

COM1
RS-232

Upgrade Firmware
Normal Run
Repair Mode

Reset
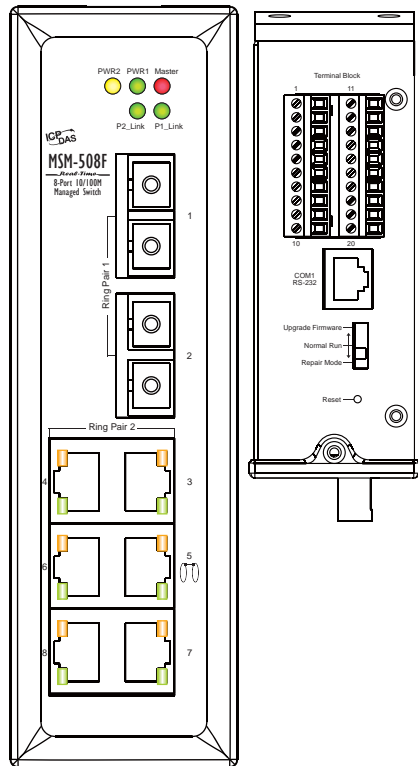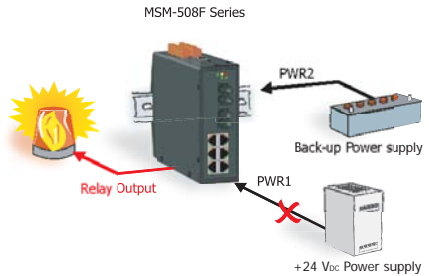
● Dimensions (Unit: mm)

DIN-Rail

Left Side View	Front View	Right Side View	Back View	Bottom View	Top View

Wall Mounting

Left Side View	Front View	Right Side View	Back View	Bottom View	Top View
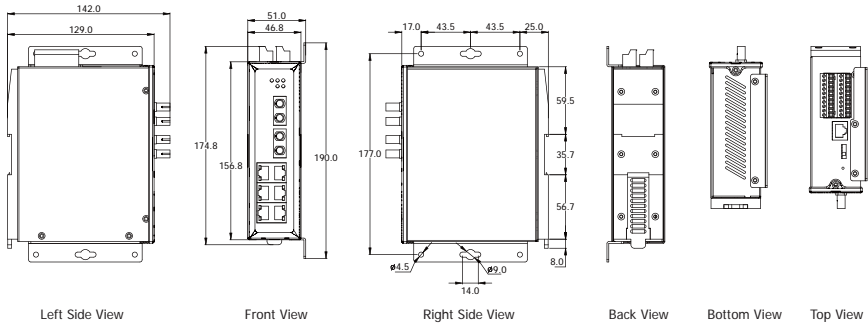
● Ordering Information

MSM-508F ☐☐ **- 4 0 -** ☐

Single Mode Distance
40: 40 km
Standard Models: 15 km

Ordering Code Definition	Fiber Port Connector	Operating Temperature
	T: Multi Mode ST Connector **C**: Multi Mode SC Connector **CS**: Single Mode SC Connector	**T**: Operating Temp: -40 °C ~ +75 °C Standard Models: 0 °C ~ +70 °C
Models	MSM-508FT MSM-508FC MSM-508FCS	MSM-508FT-T MSM-508FC-T MSM-508FCS-T MSM-508FCS-40T

● Accessories

CA-090510	9-Pin Female D-Sub & RJ-45 Cable, 1M Cable
MDR-20-24	24V/1A, 24 W Power Supply with DIN-Rail Mounting
KWM020-1824F	24V/0.75A, 18 W Power Supply
DIN-KA52F	24V/1.04A, 25 W Power Supply with DIN-Rail Mounting