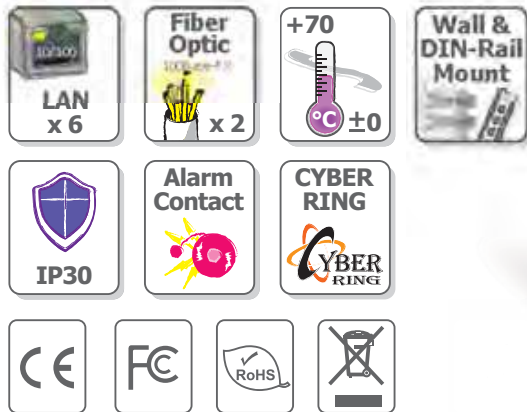


# MSM-508F Series NEW

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

## Highlight Information ▶▶▶



MSM-508FC/FCS Series

MSM-508FT Series



## ● 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<sub>DC</sub> ~ +48 V<sub>DC</sub> Power failure alarm by relay output
- Supports operating temperatures from 0 °C ~ +70 °C
- DIN-Rail mount and Screw hole for wall mounting kit

# High Reliability Industrial Ethernet Switch for Rugged Environment

## ● Specifications

Models	MSM-508FC/FCS Series	MSM-508FT Series
<b>Technology</b>		
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	
<b>Interface</b>		
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 <sub>rms</sub> 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	
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	
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	
<b>Digital Input/Output</b>		
Digital Input	3-channel, Wet Contact, L: +11 V <sub>DC</sub> Max., H: +19 V <sub>DC</sub> ~ +30 V <sub>DC</sub>	
Digital Output	3-channel, Open Collector, Sink/NPN, 30V/100 mA Max.	
<b>Power</b>		
Input Voltage Range	+12 V <sub>DC</sub> ~ +48 V <sub>DC</sub> (Non-isolation redundant input)	
Power Consumption	0.3 A @ 24 V <sub>DC</sub> , +/-5% arrowed with 100M Full duplex	
LED Indicator	Yes	
Protection	Power reverse polarity protection	
Frame Ground for EMS Protection	Yes	
<b>Mechanical</b>		
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	
<b>Environmental</b>		
Operating Temperature	0 °C ~ +70 °C	
Storage Temperature	-20 °C ~ +85 °C	
Ambient Relative Humidity	10% ~ 90% RH, non-condensing	
<b>Include Cable</b>		
CA-090510 x 1		

## 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.

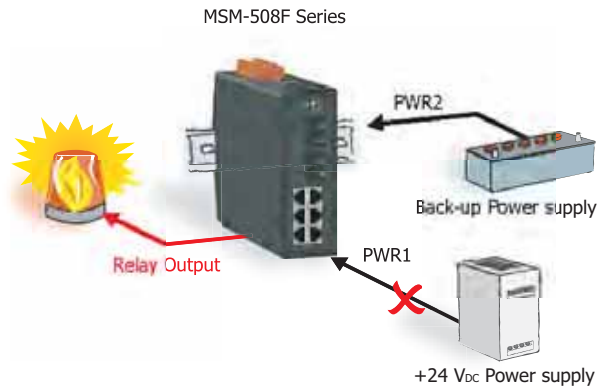
### MSM-508F Series LED Indicator Functions

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

## Redundant Power Inputs

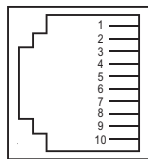
Both power inputs can be connected simultaneously to live DC power sources.

If one power source fails, the other live source acts as a backup, and automatically supplies all of MSM-508F series power needs.



## Serial Port

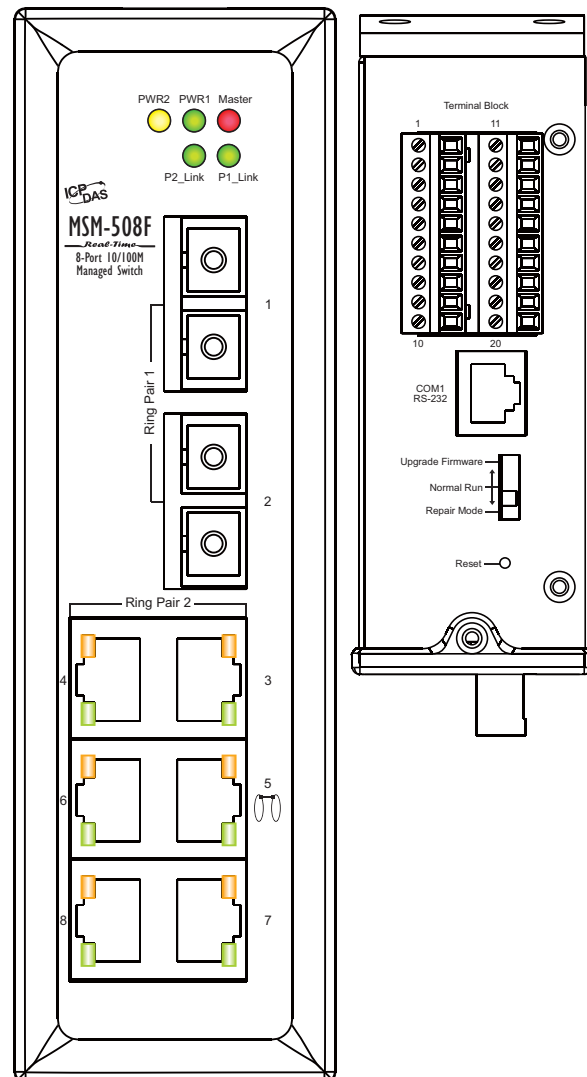
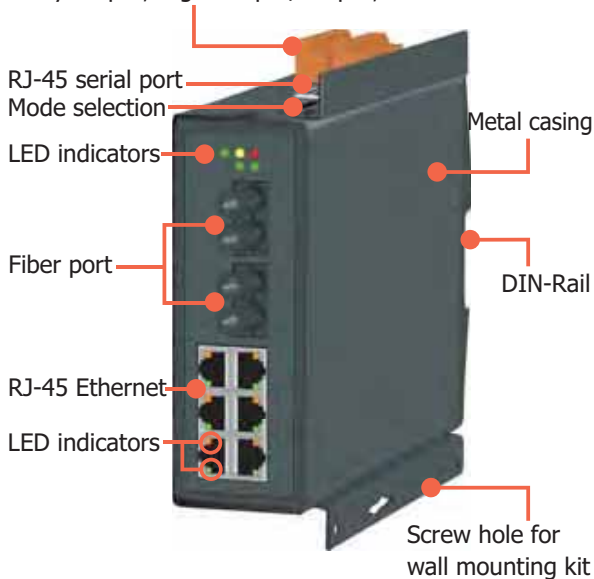
### 10-Pin RJ-45 Serial Port Pin-Out



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

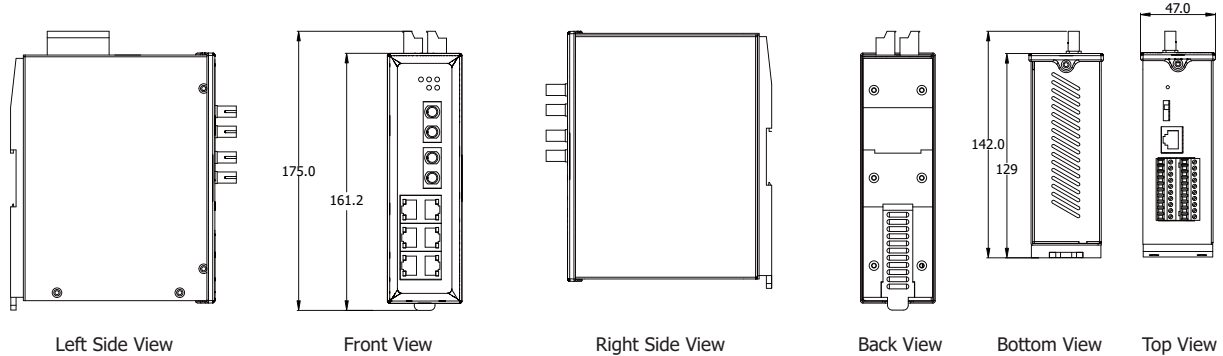
Redundant power inputs  
Relay output, Digital Input/Output, RS-485



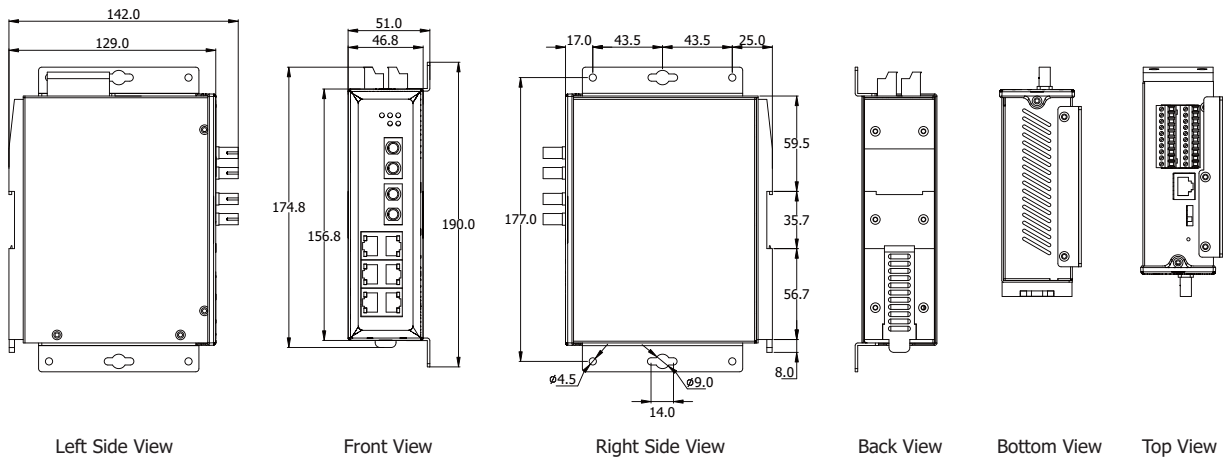
# High Reliability Industrial Ethernet Switch for Rugged Environment

## ● Dimensions (Unit: mm)

### DIN-Rail



### Wall Mounting



## ● Ordering Information

**MSM-508F**   - **40** -

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

Ordering Code Definition	Fiber Port Connector	Operating Temperature
	<b>T</b> : Multi Mode ST Connector <b>C</b> : Multi Mode SC Connector <b>CS</b> : Single Mode SC Connector	<b>T</b> : Operating Temp: -40 °C ~ +75 °C Standard Models: 0 °C ~ +70 °C
Models	MSM-508FT MSM-508FC MSM-508FCS	MSM-508FT-T Art. No. 121271 MSM-508FC-T Art. No. 123610 MSM-508FCS-T Art. No. 121419 MSM-508FCS-40T Art. No. 123611

## ● 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

## 75W Single Output Industrial DIN Rail Power Supply

## DR-75 series



### ■ Features :

- Universal AC input/Full range
- Protections: Short circuit/Over load/Over voltage/Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508(industrial control equipment)approved
- LED indicator for power on
- 100% full load burn-in test
- Fix switching frequency at 50KHz



### SPECIFICATION

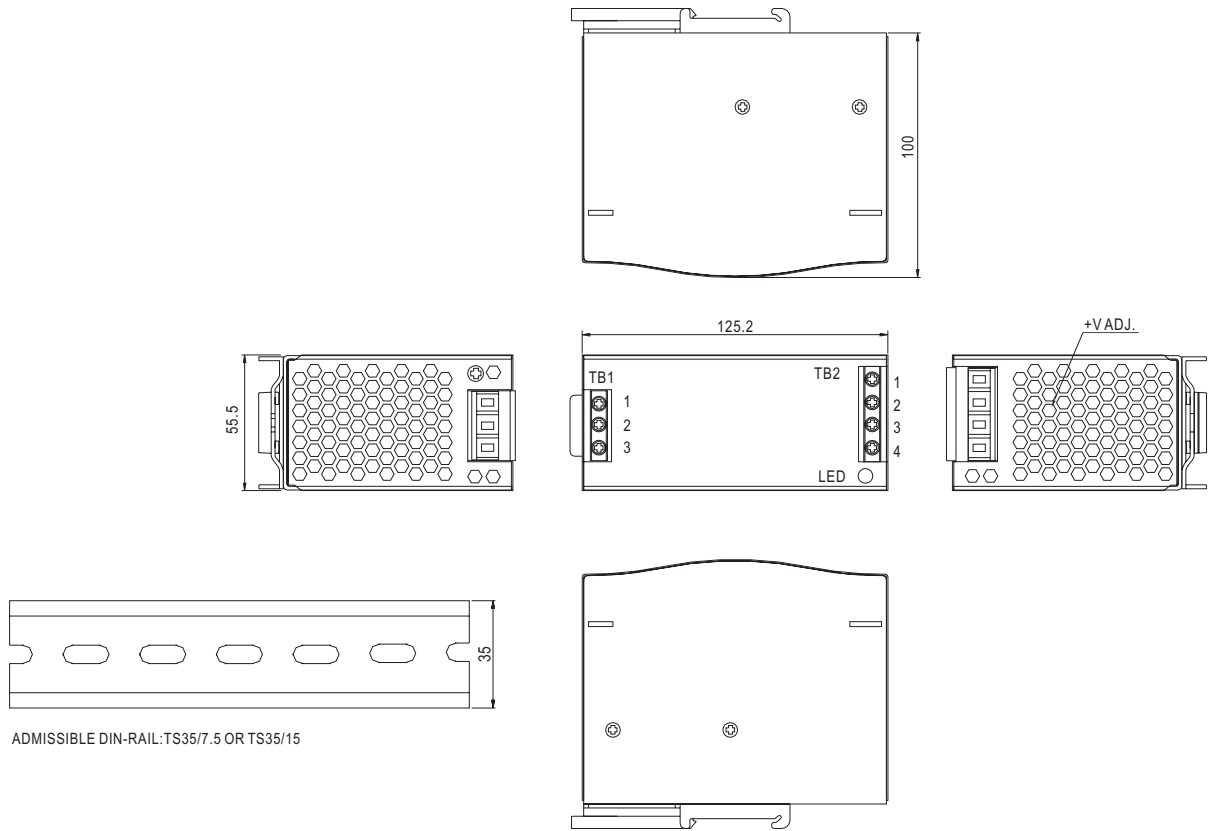
MODEL	DR-75-12	DR-75-24	DR-75-48	
OUTPUT	DC VOLTAGE	12V	24V	48V
	RATED CURRENT	6.3A	3.2A	1.6A
	CURRENT RANGE	0 ~ 6.3A	0 ~ 3.2A	0 ~ 1.6A
	RATED POWER	76W	76.8W	76.8W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	150mVp-p	240mVp-p
	VOLTAGE ADJ. RANGE	12 ~ 14V	24 ~ 28V	48 ~ 53V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME	1000ms, 60ms/230VAC      1800ms, 60ms/115VAC at full load		
	HOLD TIME (Typ.)	60ms/230VAC      12ms/115VAC at full load		
INPUT	VOLTAGE RANGE	85 ~ 264VAC      120 ~ 370VDC		
	FREQUENCY RANGE	47 ~ 63Hz		
	EFFICIENCY (Typ.)	76%	80%	81%
	AC CURRENT (Typ.)	1.6A/115V      0.96A/230V		
	INRUSH CURRENT (Typ.)	COLD START 20A/115VAC      40A/230VAC		
	LEAKAGE CURRENT	<1mA/ 240VAC		
PROTECTION	OVER LOAD	105 ~ 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed		
	OVER VOLTAGE	15 ~ 16.5V	29 ~ 34V	58 ~ 65V
	OVER TEMPERATURE	85°C ±5°C (TSW1) Detect on heat sink of power transistor Protection type : Shut down o/p voltage, recovers automatically after temperature goes down		
ENVIRONMENT	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)		
	WORKING HUMIDITY	20 ~ 90% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH		
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes		
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508, TUV EN60950-1 Approved		
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC      I/P-FG:1.5KVAC      O/P-FG:0.5KVAC		
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC		
	EMI CONDUCTION & RADIATION	Compliance to EN55011, EN55022 (CISPR22) Class B		
	HARMONIC CURRENT	Compliance to EN61000-3-2, -3		
	EMS IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN55024, EN61000-6-2 (EN50082-2) Heavy industry level, criteria A		
OTHERS	MTBF	123.1K hrs min.      MIL-HDBK-217F (25°C)		
	DIMENSION	55.5*125.2*100mm (W*H*D)		
	PACKING	0.6Kg; 20pcs/13Kg/1.1CUFT		
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</li> </ol>			

## 75W Single Output Industrial DIN Rail Power Supply

## DR-75 series

### Mechanical Specification

Case No. 923 Unit:mm



ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15

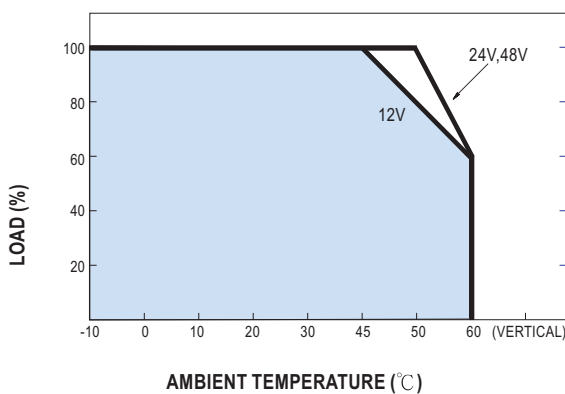
Terminal Pin. No Assignment (TB1)

Pin No.	Assignment
1	FG ⊕
2	AC/N(DC+)
3	AC/L(DC-)

Terminal Pin. No Assignment (TB2)

Pin No.	Assignment
1,2	DC OUTPUT +V
3,4	DC OUTPUT -V

### Output Derating



### Output Derating Vs Input Voltage

