NS-209F Series/NSM-209F Series

8-Port Industrial 10/100 Base-T(X) with 100 Base-FX Switch



Introduction:

The NS-209F/NSM-209F series is a Unmanaged 8-Port Industrial 10/100 Base-TX with 100 Base-FX Switch that secures data transmission by using fiber optic transmission to provide immunity from EMI/RFI interference. It is used Ethernet for transmitting a signal up to 30 km, and is the perfect solution for applications where transmission must be protected from electrical exposure, surges, lightning or chemical corrosion.

The NS-209F/NSM-209F series operates at full duplex mode. In full duplex mode, range is 30 km with 8.3/125, 8.7/125, 9/125 or 10/125 μm fiber cables.

The Ethernet supports 10/100M auto negotiation feature and auto MDI/MDI-X function.

Specification:

Models	NS-209F series	NSM-209 series
Technology		
Standards	IEEE 802.3, 802.3u, 802.3x	
Processing Type	Store & forward, wire speed switching	
MAC Addresses	2048	
Memory Bandwidth	2 Gbps	
Frame buffer memory	512 Kbit	
Flow Control	IEEE802.3x flow control, back pressure flow control	
Interface		
RJ45 ports	10/100 Base-TX auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection	
Fiber Port	100 Base-FX	
LED Indicators	10/100M, Link/Act, Full duplex (Fiber Port)	
Ethernet Isolation	1500 Vrms 1 minute	
Multi Mode (NS-209FT/NS-209FC/NSM-209FT/ NSM-209FC)	Multi mode fiber cables: 62.5/125 μm	
	Distance :2 Km	
	Wavelength : 1300 or 1310nm	
	Min. TX Output:- 20 dBm	
	Max. TX Output: -14 dBm	
	Max. RX Sensitivity: -32 dBm	
	Max. RX Overload: -8 dBm	
	Budget: 12 dBm	
Single Mode (NS-209FCS/NSM-209FCS)	Single-mode fiber cables: 9/125	
	Distance: 30 Km	
	Wavelength: 1300 or 1310nm	
	Min. TX Output: - 15 dBm	
	Max. TX Output: -8 dBm	
	Max. RX Sensitivity: -34 dBm	
	Max. RX Overload: -5 dBm	
	Budget: 19 dBm	
Power		
Input Voltage Range	+12 ~ +48 VDC (Non-isolated)	+12 ~ +48 VDC (Non-isolated) Redundant Inputs with one relay output (1 A @ 24 VDC) for alarm
Power Consumption	0.26 A @ 24 VDC	
Power reverse polarity protection	Yes	
Connector	5-Pin Removable Terminal Block	7-Pin Removable Terminal Block
Mechanical		
Casing	Plastic (Flammability UL 94V-0)	Metal (IP20 Protection)
Dimensions (W x L x H)	64 mm x 101 mm x 118 mm	73 mm x 105 mm x 132 mm
Installation	DIN-Rail	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	

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LED Indicator Functions:

NSM-209F series

LED	Color	Description
PWR_OK	Red On	Core Power is OK
	Red Off	Core Power is Off
Full for P0	Yellow On	Full Duplex
	Yellow Off	Half Duplex
Link for P0	Green On	Link/Act
	Green Off	Not Networking
Ethernet Port (P1 ~ P8)	Green On	Link/Act
	Green Off	Not Networking
	Yellow On	Link to 100 Mbps
	Yellow Off	Link to 10 Mbps
PWR2 PWR1 FAULT	Green On	Power is being supplied to power input PWR2
	Green Off	Power is not being supplied to power input PWR2
	Yellow On	Power is being supplied to power input PWR1
	Yellow Off	Power is not being supplied to power input PWR1
	Red On	Power is not being supplied to power input PWR1 and PWR2
	Red Off	Power is being supplied to power input PWR1 and PWR2

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LED	Color	Description
Power	Red On	Power is On
	Red Off	Power is Off
Fiber Port (P0)	Yellow On	Full Duplex Mode
	Yellow Off	Half Duplex Mode
	Green On	Link/Act
	Green Off	Not Networking
Ethernet Port (P1 ~ P8)	Green On	Link/Act
	Green Off	Not Networking
	Yellow On	Link to 100 Mbps
	Yellow Off	Link to 10 Mbps

NSM-209F Pin Function for Terminal Block:

External power supply is connected using the removable terminal block:

PWR1 : Power input 1 (+12 ~ +48 VDC)
PWR2 : Power input 2 (+12 ~ +48 VDC) and should be connected to the power supply (+)
GND : Ground and should be connected to the power supply (-)
R.COM : Common (Form "A" Relay) for Alarm contact.
R.NO : Normal Open (Form "A" Relay) for Alarm contact.
F.G. : F.G. stands for Frame Ground (protective ground). It is optional. If you use this pin, it can reduce EMI radiation; improve EMI performance and ESD protection.

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 NSM-209F's power needs.

NS-209F Pin Function for Terminal Block:

External power supply is connected using the removable terminal block:

+Vs : Power input (+12 ~ +48 VDC) and should be connected to the power supply (+)
GND : Ground and should be connected to the power supply (-)
F.G. : F.G. stands for Frame Ground (protective ground). It is optional. If you use this pin, it can reduce EMI radiation; improve EMI performance and ESD protection.

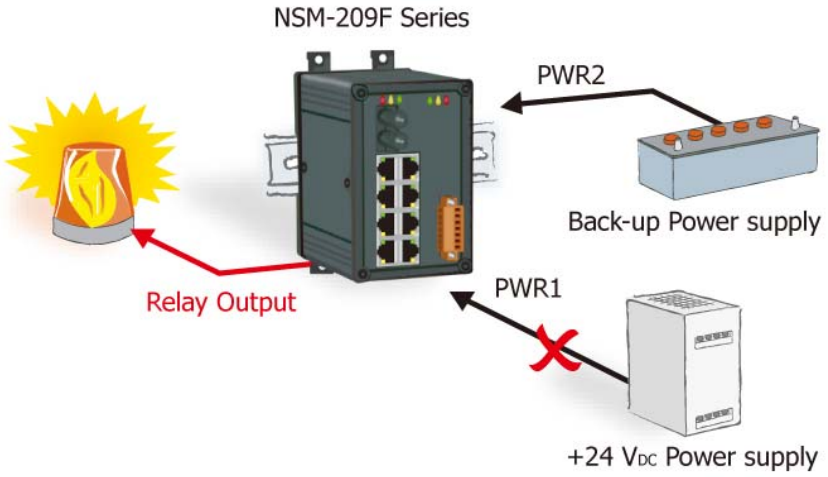
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Application Note for NSM-209F series:

Redundant Power Inputs & Relay Output Alarm:

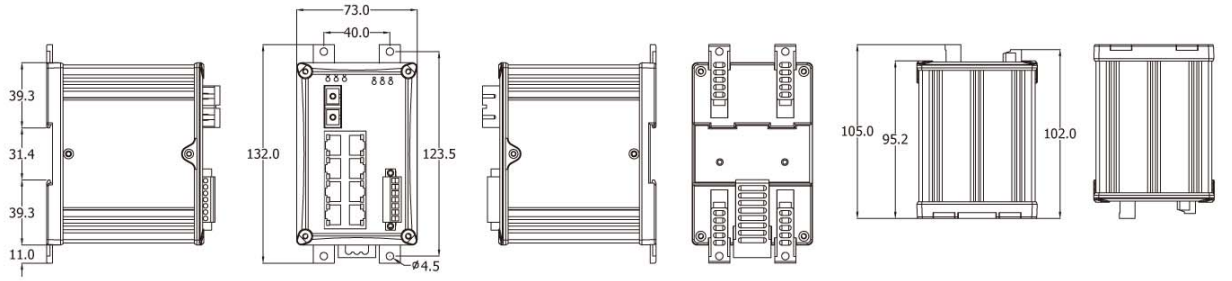
NSM-209F provides two power inputs that can be connected simultaneously to live DC power sources. If one of the power inputs fails, the other live source acts as a backup to automatically support the NSM-209F's power needs.

The NSM-209F provides relay contact outputs to warn technicians on the shop floor when the power fails.

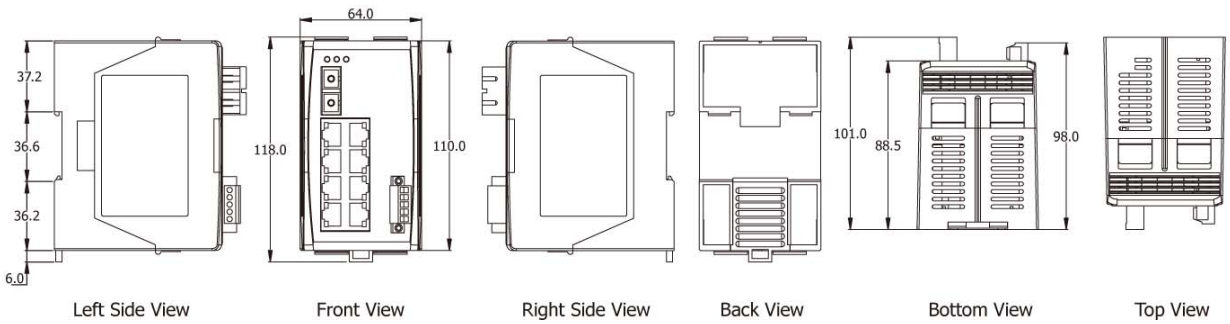


Dimensions: Unit: mm

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