

# NS-209F/NSM-209F Series



Unmanaged 8-Port Industrial 10/100 Base-TX with 100 Base-FX Fiber Switch

## Highlight Information ▶▶▶

NS-209F/NSM-209F Series



For NSM-209F Series



For NS-209F Series



NSM-209F Series



NS-209F Series



## ● 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 15 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 15 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.

## ● 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
- 2 Gbps high performance memory bandwidth
- Integrated look-up engine with dedicated 2048 unicast MAC addresses
- Supports +12 Vdc ~ +48 Vdc
- Supports operating temperatures from 0 °C ~ +70 °C
- DIN-Rail

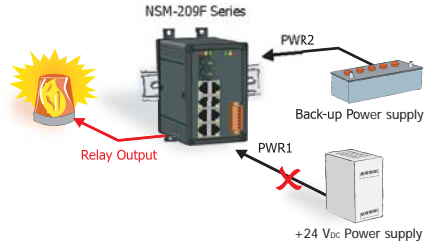
## LED Functions

### NSM-209F Series LED Indicator Functions

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	Green On	Power is being supplied to power input PWR2
	Green Off	Power is not being supplied to power input PWR2
PWR1	Yellow On	Power is being supplied to power input PWR1
FAULT	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

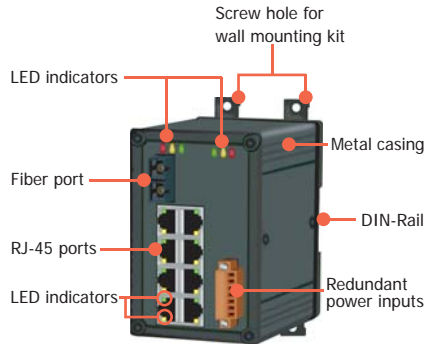
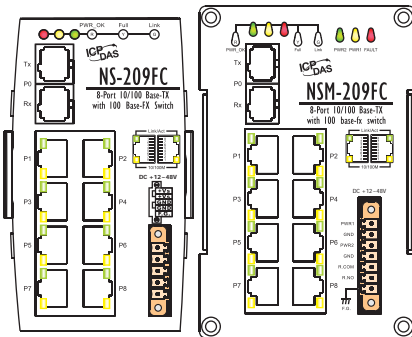
## Redundant Power Inputs

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 series power needs.



## Appearance

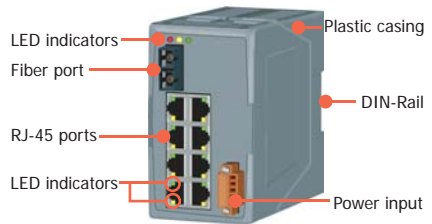
### NSM-209F Series



### NS-209F Series

### NS-209F Series LED Indicator Functions

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

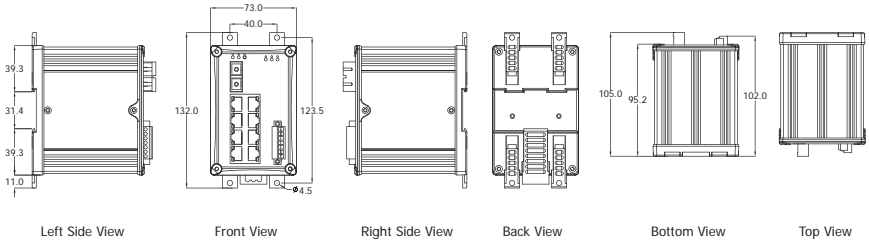


## ● Specifications

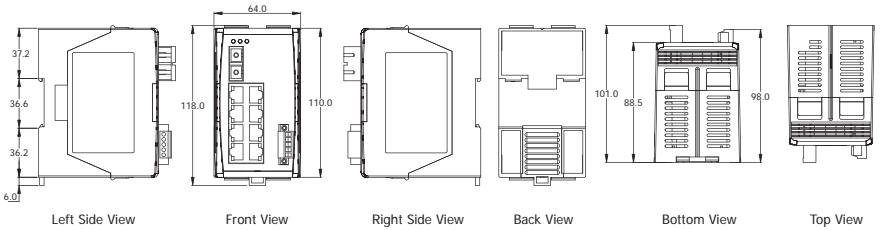
Models	NS-209F Series	NSM-209F Series
<b>Technology</b>		
Standards	IEEE 802.3, 802.3u, 802.3x	
Processing Type	Store & forward, wire speed switching	
MAC Addresses	2048	
Memory Bandwidth	2 Gbps	
Frame Buffer Memory	512 Kbit	
Flow Control	IEEE 802.3x flow control, back pressure flow control	
<b>Interface</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	
<b>Power</b>		
Input Voltage Range	+12 V <sub>DC</sub> ~ +48 V <sub>DC</sub> (Non-isolation)	+12 V <sub>DC</sub> ~ +48 V <sub>DC</sub> (Non-isolation) Redundant Inputs
Power Consumption	0.15 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	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
<b>Environmental</b>		
Operating Temperature	0 °C ~ +70 °C	
Storage Temperature	-20 °C ~ +85 °C	
Ambient Relative Humidity	10% ~ 90% RH, non-condensing	

## ● Dimensions (Unit: mm)

### NSM-209F Series



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## ● Ordering Information

<b>NS M -209F</b> <span style="border: 1px solid black; padding: 2px;">  </span> - <b>40</b> - <span style="border: 1px solid black; padding: 2px;">  </span>		
M: Metal <span style="margin-left: 150px;">Single Mode Distance</span> <span style="margin-left: 150px;">40: 40 km</span> <span style="margin-left: 150px;">Standard Models: 15 km</span>		
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	NS-209FT, NSM-209FT NS-209FC, NSM-209FC NS-209FCS, NSM-209FCS	NS-209FT-T, NSM-209FT-T NS-209FC-T, NSM-209FC-T NS-209FCS-T, NSM-209FCS-T NS-209FCS-40T, NSM-209FCS-40T

## ● Accessories

GPSU06-6	24V/0.25A, 6 W Power Supply
KWM020-1824F	24V/0.75A, 18 W Power Supply
DIN-KA52F	24V/1.04A, 25 W Power Supply with DIN-Rail Mounting