Industrial Ethernet Switch
Additional Products Catalog

2011 Product Catalog   Vol.IESAP 1.0.00 (2011.May.15)

Managed Ethernet Switches

Unmanaged Ethernet Switches

PoE Ethernet Switches

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Managed Ethernet Switches

MSM-6226

NEW

24-port L2 Plus Managed Fast Ethernet Switch + 2 TP/SFP Gigabit Dual Media

Front View

Rear View

Highlight Information ▶▶▶▶

Features ▶▶▶▶

- ■ 2 Dual Media for Flexible Fiber Connection
- ■ Supports Q-in-Q (Double-tag)
- ■ IEEE802.1X Access Control improves network security
- ■ Unknown Unicast/Broadcast/Multicast storm control
- ■ IP-MAC-Port binding for LAN security
- ■ Supports IGMPv3 snooping and IGMP Proxy
- ■ ACL Based on Ethernet Type/ARP/IPv4 for packets permit or deny, rate limitation and port copy
- ■ Supports LLDP (Link Layer Discovery Protocol) provides a standards-based method for enabling switches to advertise themselves.

- ■ Port Mirroring helps supervisor monitoring network
- ■ IEEE802.1Q tag-base VLAN for performance & security
- ■ IEEE802.1D Compatible, IEEE802.1w Rapid Spanning Tree & IEEE802.1s Multiple Spanning Tree
- ■ Multicast VLAN management for IPTV
- ■ QCL Based on Application traffic for QoS and rate
- ■ Supports DHCP snooping (DHCP option 82)
- ■ Supports "power saving" for Green Ethernet requirement

Introduction

MSM-6226 is a L2 Managed Switch that meets all IEEE 802.3/u/x/z Gigabit, Fast Ethernet and Ethernet specifications. It provides 24 Fast Ethenret ports (10/100 Mbps TP) and 2 Gigabit dual media ports with TP/SFP (or GBIC).

The switch can be managed through RS-232 serial port via direct connection, or through Ethernet port using Telnet or Web-based management unit, associated with SNMP agent. With the SNMP agent, the network administrator can logon the switch to monitor, configure and control each port activity in a friendly way. The overall network management is enhanced and the network efficiency is also improved to accommodate high bandwidth applications. In addition, the switch features comprehensive and useful function such as DHCP Option 82, QoS (Quality of Service), Spanning Tree, VLAN, Port Trunking, Bandwidth Control, Port Security, SNMP/RMON and IGMPv3 Snooping capability via the intelligent software. It is suitable for both Metro-LAN and office application.

The switch also supports the power saving for reduce the power consumption with Power Management technique. It could efficient saving the switch power with auto detect the client idle and cable length to provide different power.

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MSM-6226

Specifications

Technology	
Standards	2 Dual Media for Flexible Fiber Connection
	Port Mirroring helps supervisor monitoring network
	Improves Q-in-Q (Double-tag)
	IEEE802.1Q tag-base VLAN for performance & security and 4094 VLAN entries
	IEEE802.1X Access Control improves network security
	IEEE802.1D Compatible, IEEE802.1w Rapid Spanning Tree & IEEE802.1s Multiple Spanning Tree
	Unknown Unicast/Broadcast/Multicast storm control
	Multicast VLAN management for IPTV
	IP-MAC-Port binding for LAN security
	QCL Based on Application traffic for QoS and rate limitation managmenet
	Supports IGMPv3 snooping and IGMP Proxy
	Supports DHCP snooping (DHCP option 82)
	ACL Based on Ethernet Type/ARP/IPv4 for packets permit or deny, rate limitation and port copy
	Supports "power saving" for Green Ethernet requirement
	Supports LLDP (Link Layer Discovery Protocol) provides a standards-based method for enabling switches to advertise themselves.
MAC Addresses	8K
Processing Type	Non-blocking, store-and-forward and shared-memory L2 managed switch
Memory Bandwidth	8.8 Gbps
Frame Buffer Memory	Embedded 256 KB packet buffers and 128 KB control memory
Flow Control	Backpressure flow control for half duplex
	802.3x flow control for full duplex
Protocol	VLAN, QoS, Port Trunk, SMTP, TELNET, SNMP, IGMP, IEEE802.1X, LLDP
Interface	
RJ-45 Ports	24-port 10/100 Base-TX auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection and 2 Gigabit Ethernet ports with non-blocking wise speed performance.
SFP	2-port 1000Mbps SFP Fiber Module Dual Media Auto Detection
LED Indicators	CPURUN, POWER, ACT, FDX, SPD
Ethernet Isolation	2 K V_{DC} Isolation
COM1	RS-232 (TxD, RxD and GND); Non-isolation
Frame Ground for EMS Protection	EMS Requirements: IEC-61000-4-2, IEC-61000-4-3, IEC-61000-4-4, IEC-61000-4-5, IEC-61000-4-6, IEC-61000-4-8, IEC-61000-4-11
Power	
Input Voltage Range	Voltage: 100~240 V_{AC}
Power Consumption	15 W
Protection	Over-Voltage Protection (Spec.: 6.5 V+/-0.7 V); Over-Current Protection (Spec.: 6 ~ 10 A); Short Circuit Protection
Frame Ground for EMS Protection	Yes
Mechanical	
Casing	Metal
Environmental Rating	IP20
Dimensions (W x L x H)	442 mm x 209 mm x 44 mm
Installation	Installing Chassis to a 19-Inch Wiring Closet Rail; No Wall mounting
Environmental	
Operating Temperature	-10 °C ~ + 60 °C
Storage Temperature	-10 °C ~ + 70 °C
Ambient Relative Humidity	5 ~ 90% RH, non-condensing

1
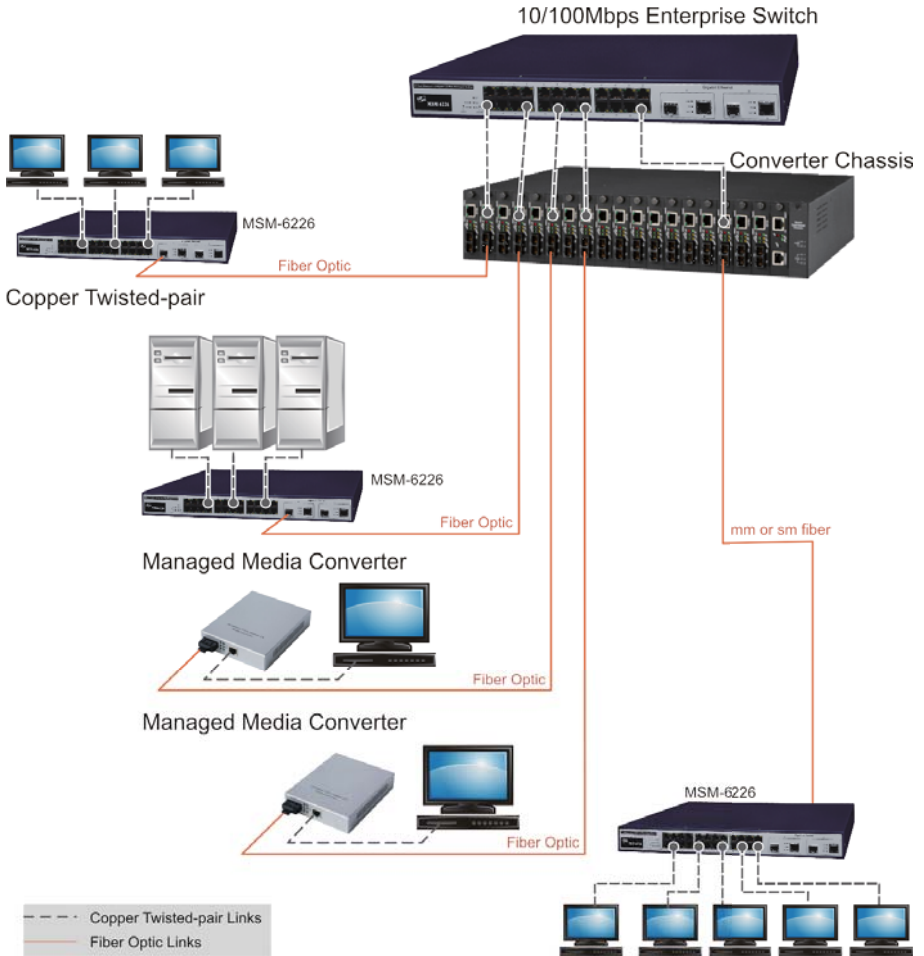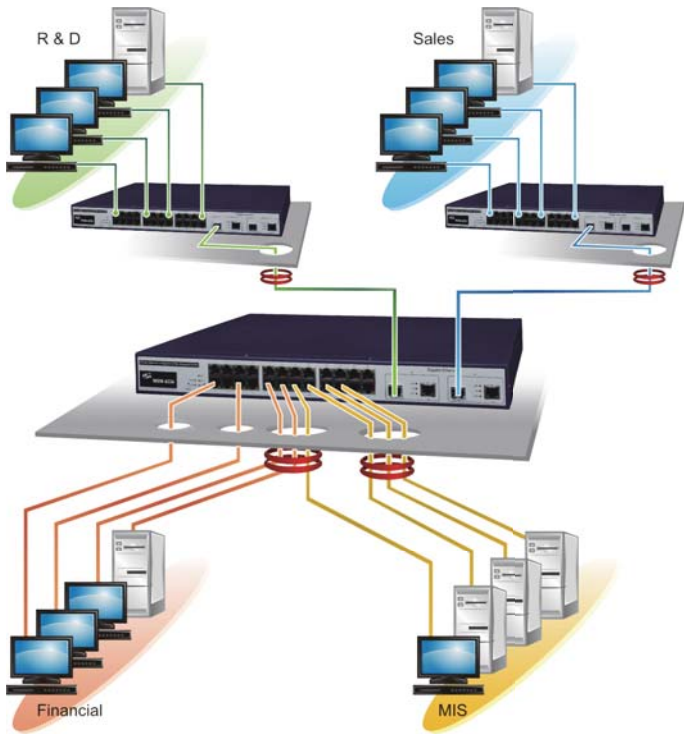
Managed Ethernet Switches

MSM-6226

Applications

Network Connection between Remote Site and Central Site

Office Network Connection

Peer-to-peer Network Connection

Appearance

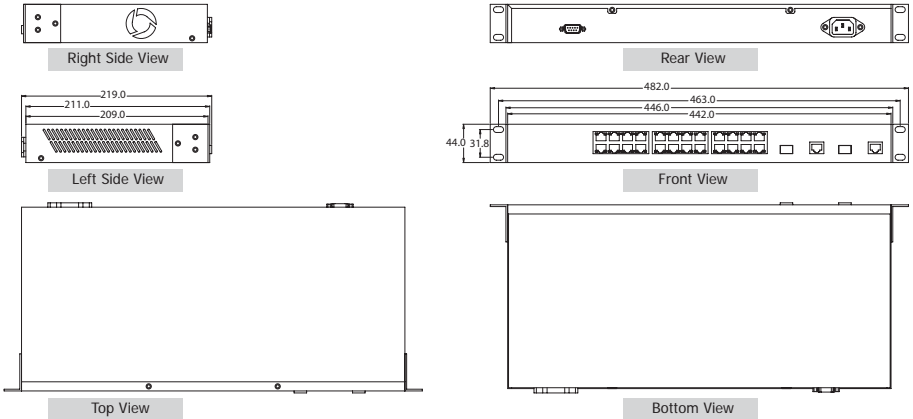RS-232 DB-9 Connector   Fast Ethernet   AC Line 100-240V 50/60 Hz

Gigabit Dual Media Port: SFP/TP

LED SET Mode:
ACT/FDX/SPD

LED SET Button:
LED SET button is used to
change the LED display mode

Power Indication

RESET Button:
RESET button is used to reset the management system.

TP Port Status:
ACT/FDX/SPD indication LEDs

TP Port Status: Link

Dimensions (Units: mm)

Right Side View

Rear View

219.0
211.0
209.0

Left Side View

482.0
463.0
446.0
442.0
44.0 31.8

Front View

Top View

Bottom View
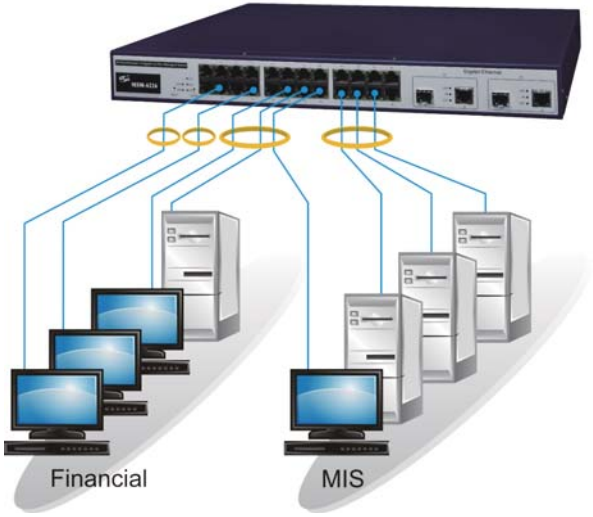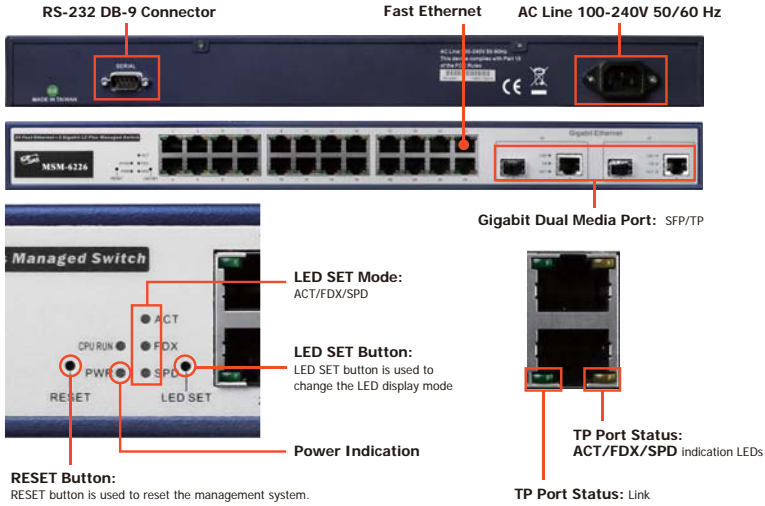
Ordering Information

MSM-6226 CR	24-port L2 Plus Managed Fast Ethernet Switch + 2 TP/SFP Gigabit Dual Media (include 9-Pin Female-Female D-sub cable, 1.8 M Cable and Power Cord)

Accessories

SFP-1G85M-SX	Multi-mode 850 nm, 0.5 km SFP module
SFP-1G13M-SX2	Multi-mode 1310 nm, 2 km SFP module
SFP-1G13S-LX	Single-mode 1310 nm, 10 km SFP module
SFP-1G13S-LX20	Single-mode 1310 nm, 20 km SFP module
SFP-1G13S-LHX	Single-mode 1310 nm, 40 km SFP module
SFP-1G15S-XD	Single-mode 1550 nm, 60 km SFP module

MSM-6226

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Unmanaged Ethernet Switches

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NSM-216

NEW

Unmanaged 16-port Industrial 10/100 Base-TX Ethernet Switch

Highlight Information ▶▶▶▶

Features ▶▶▶▶

- Provides 16 10/100 Mbps Ethernet ports
- 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
- Supports 4 kV Ethernet ESD protection and 1 kV EFT protection
- Supports Dual +12 ~ 48 V_{DC} power input and 1 relay output
- Supports operating temperatures from -40 °C ~ +75 °C
- DIN-Rail, Wall Mounting

Introduction

The NSM-216 has 16 Ethernet ports that support 10/100 Base-TX, with a 10/100M auto negotiation feature and auto MDI/MDI-X function. It can connect 16 workstations and automatically switches the transmission speed (10 Mbps or 100 Mbps) for corresponding connections.

All Ethernet ports have memory buffers that support the store-and-forward mechanism, which assures that data can be transmitted properly. The NSM-216 supports advanced network standards to optimize network performance, reduce maintenance costs, and secure network safety.

The flow control mechanism is also negotiated. There is link/data rate LEDs for each port to aid troubleshooting. Port connectors are shielded RJ-45.

NSM-216

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Specifications

| Technology	
Standards	IEEE802.3, 802.3u, 802.3x
Processing Type	Store & forward, wire speed switching
MAC Addresses	8K
Memory Bandwidth	3.2 Gbps
Frame Buffer Memory	3 Mbit
Flow Control	IEEE 802.3x flow control, back pressure flow control
Interface	
RJ-45 Ports	10/100 Base-TX auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection
LED Indicators	PWR1, PWR2, Power fail, 10/100M, Link/Act
Ethernet Isolation	1500 V_{rms} 1 minute
Power	
Redundant Input Range	+12 V_{DC} ~ +48 V_{DC} (Non-isolation)
Power Consumption	0.6 A @ 24 V_{DC}
Alarm Contact	One relay output with current carrying capacity of 1A @ 30 V_{DC}
Protection	Power reverse polarity protection
Connection	6-Pin Removable Terminal Block (Power & Relay)
Mechanical	
Casing	Metal (IP30 Protection)
Dimensions (W x L x H)	25 mm x 168 mm x 119 mm
Installation	DIN-Rail or Wall Mounting
Environmental	
Operating Temperature	-40 °C ~ + 75 °C
Storage Temperature	-40 °C ~ + 85 °C
Ambient Relative Humidity	10 ~ 90% RH, non-condensing

2

Unmanaged Ethernet Switches

NSM-216

2

LED Indicator Functions

LED	Color	Description
Ethernet Port (P1 ~ P16)	Green On	Link/Act
	Green Off	Not Networking
	Yellow On	Link to 100 Mbps
	Yellow Off	Link to 10 Mbps
PWR1	Yellow On	Power in input 1 is ready
	Yellow Off	Power in input 1 is off
PWR2	Green On	Power in input 2 is ready
	Green Off	Power in input 2 is off
FAULT	Red On	One of the powers in input 1 & 2 is off
	Red Off	Both the powers in input 1 & 2 are ready

Redundant Power Input

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-216 series power needs.

PWR2

NSM-216

Relay Output

Back-up Power supply

PWR1

+24 V$_{DC}$ Power supply
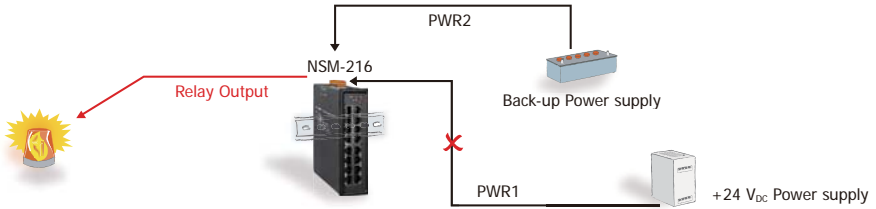
Appearance

LED Indicator:
10/100M, Link/Act

DIN-Rail

RJ-45

Power & Relay

LED Indicator:
PWR1, PWR2, Power fail

Wall Mounting

NSM-216

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Dimensions (Units: mm)

2

Unmanaged Ethernet Switches

Left Side View

Right Side View

Front View

Rear View

Bottom View

Top View
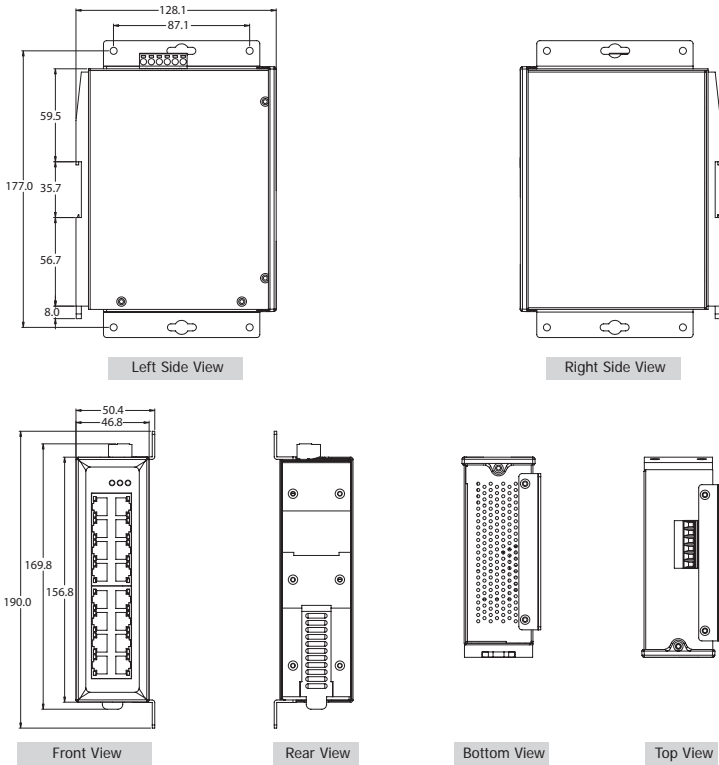
Ordering Information

NSM-216 CR	Unmanaged 16-port Industrial 10/100 Base-TX Ethernet Switch with metal casing (RoHS)

Accessories

MDR-20-24	24 V/1 A, 24 W Power Supply with DIN-Rail Mounting
MDR-60-24	24 V/2.5 A, 60 W Power Supply with DIN-Rail Mounting
MDR-60-48	48 V/1.25 A, 60 W Power Supply with DIN-Rail Mounting
DIN-KA52F	24 V/1.04 A, 25 W Power Supply with DIN-Rail Mounting
DIN-KA52F-48	48 V/0.52 A, 25 W Power Supply with DIN-Rail Mounting
KA52F-48	48 V/0.52 A, 25 W Power Supply

NSM-216

NSM-208-M12

NEW

Unmanaged 8-port 10/100 Mbps Ethernet Switch with M12

Highlight Information ▶▶▶▶

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
- Supports +12 ~ 53 V_{DC} power input
- Operating temperatures, -40 ~ +75°C
- 8-port 10/100 Mbps M12 type connector with IP40 protection

Introduction

The NSM-208-M12 is designed for industrial applications in harsh environments. The M12 connectors ensure tight, robust connections, and guarantee reliable operation, even for applications that are subject to high vibration and shock.

The Ethernet switches support IEEE 802.3/802.3u/802.3x with 10/100M, full/half-duplex, MDI/MDI-X auto-sensing, and provide an economical solution for your industrial Ethernet network.

2

Specifications

| Technology	
Standards	IEEE 802.3, 802.3u, 802.3x, 10/100 Base-T(X) auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection
Processing Type	Store & forward
MAC Addresses	1024
Memory Bandwidth	3.2 Gbps
Frame Buffer Memory	512 Kbit
Flow Control	IEEE802.3x flow control, back pressure flow control
Interface	
LED Indicators	PWR, 10/100M, Link/Act
Ethernet Isolation	1500 V_{rms} 1 minute
Connection	Female 4-Pin shielded M12 D-coding connector
Power Input	
Input Voltage Range	+12 V_{DC} ~ +53 V_{DC}
Power Consumption	0.12 A @ 48 V_{DC}
Protection	Power reverse polarity protection
Connection	Male 5-Pin shielded M12 A-coding connector
Mechanical	
Casing	Metal with IP40
Dimensions (W x L x H)	190 mm x 56 mm x 100 mm
Installation	Wall Mounting
Environmental	
Operating Temperature	-40 °C ~ + 75 °C
Storage Temperature	-40 °C ~ + 85 °C
Ambient Relative Humidity	10 ~ 95% RH, non-condensing

Pin Functions for Power Input

External power supply is connected using the M12 A-coding:
PWR: Power input (+12 ~ +53 V_{DC}) 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 EMS protection.
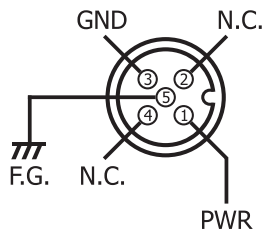
Pin Functions for Ethernet Port
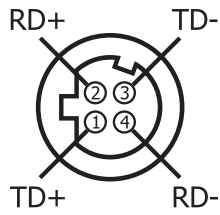
LED Indicator Functions

LED	Color	Description
Power	Red On	Power is On
	Red Off	Power is Off
Port 1~8	Green On	Link/Act

NSM-208-M12

Appearance

Female 4-Pin shielded M12
D-coding connector

NSM-208-M12

Frame ground screw

Male 5-Pin shielded M12 A-coding connector

Dimensions (Units: mm)

190.0
177.2
154.0
F.G.
100.0
87.0
Φ4.5

Front View

F.G.

Right Side View

Rear View

16.0
56.0
35.0
40.0
F.G.

Bottom View

Left Side View

F.G.

Top View
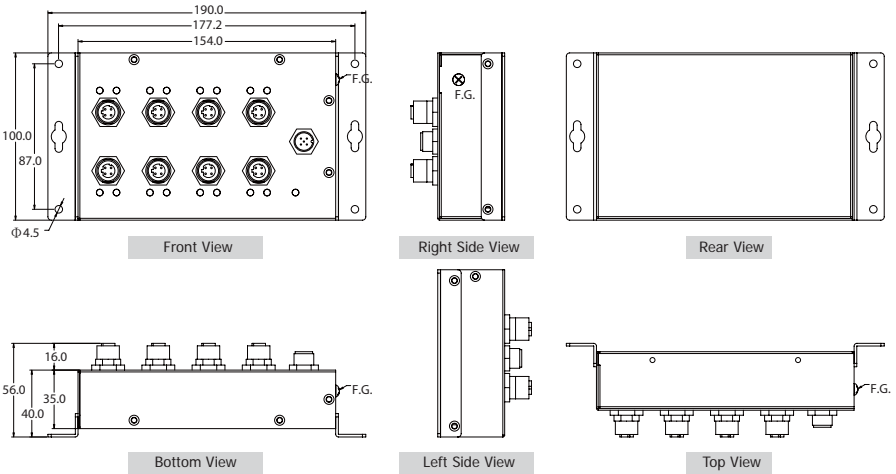
Ordering Information

NSM-208-M12	Unmanaged 8-port 10/100 Mbps Ethernet Switch with M12 Includes M12D-4P-IP68 x 8, A-CAP-M12M x 1, M12A-5P-IP68 and A-CAP-M12F x 1

Accessories

MDR-60-48	48 V/1.25 A, 60 W Power Supply with DIN-Rail Mounting
DIN-KA52F-48	48 V/0.52 A, 25 W Power Supply with DIN-Rail Mounting
KA52F-48	48 V/0.52 A, 25 W Power Supply

M12D-4P-IP68	A-CAP-M12M	M12A-5P-IP68	A-CAP-M12F
4PIO1K0000001	4PIO1K0000002	4PIO1K0000003	4PIO1K0000004

NSM-208-M12

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PoE Ethernet Switches

How PoE works

There are two basic components in an IEEE 802.3af compliant PoE network:
   Power Sourcing Equipment (PSE)

   A device that supplies power
   Powered Device (PD)

   A device that receives and utilizes the power

When the PSE connects to a network device, the PSE determines or "discovers" if the device is a PD or not. This prevents non-PoE enabled Ethernet equipment from receiving power, which could cause damage. The PSE applies two small current-limited voltage signals across the cable as it checks for the presence of a characteristic resistance. If resistance is detected, power is provided. A PD may also classify how much power it will require from the PSE. This feature supports the PSE by helping it supply power in an efficient way.

After the PSE has discovered a PD, it supplies 48 V and a maximum current of 350 mA. Voltage may be lost along the cable, depending on distance. However, a minimum of about 13 W is available to each PD, which is adequate power for numerous applications including VoIP telephones, WAPs, security cameras and building automation systems.

Once the PSE begins to provide power, it continuously monitors the PD current draw. Once the PD current consumption drops below a minimum value, for example when the device is unplugged, the PSE discontinues supplying power and the discovery process begins again.
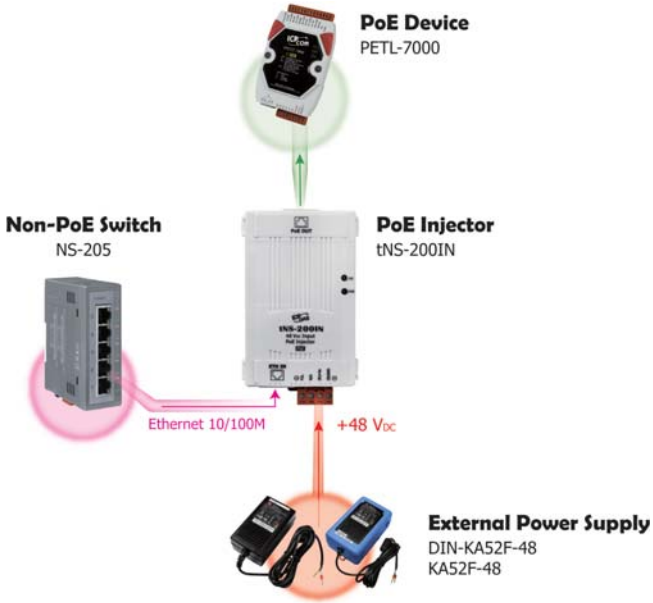
The IEEE 802.3af standard defines two different types of PSEs: endspan and midspan.

An endspan PSE - Integrates the power sourcing functionality with a network switch. Endspans available today look and function exactly the same as any other Ethernet switch, except they can provide PoE in addition to routing data. Since Ethernet data pairs use transformers coupled at each end of the link, DC power can easily be added to the center tap of the transformer without disrupting the data. In this mode of operation, an endspan injects both power and data on pin-pairs 3 and 6 and pin-pairs 1 and 2.
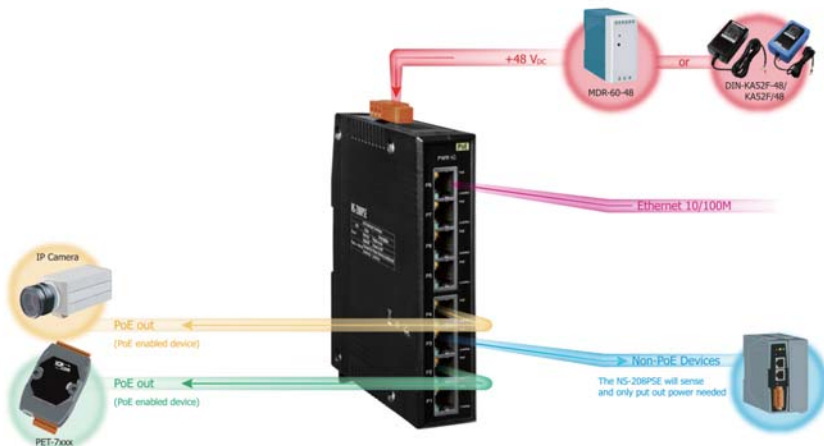

A midspan PSE - Fits in between the switch and the PD. It supplies power over the unused cable pin-pairs 4 and 5 and pin-pairs 7 and 8. Data is routed through the midspan device without modification, as shown in Figure 2. These devices are usually mounted adjacent to the Ethernet switch in an equipment rack. It is important to note that although the PSE can only use pin-pairs assigned from an endspan or a midspan, the PD must have the capability to accept power from both.

PoE Device
PETL-7000

Non-PoE Switch
NS-205

PoE Injector
tNS-200IN

Ethernet 10/100M   +48 V$_{DC}$

External Power Supply
DIN-KA52F-48
KA52F-48

Power is carried over the cabling using two techniques: Mode A and Mode B

Mode A: Power is carried on the same conductors as data. CAT-5 cabling for standard 10BaseT and 100Base-TX Ethernet uses two data/signal pairs connected to pins 1 and 2 and pins 3 and 6 on RJ-45 connectors. Power sourcing equipment superimposes power onto these pins via the center tap of internal signal coupling transformers. In the powered device (PD) the power is derived from these lines using the reverse technique.
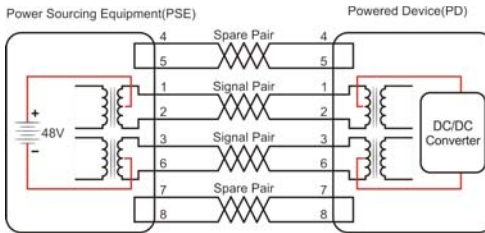
Mode B: The twisted pair on pins 4 and 5 is connected to form the positive electric power supply, while the pair on pins 7 and 8 is connected to form the negative supply. Each pair can accommodate either polarity.
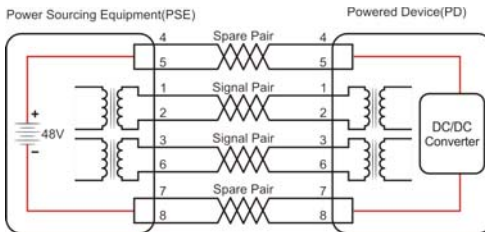
The IEEE 802.af standard specifies that all power sourcing equipment and powered devices must be compatible with both methods above. However, only one of the methods may be used at a time.

NS-208PSE/NSM-208PSE

NEW

8-port Industrial 10/100 Mbps PoE (PSE) Ethernet Switch

NSM-208PSE   NS-208PSE

Highlight Information ▶▶▶

Power over Ethernet x 8 | LAN 10/100 x 8 | +75 °C -40 | DIN-Rail Mount | CE | FC | RoHS

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
- ■8 PoE ports with Power Sourcing Equipment (PSE) operation
- ■Auto-detection of PD (powered devices) and automatic power management
- ■Over-temperature, over-current and over/under-voltage detection
- ■Supports +46 ~ 55 V$_{DC}$ power input
- ■Supports operating temperatures from -40 °C ~ +75 °C
- ■DIN-Rail
- ■"-R" stands for products with conformal coating protection

Introduction

The NS-208PSE/NSM-208PSE is an 8-port unmanaged PoE (Power over Ethernet) Industrial Ethernet switch, it supports 8 PoE ports which are classified as power source equipments (PSE).The NS-208PSE/NSM-208PSE makes centralized power supply come true and provides up to 15.4 W of power per port. The NS-208PSE/NSM-208PSE can be used to power IEEE802.3af compliant powered devices (PD) by Ethernet cable and eliminates the need for additional power wiring.

Specifications

Models	NS-208PSE	NSM-208PSE
Technology		
Standards	IEEE 802.3, 802.3u, 802.3x ,802.3af (Power over Ethernet)	
Processing Type	Store & forward; wire speed switching	
MAC Addresses	1024	
Memory Bandwidth	3.2 Gbps	
Frame Buffer Memory	512 Kbit	
Flow Control	IEEE 802.3x flow control, back pressure flow control	
Interface		
RJ-45 Ports	10/100 Base-T(X) auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection	
LED Indicators	Power, Link/Act, Powered device detect	
Ethernet Isolation	1500 Vrms 1 minute	
+/-6 kV EMS Protection	Yes	
Power Input		
Input Voltage Range	+46 ~ +55 Vdc for PoE output	
Power Consumption	0.1 A @ 48 Vdc without PD loading; 2.8 A @ 48 Vdc with PD full loading	
Protection	Power reverse polarity protection	
+/-6 kV ESD Protection	Yes	
Connection	3-Pin Removable Terminal Block	
PoE Technology		
PoE Compliance	100% IEEE 802.3af compliant	
PoE Classification	PSE (Power Sourcing Equipment)	
PoE Voltage	+46 ~ +55 Vdc depending on power input	
PoE Power	Up to 15.4 W per port	
PoE Operation	Automatic detection and power management	
PoE Pin Assignments	V+ (Pin 1, 2), V- (Pin 3, 6)	
PoE Disconnect Mode	DC disconnect	
Mechanical		
Casing	Plastic (Flammability UL 94V-0)	Metal (IP30 Protection)
Dimensions (W x L x H)	31 mm x 157 mm x 113 mm	25 mm x 168 mm x 119 mm
Installation	DIN-Rail	
Environment		
Operating Temperature	-40 °C ~ +75 °C	
Storage Temperature	-40 °C ~ +85 °C	
Ambient Relative Humidity	10% ~ 90% RH, non-condensing	

3
PoE Ethernet Switches

NS-208PSE/NSM-208PSE

LED Indicator Functions

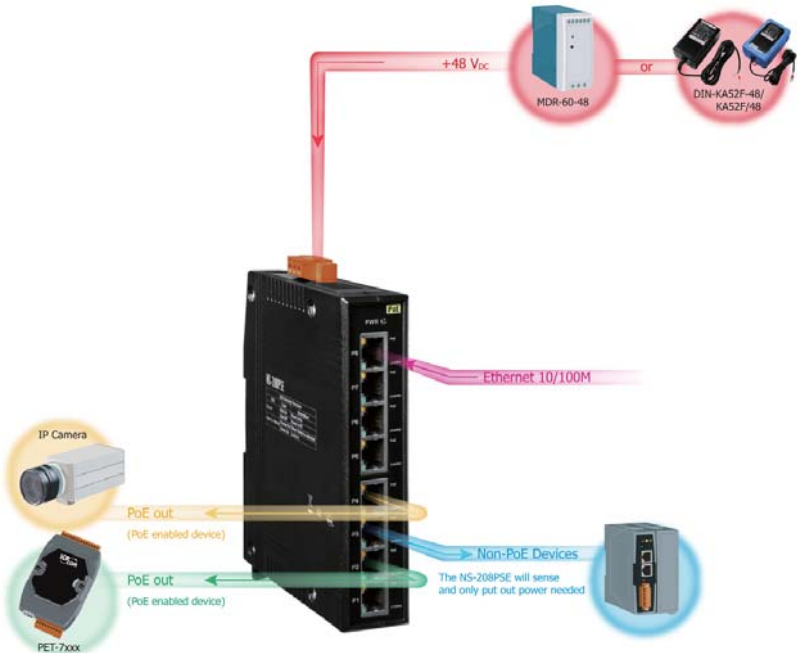| LED	Color	Description
Power	Red On	Power is On
	Red Off	Power is Off
Port 1 ~ Port 8	Orange On	Power Device is detected
	Green On	Link/Act

Pin Function for Terminal Block

External power supply is connected using the removable terminal block:

PWR: Power input (+46 V_{DC} ~ +55 V_{DC}) and should be connected to the power supply (+)

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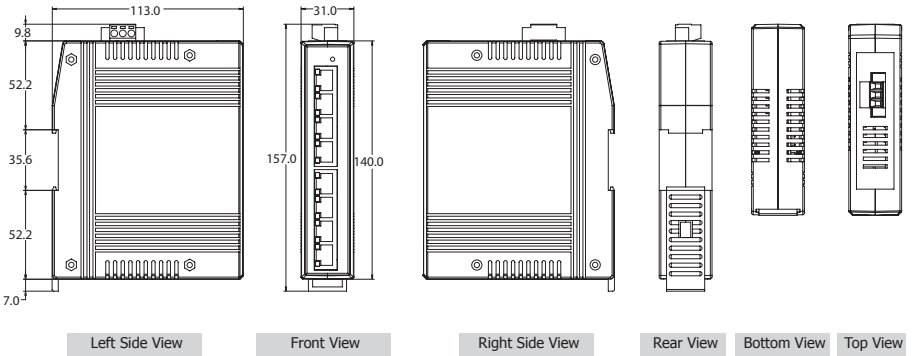
F.G.: F.G. stands for Frame Ground (protective ground). It is optional. If you use this pin, it can reduce EMI radiation; improve EMI performance and ESD protection.
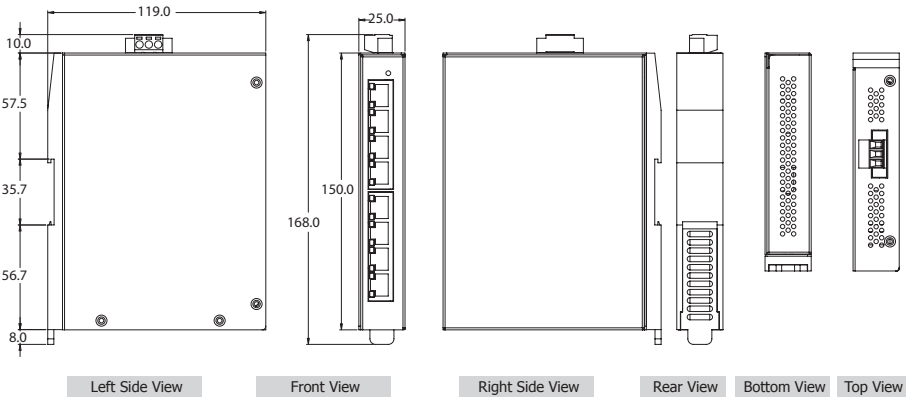
Applications

Dimensions (Units: mm)

NS-208PSE series

| Left Side View | Front View | Right Side View | Rear View | Bottom View | Top View |

NSM-208PSE series

| Left Side View | Front View | Right Side View | Rear View | Bottom View | Top View |

Ordering Information

NS-208PSE CR	Unmanaged 8-port Industrial 10/100 Mbps PoE (PSE) Ethernet Switch (RoHS)
NS-208PSE-R CR	NS-208PSE with Conformal coating protection (RoHS)
NSM-208PSE CR	Unmanaged 8-port Industrial 10/100 Mbps PoE (PSE) Ethernet Switch with Metal Casing (RoHS)
NSM-208PSE-R CR	NSM-208PSE with Conformal coating protection (RoHS)

Accessories

MDR-60-48	48 V/1.25 A, 60 W Power Supply with DIN-Rail Mounting
DIN-KA52F-48	48 V/0.52 A, 25 W Power Supply with DIN-Rail Mounting
KA52F-48	48 V/0.52 A, 25 W Power Supply

NS-205PSE-24V/NSM-205PSE-24V NEW

5-port 10/100 Mbps PoE (PSE) Ethernet Switch with 24 V_{DC} Input

NSM-205PSE-24V   NS-205PSE-24V

Highlight Information ▶▶▶▶

Power over Ethernet x 4 | LAN x 5 | 10/100 | +75 °C -40 | DIN-Rail Mount | CE | FC | RoHS

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
- ■ Supports +18 V_{DC} ~ +32 V_{DC} power input
- ■ Supports operating temperatures from -40 °C ~ +75 °C
- ■ DIN-Rail

- ■ IEEE 802.3af compliant PoE ports
  4-PoE Port with power sourcing equipment (PSE) operation Auto-detection of PD (powered devices) and automatic power management over-temperature, over-current and over/under-voltage detection

Introduction

The NS-205PSE-24V/NSM-205PSE-24V is a 5-port unmanaged PoE (Power over Ethernet) Industrial Ethernet switch; it supports 4 PoE ports which are classified as power source equipments (PSE). The NS-205PSE-24V/NSM-205PSE-24V makes centralized power supply come true and provides up to 15.4 W of power per PSE port.

The NS-205PSE-24V/NSM-205PSE-24V is designed with 24 V_{DC} to 48 V_{DC} boost for PoE application where 48 V_{DC} power supply is not available

Specifications

3

Models	NS-205PSE-24V	NSM-205PSE-24V
Technology		
Standards	IEEE 802.3, 802.3u, 802.3x ,802.3af (Power over Ethernet)	
Processing Type	Store & forward; wire speed switching	
MAC Addresses	1024	
Memory Bandwidth	3.2 Gbps	
Frame Buffer Memory	512 Kbit	
Flow Control	IEEE 802.3x flow control, back pressure flow control	
Interface		
RJ-45 Ports	10/100 Base-T(X) auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection	
LED Indicators	Power, Link/Act, 10/100M, Power Device is detected	
Ethernet Isolation	1500 V_{rms} 1 minute	
+/-6 kV EMS Protection	Yes	
Power Input		
Input Voltage Range	+18 ~ +32 V_{DC} for PoE output	
Power Consumption	0.24 A @ 24 V_{DC} without PD loading 3.2 A @ 24 V_{DC} with PD full loading 4.6 A @ 18 V_{DC} with PD full loading	
Protection	Power reverse polarity protection	
Frame Ground for EMS Protection	Yes	
Connection	3-Pin Removable Terminal Block	
PoE Technology		
PoE Compliance	100% IEEE 802.3af compliant	
PoE Classification	PSE (Power Sourcing Equipment)	
PoE Voltage	+48 V_{DC}	
PoE Power	Up to 15.4 W per port	
PoE Operation	Automatic detection and power management	
PoE Pin Assignments	V+ (Pin 1, 2), V- (Pin 3, 6)	
PoE Disconnect Mode	DC disconnect	
Mechanical		
Casing	Plastic (Flammability UL 94V-0)	Metal (IP30 Protection)
Dimensions (W x L x H)	31 mm x 157 mm x 113 mm	25 mm x 168 mm x 119 mm
Installation	DIN-Rail	
Environment		
Operating Temperature	-40 °C ~ +75 °C	
Storage Temperature	-40 °C ~ +85 °C	
Ambient Relative Humidity	10% ~ 90% RH, non-condensing	

LED Indicator Functions

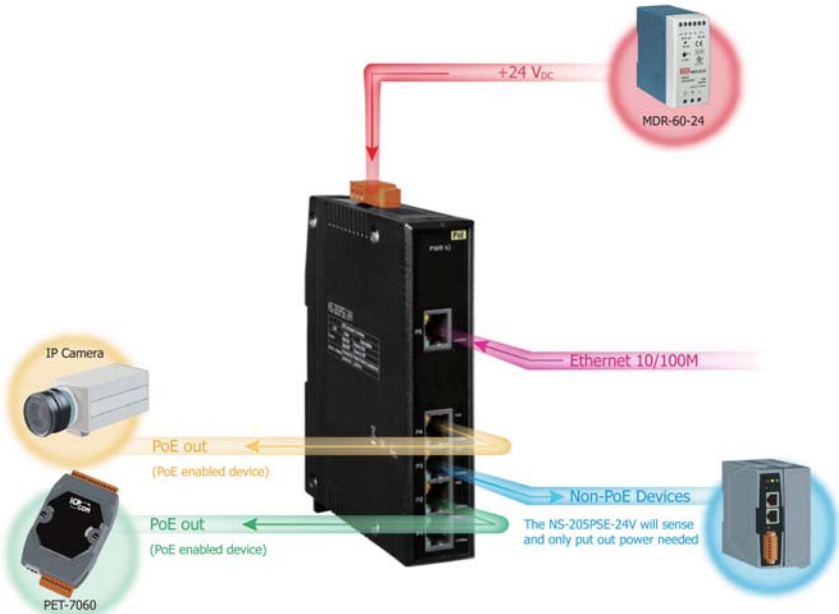| LED	Color	Description
Power	Red On	Power is On
	Red Off	Power is Off
Port 1 ~ Port 4	Orange On	Power Device is detected
	Green On	Link/Act
Port 5	Yellow On	Link to 100 Mbps
	Green On	Link/Act

Pin Function for Terminal Block

External power supply is connected using the removable terminal block:

PWR: Power input (+18 V_{DC} ~ +32 V_{DC}) and should be connected to the power supply (+)
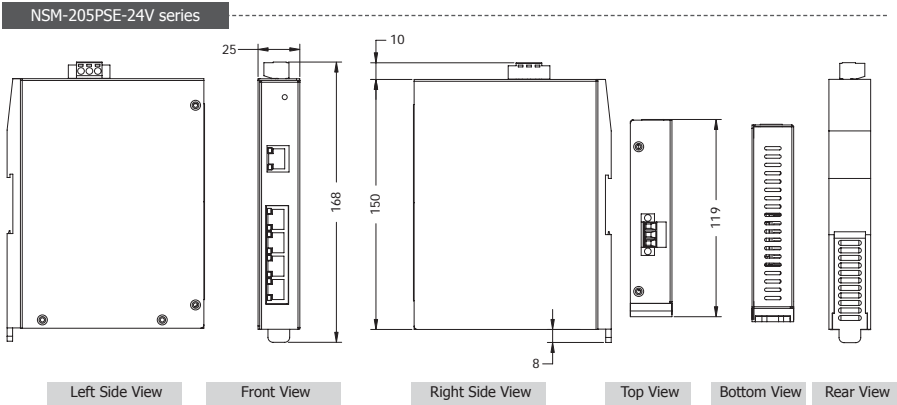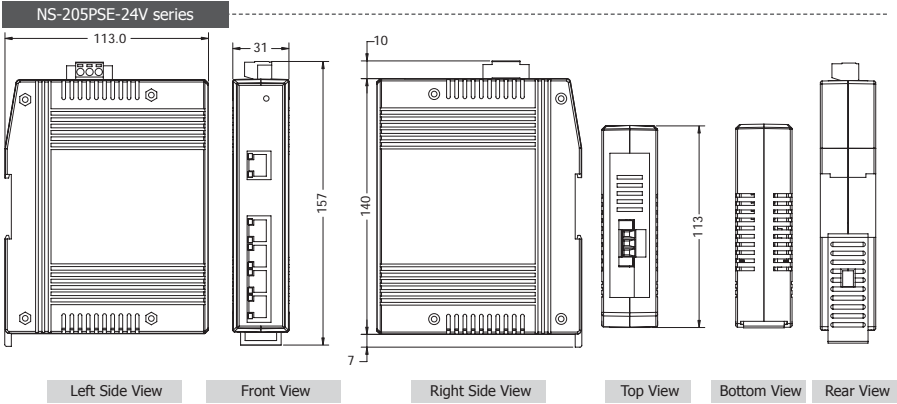
GND: Ground and should be connected to the power supply (-)

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.

Applications

NS-205PSE-24V/NSM-205PSE-24V

3-9 **ICP DAS CO., LTD.** Professional Provider of High Quality **I**ndustrial **C**omputer **P**roducts and **D**ata **A**cquisition **S**ystems Vol. IESAP 1.0.00 (2011.May.15)

Dimensions (Units: mm)

NS-205PSE-24V series

| Left Side View | Front View | Right Side View | Top View | Bottom View | Rear View |

NSM-205PSE-24V series

| Left Side View | Front View | Right Side View | Top View | Bottom View | Rear View |

Ordering Information

NS-205PSE-24V CR	Unmanaged 5-port 10/100 Mbps PoE (PSE) Ethernet Switch with 24 V$_{DC}$ Input (RoHS)
NSM-205PSE-24V CR	Unmanaged 5-port 10/100 Mbps PoE (PSE) Ethernet Switch with 24 V$_{DC}$ Input; Metal Casing (RoHS)

Accessories

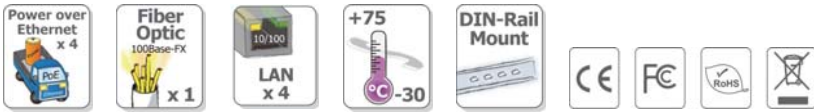|	
MDR-60-24	24 V/2.5 A, 60 W Power Supply with DIN-Rail Mounting
MDR-20-24	24 V/1.0 A, 24 W Power Supply with DIN-Rail Mounting
DIN-KA52F	24 V/1.04 A, 25 W Power Supply with DIN-Rail Mounting

3

NS-205PF Series/NSM-205PF Series

NEW

4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port

NSM-205PFT

NSM-205PFC
NSM-205PFCS
NSM-205PFCS-60

NS-205PFT

NS-205PFC
NS-205PFCS
NS-205PFCS-60

Highlight Information ▶▶▶▶

Power over Ethernet x 4

Fiber Optic 100Base-FX x 1

10/100 LAN x 4

+75 / -30 °C

DIN-Rail Mount

CE FC RoHS

Features ▶▶▶▶▷

■ Provides 1 x 100-FX fiber port plus 4 x PoE ports

■ 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

■ 4 PoE ports with Power Sourcing Equipment (PSE) operation

■ Auto-detection of PD (powered devices) and automatic power management

■ Over-temperature, over-current and over/undervoltage detection

■ Supports +46 ~ +55 V_{DC} power input

■ Supports operating temperatures from -30 ~ +75°C

■ DIN-Rail

Introduction

The NS-205PF/NSM-205PF is a 4-port unmanaged PoE (PSE) with 1 fiber port switch; it supports 4 PoE ports which are classified as power source equipments (PSE). The NS-205PF/NSM-205PF makes centralized power supply come true and provides up to 15.4 W of power per PSE port. Using fiber optics, you can prevent noise from interfering with your system and supports high-speed (100 Mbps) and long-distance (up to 60 km) transmissions.

Specifications

Models	NS-205PF series	NSM-205PF series
Technology		
Standards	IEEE 802.3, 802.3u, 802.3x, 802.3af (Power over Ethernet)	
Processing Type	Store & forward; wire speed switching	
MAC Addresses	1024	
Memory Bandwidth	3.2 Gbps	
Frame Buffer Memory	512 Kbit	
Flow Control	IEEE 802.3x flow control, back pressure flow control	
Ethernet Interface		
RJ-45 Ports	10/100 Base-T(X) auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection	
LED Indicators	Power, Link/Act, 10/100M, Power Device is detected	
Ethernet Isolation	1500 V$_{rms}$ 1 minute	
+/-4 kV ESD Protection	Yes	
Fiber Interface (100 Base-FX; SC/ST type)		
Multi-Mode (NS-205PFT/FC; NSM-205PFT/FC)	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 Max. RX Sensitivity: -32 dBm Max. RX Overload: -8 dBm Budget: 12 dBm	
Single-Mode (NS-205PFCS; NSM-205PFCS)	Single-mode fiber cables: 8.3/125, 8.7/125, 9/125 or 10/125 µm Distance: 30 km, (9/125 µm recommended) for full duplex Wavelength: 1300 or 1310 nm Min. TX Output: - 15 dBm Max. TX Output: -8 dBm Max. RX Sensitivity: -34 dBm Max. RX Overload: -5 dBm Budget: 19 dBm	
Single-Mode (NS-205PFCS-60; NSM-205PFCS-60)	Single-mode fiber cables: 8.3/125, 8.7/125, 9/125 or 10/125 µm Distance: 60 km, (9/125 µm recommended) for full duplex Wavelength: 1300 or 1310 nm Min. TX Output: - 5 dBm Max. TX Output: 0 dBm Max. RX Sensitivity: -35 dBm Max. RX Overload: -5 dBm Budget: 30 dBm	
Power Input		
Input Voltage Range	+46 ~ +55 V$_{DC}$ for PoE output	
Power consumption	0.08 A @ 48 V$_{DC}$ without PD loading; 1.5 A @ 48 V$_{DC}$ with PD full loading	
Protection	Power reverse polarity protection	
+/- 4kV ESD Protection	Yes	
Connection	3-Pin Removable Terminal Block	
PoE Technology		
PoE Compliance	100% IEEE 802.3af compliant	
PoE Classification	PSE (Power Sourcing Equipment)	
PoE Voltage	+48 V$_{DC}$ depending on power input	
PoE Power	Up to 15.4 W per port	
PoE Operation	Automatic detection and power management	
PoE Pin Assignments	V+ (Pin 1, 2), V- (Pin 3, 6)	
PoE Disconnect Mode	DC disconnect	
Mechanical		
Casing	Plastic (Flammability UL 94V-0)	Metal (IP30 Protection)
Dimensions (W x L x H)	31 mm x 157 mm x 113 mm	25 mm x 168 mm x 119 mm
Installation	DIN-Rail	
Environment		
Operating Temperature	-30 °C ~ +75 °C	
Storage Temperature	-40 °C ~ +85 °C	
Ambient Relative Humidity	10% ~ 90% RH, non-condensing	

3

PoE Ethernet Switches

NS-205PF Series/NSM-205PF Series

LED Indicator Functions

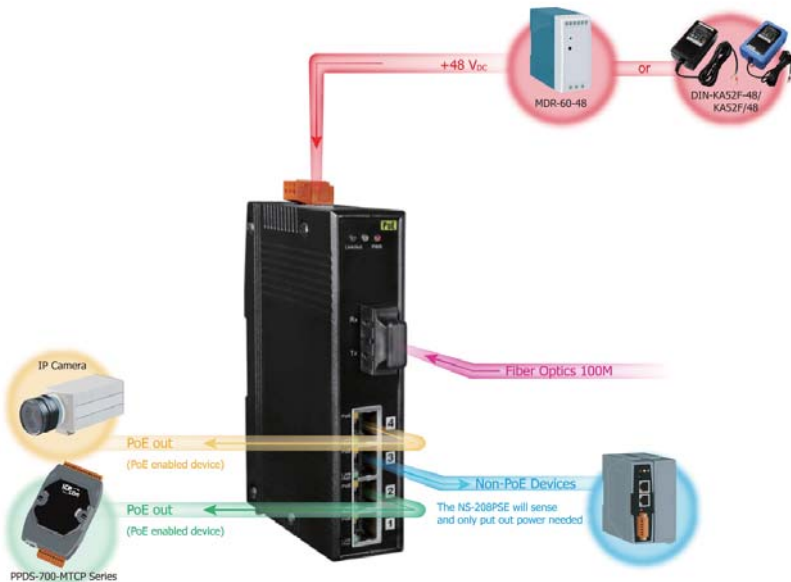| LED	Color	Description
Power	Red On	Power is On
	Red Off	Power is Off
Port 1 ~ Port 4	Orange On	Power Device is detected
	Green On	Link/Act
Port 5	Green On	Link/Act

Pin Function for Terminal Block

External power supply is connected using the removable terminal block:

PWR: Power input (+46 V_{DC} ~ +55 V_{DC}) and should be connected to the power supply (+)
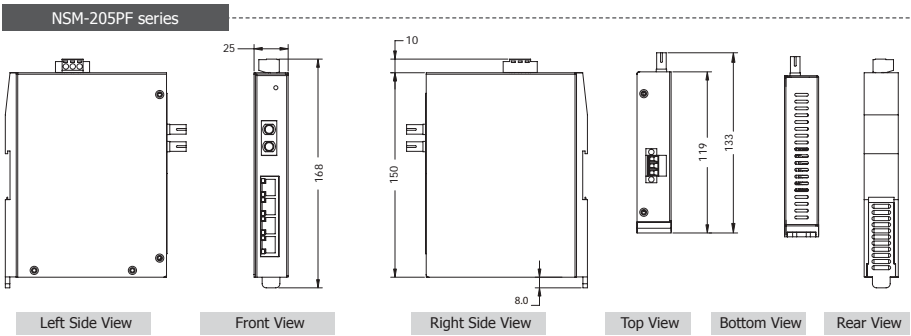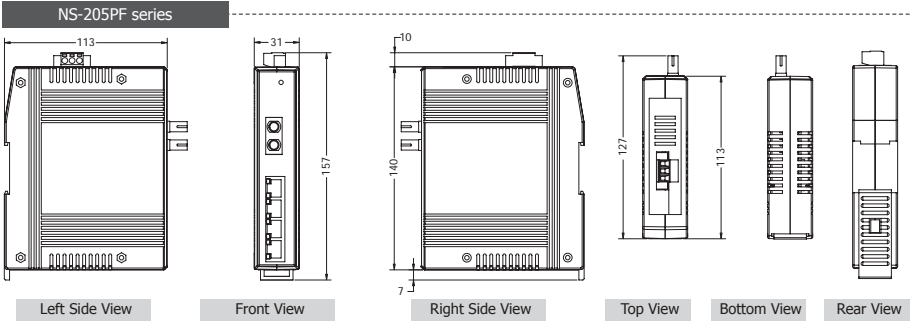
GND: Ground and should be connected to the power supply (-)

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.

Applications

NS-205PF Series/NSM-205PF Series

Dimensions (Units: mm)

3

PoE Ethernet Switches

NS-205PF series

| Left Side View | Front View | Right Side View | Top View | Bottom View | Rear View |

NSM-205PF series

| Left Side View | Front View | Right Side View | Top View | Bottom View | Rear View |

Ordering Information

NS-205PFT CR	Multi-mode 2 km, ST Connector, 4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port (RoHS)
NS-205PFC CR	Multi-mode 2 km, SC Connector, 4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port (RoHS)
NS-205PFCS CR	Single-mode 30 km, SC Connector, 4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port (RoHS)
NS-205PFCS-60 CR	Single-mode 60 km, SC Connector, 4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port (RoHS)
NSM-205PFT CR	Multi-mode 2 km, ST Connector, 4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port; metal case (RoHS)
NSM-205PFC CR	Multi-mode 2 km, SC Connector, 4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port; metal case (RoHS)
NSM-205PFCS CR	Single-mode 30 km, SC Connector, 4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port; metal case (RoHS)
NSM-205PFCS-60 CR	Single-mode 60 km, SC Connector, 4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port; metal case (RoHS)

Accessories

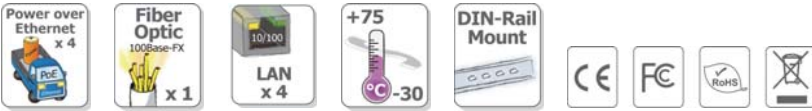| MDR-60-48	48 V/1.25 A, 60 W Power Supply with DIN-Rail Mounting
DIN-KA52F-48	48 V/0.52 A, 25 W Power Supply with DIN-Rail Mounting
KA52F-48	48 V/0.52 A, 25 W Power Supply

NS-205PF Series/NSM-205PF Series

NS-205PF-24V Series/NSM-205PF-24V Series NEW

PoE Switch with 1 Fiber port and 24 V$_{DC}$ Input

NSM-205PFT-24V

NSM-205PFC-24V
NSM-205PFCS-24V
NSM-205PFCS-60-24V

NS-205PFT-24V

NS-205PFC-24V
NS-205PFCS-24V
NS-205PFCS-60-24V

Highlight Information ▶▶▶▶

Power over Ethernet x 4 | Fiber Optic 100Base-FX x 1 | 10/100 LAN x 4 | +75 -30 °C | DIN-Rail Mount | CE | FC | RoHS

Features ▶▶▶▶

- Provides 1 x 100-FX fiber port plus 4 x PoE ports
- 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
- 4 PoE ports with Power Sourcing Equipment (PSE) operation
- Auto-detection of PD (powered devices) and automatic power management
- Over-temperature, over-current and over/undervoltage detection
- Supports +18 ~ +32 V$_{DC}$ power input
- Supports operating temperatures from -30 ~ +75°C
- DIN-Rail

Introduction

The NS-205PF-24V/NSM-205PF-24V is a 4-port unmanaged PoE (PSE) Ethernet switch with 1 fiber port; it supports 4 PoE ports which are classified as power source equipments (PSE). The NS-205PF-24V/NSM-205PF-24V makes centralized power supply come true and provides up to 15.4 W of power per PSE port. Using fiber optics, you can prevent noise from interfering with your system and supports long-speed (100 Mbps) and high-distance (up to 60 km) transmissions.

The NS-205PF-24V/NSM-205PF-24V is designed with 24 V$_{DC}$ to 48 V$_{DC}$ boost for PoE application where 48 V$_{DC}$ power supply is not available.

Specifications

Models	NS-205PF-24V series	NSM-205PF-24V series
Technology		
Standards	IEEE 802.3, 802.3u, 802.3x, 802.3af (Power over Ethernet)	
Processing Type	Store & forward; wire speed switching	
MAC Addresses	1024	
Memory Bandwidth	3.2 Gbps	
Frame Buffer Memory	512 Kbit	
Flow Control	IEEE 802.3x flow control, back pressure flow control	
Ethernet Interface		
RJ-45 Ports	10/100 Base-T(X) auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection	
LED Indicators	Power, Link/Act, 10/100M, Power Device is detected	
Ethernet Isolation	1500 V$_{rms}$ 1 minute	
+/-4 kV ESD Protection	Yes	
Fiber Interface (100 Base-FX; SC/ST type)		
Multi-Mode (NS-205PFT/FC; NSM-205PFT/FC)	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 Max. RX Sensitivity: -32 dBm Max. RX Overload: -8 dBm Budget: 12 dBm	
Single-Mode (NS-205PFCS; NSM-205PFCS)	Single-mode fiber cables: 8.3/125, 8.7/125, 9/125 or 10/125 μm Distance: 30 km, (9/125 μm recommended) for full duplex Wavelength: 1300 or 1310 nm Min. TX Output: - 15 dBm Max. TX Output: -8 dBm Max. RX Sensitivity: -34 dBm Max. RX Overload: -5 dBm Budget: 19 dBm	
Single-Mode (NS-205PFCS-60; NSM-205PFCS-60)	Single-mode fiber cables: 8.3/125, 8.7/125, 9/125 or 10/125 μm Distance: 60 km, (9/125 μm recommended) for full duplex Wavelength: 1300 or 1310 nm Min. TX Output: - 5 dBm Max. TX Output: 0 dBm Max. RX Sensitivity: -35 dBm Max. RX Overload: -5 dBm Budget: 30 dBm	
Power Input		
Input Voltage Range	+18 ~ +32 V$_{DC}$ for PoE output	
Power consumption	0.08 A @ 48 V$_{DC}$ without PD loading; 1.5 A @ 48 V$_{DC}$ with PD full loading	
Protection	Power reverse polarity protection	
+/- 4kV ESD Protection	Yes	
Connection	3-Pin Removable Terminal Block	
PoE Technology		
PoE Compliance	100% IEEE 802.3af compliant	
PoE Classification	PSE (Power Sourcing Equipment)	
PoE Voltage	+48 V$_{DC}$ depending on power input	
PoE Power	Up to 15.4 W per port	
PoE Operation	Automatic detection and power management	
PoE Pin Assignments	V+ (Pin 1, 2), V- (Pin 3, 6)	
PoE Disconnect Mode	DC disconnect	
Mechanical		
Casing	Plastic (Flammability UL 94V-0)	Metal (IP30 Protection)
Dimensions (W x L x H)	31 mm x 157 mm x 113 mm	25 mm x 168 mm x 119 mm
Installation	DIN-Rail	
Environment		
Operating Temperature	-30 °C ~ +75 °C	
Storage Temperature	-40 °C ~ +85 °C	
Ambient Relative Humidity	10% ~ 90% RH, non-condensing	

3

PoE Ethernet Switches

NS-205PF-24V Series/NSM-205PF-24V Series

LED Indicator Functions

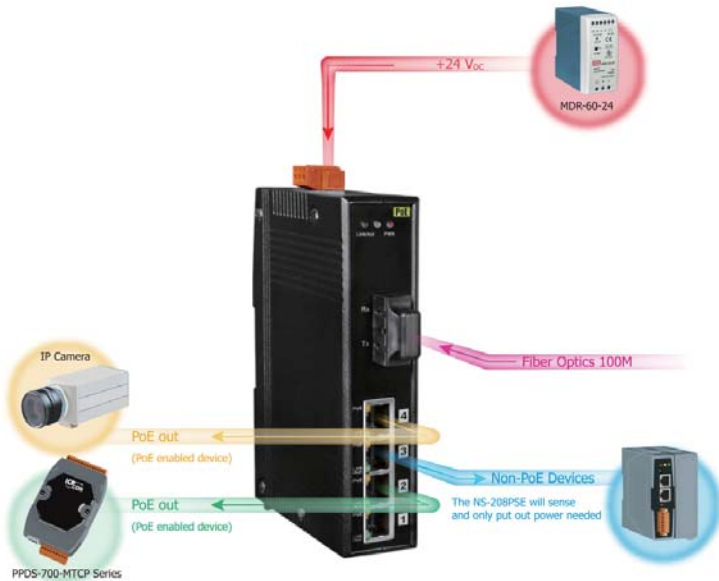| LED	Color	Description
Power	Red On	Power is On
	Red Off	Power is Off
Port 1 ~ Port 4	Orange On	Power Device is detected
	Green On	Link/Act
Port 5	Green On	Link/Act

Pin Function for Terminal Block

External power supply is connected using the removable terminal block:

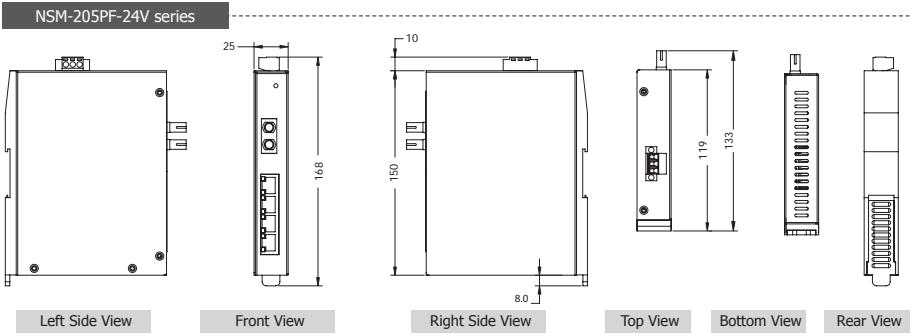**PWR:** Power input (+18 V_{DC} ~ +32 V_{DC}) and should be connected to the power supply (+)
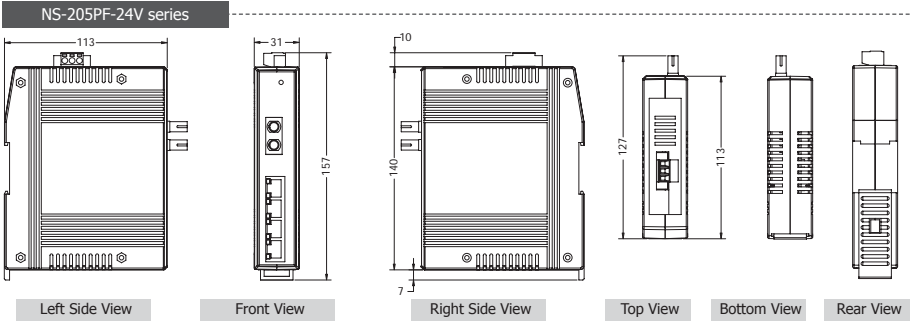
GND: Ground and should be connected to the power supply (-)

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.

Applications

3

Dimensions (Units: mm)

NS-205PF-24V series

| Left Side View | Front View | Right Side View | Top View | Bottom View | Rear View |

NSM-205PF-24V series

| Left Side View | Front View | Right Side View | Top View | Bottom View | Rear View |

Ordering Information

NS-205PFT-24V CR	Multi-mode 2 km, ST Connector, 4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port (RoHS)
NS-205PFC-24V CR	Multi-mode 2 km, SC Connector, 4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port (RoHS)
NS-205PFCS-24V CR	Single-mode 30 km, SC Connector, 4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port (RoHS)
NS-205PFCS-60-24V CR	Single-mode 60 km, SC Connector, 4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port (RoHS)
NSM-205PFT-24V CR	Multi-mode 2 km, ST Connector, 4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port; metal case (RoHS)
NSM-205PFC-24V CR	Multi-mode 2 km, SC Connector, 4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port; metal case (RoHS)
NSM-205PFCS-24V CR	Single-mode 30 km, SC Connector, 4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port; metal case (RoHS)
NSM-205PFCS-60-24V CR	Single-mode 60 km, SC Connector, 4-port 10/100 Mbps PoE (PSE) Ethernet Switch with 1 Fiber port; metal case (RoHS)

Accessories

MDR-60-24	24 V/2.5 A, 60 W Power Supply with DIN-Rail Mounting
MDR-20-24	24 V/1.0 A, 24 W Power Supply with DIN-Rail Mounting
DIN-KA52F	24 V/1.04 A, 25 W Power Supply with DIN-Rail Mounting

NS-205PF-24V Series/NSM-205PF-24V Series

NSM-208PSE-M12

NEW

Unmanaged 8-port PoE Ethernet Switch with M12

Highlight Information ▶▶▶▶

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
- ■ 8 PoE ports with Power Sourcing Equipment (PSE) operation
- ■ Auto-detection of PD (powered devices) and automatic power management
- ■ Over-temperature, over-current and over/under-voltage detection
- ■ Operating temperatures, -40 ~ +75°C
- ■ 8-port 10/100 Mbps M12 type connector with IP40 protection

Introduction

The NSM-208PSE-M12 is designed for industrial applications in harsh environments. The M12 connectors ensure tight, robust connections, and guarantee reliable operation, even for applications that are subject to high vibration and shock.

The NSM-208PSE-M12 PoE switch provide 8 fast Ethernet M12 ports with 8 IEEE 802.3af compliant PoE ports. The switch is classified as power source equipment (PSE) and provide up to 15.4 W of power per port.

The Ethernet switch support IEEE 802.3/802.3u/802/3x with 10/100M, full/half-duplex, MDI/MDI-X auto-sensing, and provide an economical solution for your industrial Ethernet network.

Specifications

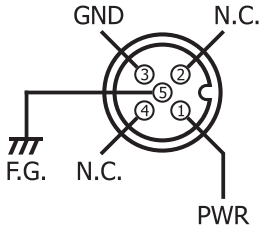| Technology	
Standards	IEEE 802.3, 802.3u, 802.3x ,802.3af (PoE), 10/100 Base-T(X) auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection
Processing Type	Store & forward
MAC Addresses	1024
Memory Bandwidth	3.2 Gbps
Frame Buffer Memory	512 Kbit
Flow Control	IEEE802.3x flow control, back pressure flow control
Interface	
LED Indicators	PWR, 10/100M, Link/Act, Power Device is detected
Ethernet Isolation	1500 V_{rms} 1 minute
Connection	Female 4-Pin shielded M12 D-coding connector
Power Input	
Input Voltage Range	+46 V_{DC} ~ +53 V_{DC}
Power Consumption	0.12 A @ 48 V_{DC} without PD loading; 3.0 A @ 48 V_{DC} with PD full loading
Protection	Power reverse polarity protection
Connection	Male 5-Pin shielded M12 A-coding connector
PoE Technology	
PoE Compliance	100% IEEE 802.3af compliant
PoE Classification	PSE (Power Sourcing Equipment)
PoE Voltage	+46 ~ +48 V_{DC} depending on power input
PoE Power	Up to 15.4 W per port
PoE Operation	Automatic detection and power management
PoE Pin Assignments	V+ (Pin 1, 3), V- (Pin 2, 4)
PoE Disconnect Mode	DC disconnect
Mechanical	
Casing	Metal with IP40
Dimensions (W x L x H)	190 mm x 56 mm x 100 mm
Installation	Wall Mounting
Environmental	
Operating Temperature	-40 °C ~ + 75 °C
Storage Temperature	-40 °C ~ + 85 °C
Ambient Relative Humidity	10 ~ 95% RH, non-condensing

LED Indicator Functions

LED	Color	Description
Power	Red On	Power is On
	Red Off	Power is Off
Port1~8	Yellow On	Power Device is detected
	Green On	Link/Act

3

PoE Ethernet Switches
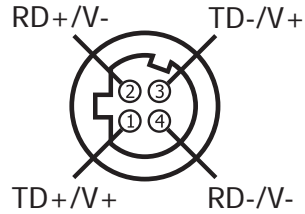
NSM-208PSE-M12

Pin Functions for Power Input

External power supply is connected using the M12 A-coding:

PWR: Power input (+46 ~ +53 V_{DC}) 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 EMS protection.

```
        GND        N.C.
          ③  ②
            ⑤
          ④  ①
    🖧
    F.G.   N.C.
                PWR
```

Pin Functions for Ethernet Port

```
    RD+/V-            TD-/V+
            ②  ③
            ①  ④
    TD+/V+            RD-/V-
```

Appearance

Female 4-Pin shielded M12
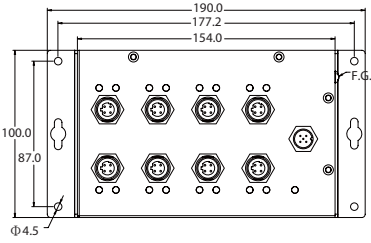D-coding connector

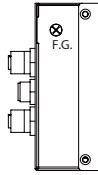NSM-208PSE-M12

Frame ground screw
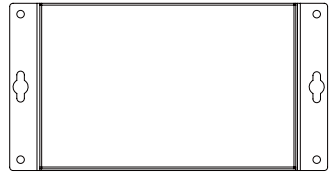
Male 5-Pin shielded M12
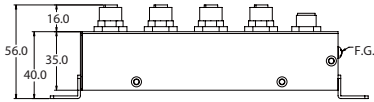A-coding connector
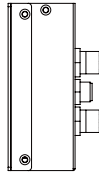
Dimensions (Units: mm)
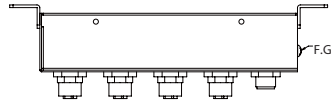

Front View

Right Side View

Rear View

Bottom View

Left Side View

Top View

Ordering Information

NSM-208PSE-M12	Unmanaged 8-port PoE Ethernet Switch with M12 Includes M12D-4P-IP68 x 8, A-CAP-M12M x 1, M12A-5P-IP68 and A-CAP-M12F x 1

Accessories

MDR-60-48	48 V/1.25 A, 60 W Power Supply with DIN-Rail Mounting
DIN-KA52F-48	48 V/0.52 A, 25 W Power Supply with DIN-Rail Mounting
KA52F-48	48 V/0.52 A, 25 W Power Supply

M12D-4P-IP68	A-CAP-M12M	M12A-5P-IP68	A-CAP-M12F
4PIO1K0000001	4PIO1K0000002	4PIO1K0000003	4PIO1K0000004

NSM-208PSE-M12

tNS-200IN/tNS-200IN-24V NEW

PoE injector (RoHS)

Highlight Information ▶▶▶▶

Features ▶▶▶▶

- ■ Auto-detection of PD (powered devices)
- ■ Power Sourcing Equipment (PSE) operation
- ■ Over-temperature, over-current and over/under-voltage detection
- ■ Supplies up to 15.4 W
- ■ No user settings
- ■ Tiny packaging fits on your DIN-Rail
- ■ Cost-effective for tNS-200IN

Introduction

The tNS-200IN/tNS-200IN-24V Single Port PoE Injector supports PoE powered devices in industrial environments. The tNS-200IN/tNS-200IN-24V delivers both data and power over a single standard Ethernet cable to a PoE Powered Device designed to receive both Data and Power through its RJ-45 port connector.

The tNS-200IN-24V is designed with 24 V_{DC} to 48 V_{DC} boost for PoE application where 48 V_{DC} power supply is not available.

Specifications

Models	tNS-200IN	tNS-200IN-24V
Interface		
RJ-45 Ports	1 for Ethernet in, 1 for PoE out	
LED Indicators	Power, Power Device is detected	
Power Input		
Input Voltage	+46 V_{DC} ~ +53 V_{DC}	+18 V_{DC} ~ +32 V_{DC}
Power consumption	0.4 A @ 48 V_{DC} with PD full loading	0.9 A @ 24 V_{DC} with PD full loading
Protection	Power reverse polarity protection	
Frame Ground for EMS Protection	Yes	
Connection	4-Pin Removable Terminal Block	
PoE Technology		
PoE Compliance	100% IEEE 802.3af compliant	
PoE Classification	PSE (Power Sourcing Equipment)	
PoE Voltage	+46 ~ +48 V_{DC} depending on power input	
PoE Power	Up to 15.4 W	
PoE Operation	Automatic detection and power management	
PoE Pin Assignments	V+ (Pin 4, 5), V- (Pin 7, 8)	
PoE Disconnect Mode	DC disconnect	
Mechanical		
Casing	Plastic	
Flammability	UL 94V-0	
Dimensions (W x L x H)	52 mm x 86 mm x 27 mm	
Installation	DIN-Rail	
Environmental		
Operating Temperature	-40 °C ~ + 75 °C	
Storage Temperature	-40 °C ~ + 85 °C	
Ambient Relative Humidity	10 ~ 90% RH, non-condensing	

LED Indicator Functions

LED	Color	Description
PWR	Red On	Power is On
	Red Off	Power is Off
PoE	Orange On	Power Device is detected

3

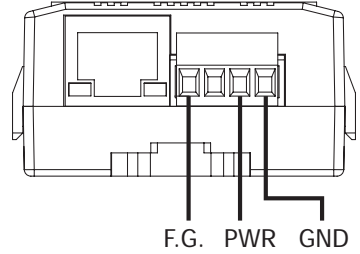PoE Ethernet Switches

tNS-200IN/tNS-200IN-24V

Pin Function for Terminal Block

External power supply is connected using the removable terminal block:

PWR: Power input 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.
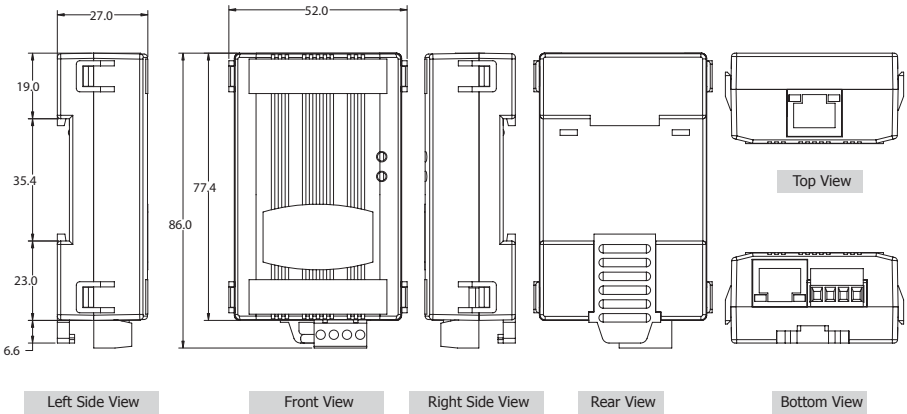
F.G.   PWR   GND

Applications

tNS-200IN/tNS-200IN-24V

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Appearance

LED Indicators:
PWR, PoE

RJ-45:
PoE OUT

Power input

RJ-45:
Ethernet IN

Dimensions (Units: mm)

| Left Side View | Front View | Right Side View | Rear View | Bottom View |

Top View

Ordering Information

tNS-200IN CR	PoE injector for 1 PoE port (uses spare pairs), 48 V$_{DC}$ input (RoHS)
tNS-200IN-24V CR	PoE injector for 1 PoE port (uses unused pairs), 24 V$_{DC}$ input (RoHS)

Accessories

MDR-60-48	48 V/1.25 A, 60 W Power Supply with DIN-Rail Mounting
DIN-KA52F-48	48 V/0.52 A, 25 W Power Supply with DIN-Rail Mounting
KA52F-48	48 V/0.52 A, 25 W Power Supply without DIN-Rail Mounting
DIN-KA52F	24 V/1.04 A, 25 W Power Supply with DIN-Rail Mounting

DR-120-24 / DR-120-48

MDR-20-24 / MDR-60-48

KA-52F-48 / DIN-KA52F-48

tDS-700 series

PPDSM-700 series

PET-7000 series

ICP DAS CO., LTD.

Taiwan
Website: http://www.icpdas.com
E-mail: service@icpdas.com
TEL：886-3-597-3366   FAX：886-3-597-3733

China
Website: http://www.icpdas.com.cn
E-mail: sales_sh@icpdas.com.cn
TEL：86-21-6247-1722   FAX：86-21-6247-1725

Europe
Website: http://www.icpdas-europe.com
E-mail: info@icpdas-europe.com
TEL：+49 (0) 7121-14324-0   FAX：+49 (0) 7121-14324-90

USA
Website: http://www.icpdas-usa.com
E-mail: sales@icpdas-usa.com
TEL：1-310-517-9888 x101   FAX：1-310-517-0998

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