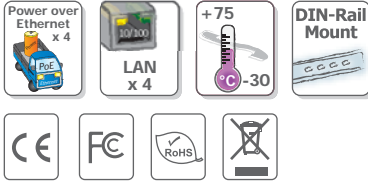


# NS-205PFx series/NSM-205PFx series

4-Port 10/100 Mbps PoE (PSE) with 1 fiber port Switch

## Highlight Information ▶▶▶



NS-205PFx series    NSM-205PFx series



## ● Introduction

The NS-205PFx/NSM-205PFx 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-205PFx/NSM-205PFx makes centralized power supply come true and provides up to 15.4 watts of power per PSE port. Using fiber optics, you can prevent noise from interfering with your system and supports high-speed (100 Mbps) and high-distance (up to 60 km) transmissions.

## ● 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 10/100Mbps 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/under-voltage detection
- Power Input, +46 ~ +55 V<sub>DC</sub>
- Supports operating temperatures from -30 ~ +75°C
- DIN-Rail

## ● Specifications

| Models   | NS-205PFx series   | NSM-205PFx series |
|--|--|-------------------|
| <b>Technology</b>                                |  |                   |
| 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   |                   |
| <b>Ethernet Interface</b>                        |  |                   |
| 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 <sub>rms</sub> 1 minute   |                   |
| +/-6 kV EMS Protection                           | Yes  |                   |
| <b>Fiber Interface (100 Base-FX; SC/ST type)</b> |  |                   |
| Multi-Mode<br>(NS-205PFT/FC)                     | Multi mode fiber cables:50/125, 62.5/125 or 100/140 μm<br>Distance :2 km, (62.5/125 μm recommended) for full duplex<br>Wavelength : 1300 or 1310nm<br>Min. TX Output:- 20 dBm<br>Max. TX Output: -14 dBm<br>Max. RX Sensitivity: -32 dBm<br>Max. RX Overload: -8 dBm<br>Budget: 12 dBm     |                   |
| Single-Mode<br>(NS-205PFCS)                      | Single-mode fiber cables: 8.3/125, 8.7/125, 9/125 or 10/125μm<br>Distance: 30 Km, (9/125 μm recommended) for full duplex<br>Wavelength: 1300 or 1310nm<br>Min. TX Output: - 15 dBm<br>Max. TX Output: -8 dBm<br>Max. RX Sensitivity: -34 dBm<br>Max. RX Overload: -5 dBm<br>Budget: 19 dBm |                   |
| Single-Mode<br>(NS-205PFCS-60)                   | Single-mode fiber cables: 8.3/125, 8.7/125, 9/125 or 10/125μm<br>Distance: 60 Km, (9/125 μm recommended) for full duplex<br>Wavelength: 1300 or 1310nm<br>Min. TX Output: - 5 dBm<br>Max. TX Output: 0 dBm<br>Max. RX Sensitivity: -35 dBm<br>Max. RX Overload: -5 dBm<br>Budget: 30 dBm   |                   |
| <b>Power Input</b>                               |  |                   |
| Input Voltage Range                              | +46 ~ +55 VDC for PoE output   |                   |
| Power consumption                                | 0.08@ 48 VDC without PD loading  |                   |
| Protection                                       | Power reverse polarity protection  |                   |
| +/- 4kV EMS Protection                           | Yes  |                   |
| Connection                                       | 3-Pin Removable Terminal Block   |                   |
| <b>PoE Output (Port1 ~ 4)</b>                    |  |                   |
| PoE Compliance                                   | 100% IEEE 802.3af compliant  |                   |
| PoE Classification                               | PSE (Power Sourcing Equipment)   |                   |
| PoE Voltage                                      | +48 VDC depending on power input   |                   |
| PoE Power  | Up to 15.4 watts per channel   |                   |
| PoE Operation                                    | Automatic detection and power management   |                   |

|                           |                                 |                         |
|---------------------------|---------------------------------|-------------------------|
| 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                        |                         |
| Environmental             |                                 |                         |
| Operating Temperature     | -30 °C ~ +75 °C                 |                         |
| Storage Temperature       | -40 °C ~ +85 °C                 |                         |
| Ambient Relative Humidity | 10% ~ 90% RH, non-condensing    |                         |

### LED Functions

| 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

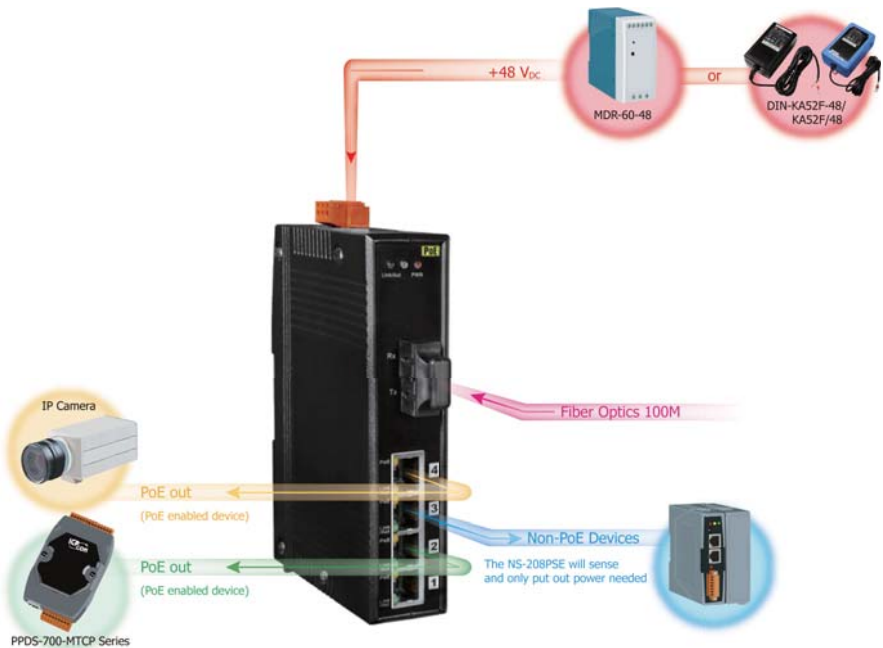
External power supply is connected using the removable terminal block:

**PWR** : Power input (+46 V<sub>DC</sub> ~ +55 V<sub>DC</sub>) and should be connected to the power supply (+)

**GND** : Ground and should be connected to the power supply (-)

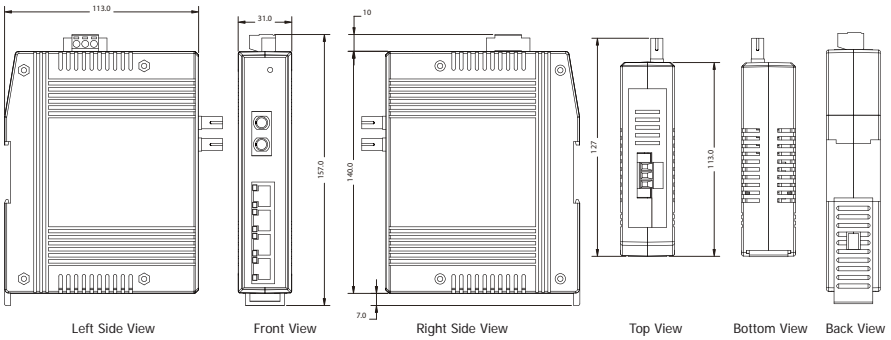
**F.G.** : F.G. stands for Frame Ground (protective ground). It is optional. If you use this pin, it can reduce EMI radiation; improve EMI performance and ESD protection.

### Applications

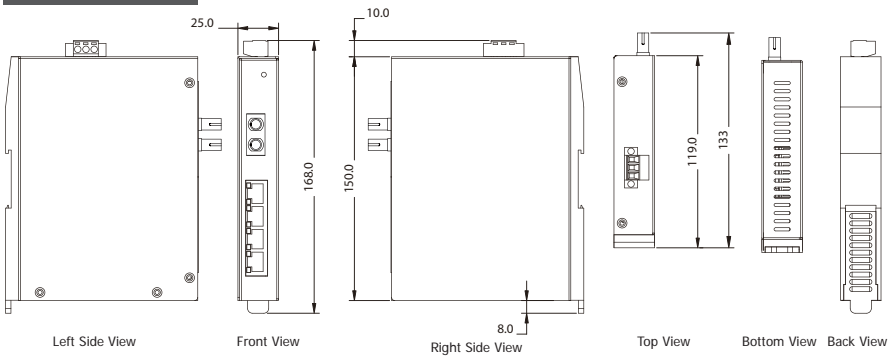


## ● Dimensions (Unit: mm)

### NS-205PFx series



### NS-205PFx series



## ● Ordering Information

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

## ● Accessories

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