

# NS-208G/ NSM-208G Series

Unmanaged 8-Port Industrial 10/100/1000 Base-T Ethernet Switch

## Highlight Information ▶▶▶

NS-208G/NSM-208G Series



For NSM-208G Series



For NS-208G Series



NSM-208G Series

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## ● Introduction

The NS-208G/NSM-208G series has 8 Ethernet Switching ports that support 10/100/1000 Base-T, with a 10/100/1000M auto negotiation feature and auto MDI/MDI-X function. It can connect 8 workstations and automatically switches the transmission speed (10 Mbps or 100 Mbps or 1000 Mbps) for corresponding connections.

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.

## ● Features

- Automatic MDI/MDI-X crossover for plug-and-play
- Each port supports 10/100 and 1000 Mbps speed auto negotiation
- Store-and-forward architecture
- Full duplex IEEE 802.3x and half duplex backpressure flow control
- 16 Gbps high performance memory bandwidth
- Power Inputs +10 V<sub>DC</sub> ~ +30 V<sub>DC</sub>
- Supports operating temperatures from -40 °C ~ +75 °C
- DIN-Rail

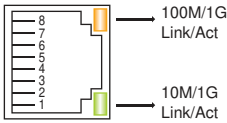
● Specifications

| Models                          | NS-208G   | NSM-208G                  |
|---------------------------------|---|---------------------------|
| <b>Technology</b>               |   |                           |
| Standards                       | IEEE 802.3, 802.3u, 802.3ab and 802.3x  |                           |
| Processing Type                 | Store & forward, wire speed switching   |                           |
| MAC Addresses                   | 8192  |                           |
| Memory Bandwidth                | 16 Gbps   |                           |
| Frame Buffer Memory             | 1 Mbit  |                           |
| Jumbo Frames                    | 9K for Speed 1000M  |                           |
| Flow Control                    | IEEE 802.3x flow control, back pressure flow control                                      |                           |
| <b>Interface</b>                |   |                           |
| RJ-45 Ports                     | 10/100/1000 Base-T auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection |                           |
| LED Indicators                  | Power, 10/100/1000M, Link/Act   |                           |
| Ethernet Isolation              | 1500 V <sub>rms</sub> 1 minute  |                           |
| Frame Ground for EMS Protection | Yes   |                           |
| Cable                           | 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                                   |                           |
|                                 | Gigabit Ethernet: 4-pair UTP/STP Cat.5, EIA/TIA-568 100 Ω                                 |                           |
| <b>Power</b>                    |   |                           |
| Input Voltage Range             | +10 V <sub>DC</sub> ~ +30 V <sub>DC</sub> (Non-isolation)                                 |                           |
| Power Consumption               | 0.3 A @ 24 V <sub>DC</sub> , +/-5% arrowed with 1000M Full duplex                         |                           |
| Protection                      | Power reverse polarity protection   |                           |
| Frame Ground for EMS Protection | Yes   |                           |
| Connection                      | 5-Pin Removable Terminal Block  |                           |
| <b>Mechanical</b>               |   |                           |
| Casing                          | Plastic (Flammability UL 94V-0)   | Metal (IP20 Protection)   |
| Dimensions (W x L x H)          | 64 mm x 98 mm x 118 mm  | 73 mm x 102 mm x 132 mm   |
| Installation                    | DIN-Rail  | DIN-Rail or Wall Mounting |
| <b>Environmental</b>            |   |                           |
| Operating Temperature           | -40 °C ~ +75 °C   |                           |
| Storage Temperature             | -40 °C ~ +75 °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      |
| Ethernet Port | Orange On      | Link to 1000 Mbps |
|               | Green On       |                   |
|               | Only Orange On | Link to 100 Mbps  |
|               | Only Green On  | Link to 10 Mbps   |



### RJ-45 Pin-Out

| Pin# | Signal Name | Function                |
|------|-------------|-------------------------|
| 1    | BI_DA+      | Bi-directional pair + A |
| 2    | BI_DA-      | Bi-directional pair - A |
| 3    | BI_DB+      | Bi-directional pair + B |
| 4    | BI_DC+      | Bi-directional pair + C |
| 5    | BI_DC-      | Bi-directional pair - C |
| 6    | BI_DB-      | Bi-directional pair - B |
| 7    | BI_DD+      | Bi-directional pair + D |
| 8    | BI_DD-      | Bi-directional pair - D |

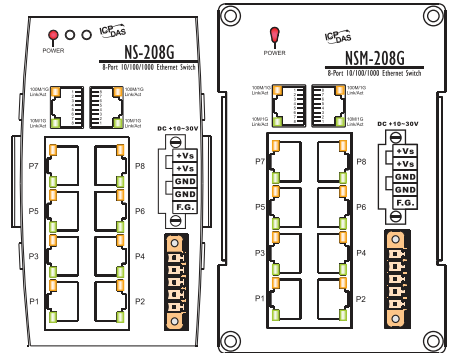
## Pin Function for Terminal Block

External power supply is connected using the removable terminal block:

+Vs : Power input (+10 V<sub>DC</sub> ~ +30 V<sub>DC</sub>) and should be connected to the power supply (+)

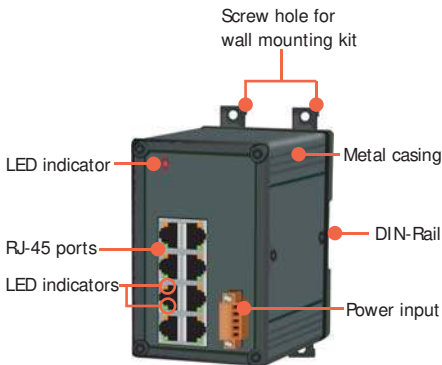
GND: Ground and should be connected to the power supply (-)

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.

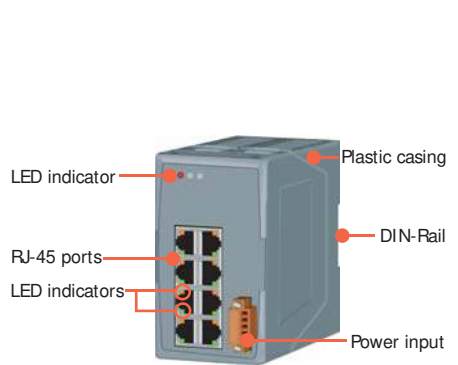


## Appearance

### NSM-208G Series

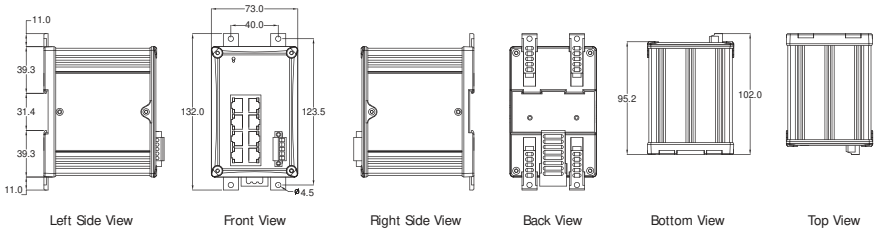


### NS-208G Series

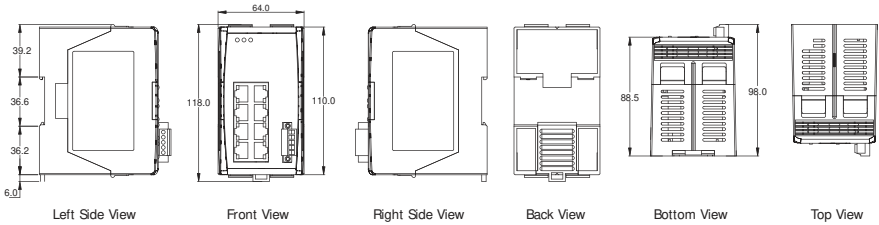


## ● Dimensions (Unit: mm)

### NSM-208G Series



### NS-208G Series



## ● Ordering Information

|              |  |
|--------------|--|
| NS-208G CR   | Unmanaged 8-Port 10/100/1000 Base-T Ethernet Switch with Power Input +10 V <sub>DC</sub> ~ +30 V <sub>DC</sub> (RoHS)                |
| NSM-208G CR  | Unmanaged 8-Port 10/100/1000 Base-T Ethernet Switch with Power Input +10 V <sub>DC</sub> ~ +30 V <sub>DC</sub> , metal casing (RoHS) |
| NS-208AG CR  | Unmanaged 8-Port 10/100/1000 Base-T Ethernet Switch with Power Input +12 V <sub>DC</sub> ~ +48 V <sub>DC</sub> (RoHS)                |
| NSM-208AG CR | Unmanaged 8-Port 10/100/1000 Base-T Ethernet Switch with Power Input +12 V <sub>DC</sub> ~ +48 V <sub>DC</sub> , metal casing (RoHS) |

## ● Accessories

|              |   |
|--------------|---|
| KWM020-1824F | 24V/0.75A, 18 W Power Supply                        |
| DIN-KA52F    | 24V/1.04A, 25 W Power Supply with DIN-Rail Mounting |
| MDR-20-24    | 24V/1A, 24 W Power Supply with DIN-Rail Mounting    |