

## INDUSTRIAL GRADE ETHERNET SWITCHES

- 5 and 8 port industrial grade Ethernet switches  
*Designed for industrial use.*
- Auto DMDI/MDIX feature accepts either type of cable  
*Use with standard and with crossover cables.*
- Available POE Versions  
*Powers POE compatible Ethernet devices.*
- Proven reliability values.  
*Reliability not available in office grade switches.*
- Expanded operating temperature range.  
*Works in harsh environments.*
- Mounts on standard DIN rails.  
*Easy mounting in network cabinets or on factory wall.*
- Includes AC Power Adapter.  
*Nothing more to buy.*

**CE** Approved



### Description

The NS Series of Industrial Ethernet Switches provides 5 or 8 Ethernet Switching ports with extended temperature ranges and the features needed for industrial networks or for anyone building reliable Ethernet network systems. The unmanaged switches automatically switch the transmission speed, 10 Mbps, 100 Mbps or 1000 Mbps (NS-208G only), to match the connected device. The switches use a store-and-forward architecture with full duplex IEEE 802.3x and half duplex back pressure flow control. Each port has an auto-negotiation feature and an auto MDI/MDIX crossover function to automatically match the cable and connected device. Diagnostic LEDs on each port display activity, link and data rate to aid trouble-shooting. Port connectors are shielded RJ-45 connectors. Each switch contains a "soft start" function with overload and high-low voltage protection. PSE versions supply power over the Ethernet to POE compatible devices.

The NS Series switches are designed for DIN rail mounting and include a short DIN rail and a power adapter that plugs into a standard AC receptacle. An optional DIN mount power adapter is available for users who prefer a DIN mounted power adapter.



**NS-205 5 Port Ethernet Switch**

### NS-205

The NS-205 has 5 Ethernet Switching ports that support 10/100Base-T, with a 10/100M auto-negotiation feature and auto MDI/MDIX function. The NS-205 can connect 5 workstations and automatically switches the transmission speed (10 Mbps or 100 Mbps) for the corresponding connections. The width of the NS-205 is just 32.30 mm (1.27 inches), so it can be used where space is important. The NS-205OEM1 version has conformal coating and an extended operating temperature range of -40 to +85 °C.

### NS-205G

The NS-205G version extends the data rate to a gigabit. The NS-205G supports 10/100/1000 Base-T, with a 10/100/1000 M auto-negotiation feature and auto MDI/MDIX function. It can connect 5 workstations and automatically switches the transmission speed (10 Mbps or 100 Mbps or 1000Mbps) for corresponding connections.

The NS-205G's Power Saving Technology, automatically reduces the power usage of ports that are idle. It also analyzes the length of any Ethernet cable connected to it and adjustment of power usage accordingly. Shorter lengths require less power.

### NS-205PSE

The NS-205PSE version provides 4 PoE ports which are classified as power source equipment (PSE). The NS-205PSE makes centralized power over Ethernet come true and provides up to 15.4 watts of power per port. The NS-205PSE can be used to power IEEE802.3af compliant powered devices (PD) over the Ethernet cable and eliminates the need for additional power wiring.

Use the NS-205PSE with a DIN-KA52F-48 Power Supply. The Power Supply can be DIN wall-mounted and uses a minimum of space in your wiring closet.

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## NS SERIES DESCRIPTION AND SPECIFICATIONS

### NS-208

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



#### NS-208 8 Port Ethernet Switch

The NS-208 is compatible with Sixnet, Stride, Hirschmann, and other industrial grade Ethernet Switches.

### NS-208G

The NS-208G has 8 Ethernet Switching ports that support 10/100/1000 Base-T, with a 10/100/1000M auto-negotiation feature and auto MDI/MDIX function. The NS-208G can connect 8 workstations and automatically switches the transmission speed (10 Mbps or 100 Mbps or 1000Mbps) for corresponding connections. The Model NSM-208G comes in a slightly larger metal case that has mounting tabs. The NSM-208G case can also be DIN rail mounted.



#### NS-208G 8 Port Ethernet Switch

### NS-208PSE

The NS-208PSE version provides 8 PoE ports which are classified as power source equipment (PSE). The NS-208PSE makes centralized power over Ethernet come true and provides up to 15.4 watts of power per port. The NS-208PSE can be used to power IEEE802.3af compliant powered devices (PD) over the Ethernet cable and eliminates the need for additional power wiring.

Use the NS-208PSE with a DIN-KA52F-48 Power Supply. The Power Supply can be DIN wall-mounted and uses a minimum of space in your wiring closet.

### Power Adapters

All NS Series Ethernet Switches are shipped with a wall-mounted AC power adapter. The AC power adapter only powers the switch itself. PSE versions require a the DIN-KA52F 48Volt power supply or its equivalent to supply power for the POE ports.

### Universal Power Supplies

There are several POE capable power supplies to choose from. All are universal power supplies with a 115/230 Vac input range and can be DIN mounted. The DIN-KA52F-48 produces 0.5 Amp at 48 Vdc (25W) and works with the POE switches in this datasheet to give you the most economical system.

The DIN-KA52F produces 1 Amp at 24 Vdc (24 VA) for systems requiring only 24 volts.

A typical POE capable ET-7000 module consumes 3 watts and uses about 0.1 Amps.



#### DIN-KA52F-48 Power Supply

### Ethernet

10/100/1000Base-T switches compatible with IEEE 802.3, IEEE 802.3u, and IEEE 802.3x. Full duplex IEEE 802.3x and half duplex back pressure flow control

Ports 5 or 8 See Model specs

Speed  
 NS-205/208 10/100 Mbps  
 NS-208G 10/100/1000 Mbps

Functions  
 Auto MDI/Auto MDIX crossover

Connectors RJ-45 shielded jacks

Diagnostic LEDs on each port display Activity, Link and Data Rate.

### NS-205 / NS-205OEM1

10/100 Base-T, 5 port Ethernet Switch compatible with : IEEE 802.3, 802.3u, and 802.3x.

Network Characteristics  
 Memory Bandwidth 1.4 Gbps  
 MAC Address Table Size 1 K

Size (W x H x D)  
 32.30 x 99.0 x 77.5 mm  
 (1.28 x 3.9 x 3.1 inches)

Reliability  
 MTBF 778,752 hours (25 °C)

Temperature:  
 Operating -40 to +75 °C  
 -40 to +85 °C (OEM1)  
 Storage -40 to +85 °C

Power  
 Voltage 10-30 Vdc at 2.4 VA

ESD Protection:  
 Contact Discharge 8 KV  
 Air-Gap Discharge 15 KV

### NS-205G

10/100/1000 Base-T, 5 port Ethernet Switch compatible with : IEEE 802.3, 802.3u, and 802.3x.

Network Characteristics  
 Memory Bandwidth 16 Gbps  
 MAC Address Table Size 8K  
 Frame buffer memory : 1 Mbit  
 Jumbo Frames 9K

## NS SERIES SPECIFICATIONS

NS-205G Cont'd		NS-208G / NSM-208G		DIN-KA52F-48	
Size	(W x H x D) 37 x 107 x 78 mm (1.46 x 4.2 x 3.1 inches)	10/100/1000 Base-T, 8 port Ethernet Switch compatible with : IEEE 802.3, 802.3u, 802.3ab and 802.3x. Available in a metal case as Model NSM-208G		DIN rail mounted power supply module for powering 3-10 NS Series Ethernet Switches. IEEE 802.3af compliant.	
Temperature:		Network Characteristics		Input	100-250 Vac at 50-60 Hz.
Operating	-30 to +70 °C	Memory Bandwidth 16 Gbps		Output	48 Vdc at 0.5 Ampere
Storage	-40 to +85 °C (OEM1)	MAC Address Table Size 8K		Size	(W x H x D) 68. x 107 x 50 mm (2.7 x 4.2 x 1.97 inches)
Power		Frame buffer memory : 1 Mbit		Connections:	3-pole, IEC320-C14
Voltage	10-30 Vdc at 2.4 VA	Jumbo Frames 9K		Temperature:	
ESD Protection:		Size NS-208G	(W x H x D)	Operating	0 to +70 °C
Contact Discharge	8 KV		64. x 110.0 x 97.5 mm (2.52 x 4.33 x 3.84 inch)	Storage	-40 to +85 °C
Air-Gap Discharge	15 KV	Size NSM-208G	(W x H x D)	Approvals:	UL60950-1, CSA C22.2, TUV EN60950-1, BSMI CNS14336 approved.
<b>NS-208</b>			72.5. x 110.0 x 101.1 mm (2.86 x 4.33 x 4. inches)	EMI/RFI Tests:	EN55022 class B, FCC PART 15 / CISPR22 class B, CNS13438 class B, EN61000
10/100 Base-T, 8 port Ethernet Switch compatible with : IEEE 802.3, 802.3u, and 802.3x.		Temperature:		<b>Common Specifications</b>	
Network Characteristics		Operating	-30 to +70 °C	Relative Humidity:	10% to 90% non-condensing
Memory Bandwidth 2 Gbps		Storage	-40 to +75 °C	Vibration	Standard: IEC61373
Size	(W x H x D) 64. x 110.0 x 97.5 mm (2.52 x 4.33 x 3.84 inches)	Reliability		Electrical	Standard: EN50155
MTBF	499,200 hours (25 °C)	MTBF	499,200 hours (25 °C)	<b>Approvals</b>	
Reliability		Power		CE Certified	
MTBF	499,200 hours (25 °C)	Voltage	10-30 Vdc at 7.2 VA	FCC Certified	
Temperature:		ESD Protection:		<b>Included Accessories</b>	
Operating	-30 to +75 °C	Contact Discharge	4 KV	Manual	
Storage	-40 to +85 °C	Air-Gap Discharge	6 KV	Short DIN Rail and mounting screws.	
Power				115 Vac Power Supply with all non PSE models.	
Voltage	10-30 Vdc at 3.6 VA				
ESD Protection:					
Contact Discharge	8KV				
Air-Gap Discharge	15KV				

## ORDERING INFORMATION

	Part Number
Five Port 10/100 Mbs Ethernet Switch	NS-205
Five Port 10/100 Mbs Ethernet Switch with conformal coating,	NS-205OEM1
Five Port Gigabit Ethernet Switch	NS-205G
Five Port 10/100 Mbs Ethernet Switch with four POE ports	NS-205PSE
Eight Port 10/100 Mbs Ethernet Switch	NS-208
Eight Port Gigabit Ethernet Switch	NS-208G
Eight Port 10/100 Mbs Ethernet Switch, metal case with tabs	NSM-208G
Eight Port 10/100 Mbs Ethernet Switch with eight POE ports	NS-208PSE
Universal Power Supply, 48 Vdc, 0.52 Amp, 25W	DIN-KA52F-48