

# NS-200F Series

Industrial 10/100 Base-TX to 100 Base-FX Media Converter

## Highlight Information ▶▶▶▶



NS-200FC/FCS Series

NS-200FT Series



Media Converters NS-200F Series

### ● Introduction

The NS-200F series is a Ethernet (10/100 Base-TX) to Media (100 Base-FX) converter. The Ethernet supports 10/100M auto negotiation feature and auto MDI/MDI-X function.

The NS-200F series operates at either half or full duplex mode.

It contains "soft start" function with overload protection, high-low voltage protection.

The width of the NS-200F series is just 33 mm, so it can be used where space is important.

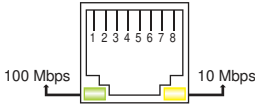
### ● Features

- Automatic MDI/MDI-X crossover for plug-and-play
- Supports both 10/100 Mbps speed auto negotiation
- Store-and-forward architecture
- Full duplex IEEE 802.3x and half duplex backpressure flow control
- 1.4 Gbps high performance memory bandwidth
- Frame buffer memory: 256 Kbit
- Integrated look-up engine with dedicated 1024 unicast MAC addresses
- Supports +10 V<sub>bc</sub> ~ +30 V<sub>bc</sub> Reverse Polarity Protection
- Supports operating temperatures from 0 °C ~ +70 °C
- DIN-Rail mount for industrial usage

## ● Specifications

<b>Technology</b>	
Standards	IEEE 802.3, 802.3u, 802.3x
Processing Type	Store & forward, wire speed switching
MAC Addresses	1024
Memory Bandwidth	1.4 Gbps
Frame Buffer Memory	256 Kbit
Flow Control	IEEE 802.3x flow control, back pressure flow control
<b>Interface</b>	
RJ-45 Port	10/100 Base-TX auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection
Fiber 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 $\mu\text{m}$
	Distance: 2 km, (62.5/125 $\mu\text{m}$ 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 $\mu\text{m}$
	Distance: 15 km, (9/125 $\mu\text{m}$ 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 $\Omega$
	Fast Ethernet: 2-pair UTP/STP Cat. 5, EIA/TIA-568 100 $\Omega$
<b>Power</b>	
Input Voltage Range	+10 V <sub>DC</sub> ~ +30 V <sub>DC</sub> (Non-isolation)
Power Consumption	0.12 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)
Dimensions (W x L x H)	33 mm x 85 mm x 107 mm
Installation	DIN-Rail
<b>Environmental</b>	
Operating Temperature	0 $^{\circ}\text{C}$ ~ +70 $^{\circ}\text{C}$
Storage Temperature	-20 $^{\circ}\text{C}$ ~ +85 $^{\circ}\text{C}$
Ambient Relative Humidity	10% ~ 90% RH, non-condensing

## LED Functions

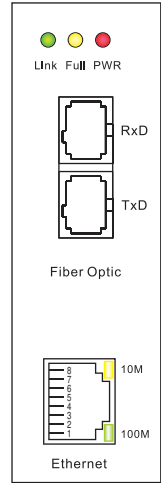


**LED Indicator Functions**

LED	Color	Description
PWR	Red	Power is On
	Off	Power is Off
Fiber Optic	Yellow_On	Full Duplex Mode
	Yellow_Off	Half Duplex Mode
	Green_On	Link/Act
	Green_Off	Not Networking
Ethernet	Yellow	Link to 10 Mbps
	Green	Link to 100 Mbps
	Off	Not Networking

**RJ-45 Pin-Out**

Pin#	Signal Name	Function
1	TD+	Transmit Data
2	TD-	Transmit Data
3	RD+	Receive Data
4	NC	No Connection
5	NC	No Connection
6	RD-	Receive Data
7	NC	No Connection
8	NC	No Connection



## 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>

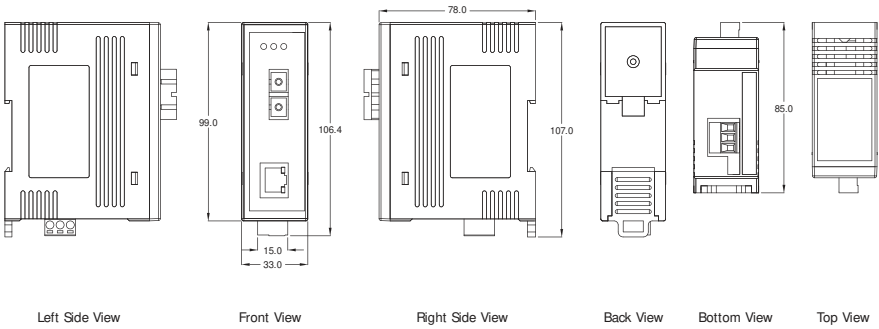
GND: Ground

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



## ● Dimensions (Unit: mm)



## ● Ordering Information

NS-200 <span style="border: 1px solid black; padding: 2px;">A</span> <span style="border: 1px solid black; padding: 2px;">F</span> <span style="border: 1px solid black; padding: 2px;"> </span> <span style="border: 1px solid black; padding: 2px;"> </span> - <span style="border: 1px solid black; padding: 2px;">4</span> <span style="border: 1px solid black; padding: 2px;">0</span> - <span style="border: 1px solid black; padding: 2px;"> </span>		
A: Power Input +12 V <sub>DC</sub> ~ +48 V <sub>DC</sub>		
Single Mode Distance 40: 40 km Standard Models: 15 km		
Ordering Code Definition	Fiber Port Connector	Operating Temperature
	T: Multi Mode ST Connector C: Multi Mode SC Connector CS: Single Mode SC Connector	T: Operating Temp: -40 °C ~ +75 °C Standard Models: 0 °C ~ +70 °C
Models	NS-200FT NS-200FC NS-200FCS NS-200AFT NS-200AFC NS-200AFCS	NS-200AFT-T NS-200AFC-T NS-200AFCS-T NS-200AFCS-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