ICP DAS

NS-205AF Series/NSM-205AF Series
4-port 10/100 Mbps Ethernet with 1 Fiber Port Switch

NS-206AF Series/NSM-206AF Series
4-port 10/100 Mbps Ethernet with 2 Fiber Ports Switch

▣ Features

- Provides 1 x 100-FX fiber port for NS-205AF/NSM-205AF series
- Provides 2 x 100-FX fiber ports for NS-206AF/NSM-206AF series
- Full duplex IEEE 802.3x and half duplex backpressure flow control
- Automatic MDI/MDI-X crossover for plug-and-play
- Store-and-forward architecture
- Redundant dual +12 VDC ~ +48 VDC power inputs
- Broadcast Storm protection

CE UKCA FC RoHS

📁 Introduction

The NS-206AF/NSM-206AF is a 4-port unmanaged Ethernet with 2 fiber ports switch. 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.

The NS-205AF/NSM-205AF/NS-206AF/NSM-206AF provides a wide +12 VDC ~ +48 VDC power range to fit all the common power standards found in industrial automation, without external power converters. The wide power input lowers installation and maintenance costs.
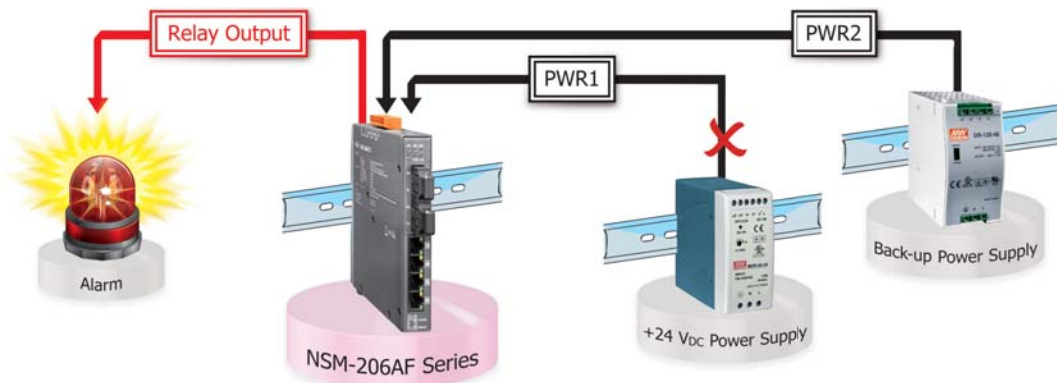
📁 Comparison Table of Fiber Switch

Mode Name	NS-205F NS-206F	NSM-205F NSM-206F	NS-205AF NS-206AF	NSM-205AF NSM-206AF
PoE	-			
Input Voltage Range	+10 VDC ~ +30 VDC		+12 VDC ~ +48 VDC	
Operating Temperature	0 °C ~ +70 °C		-30 °C ~ +75 °C	
Casing	Plastic	Metal (IP20)	Plastic	Metal (IP30)
Installation	DIN-Rail Mounting	DIN-Rail Mounting or Wall Mounting	DIN-Rail Mounting	
Dimensions (W x L x H) (Unit: mm)	64 x 118 x 101	73 x 132 x 105	31 x 157 x 123	25 x 168 x 131

📁 Redundant Power Input

Both power inputs can be connected simultaneously to live DC power sources.
If one power source fails, the other live source will act as a backup, and automatically supplies all of NSM-205AF/NSM-206AF series power needs.

Specifications

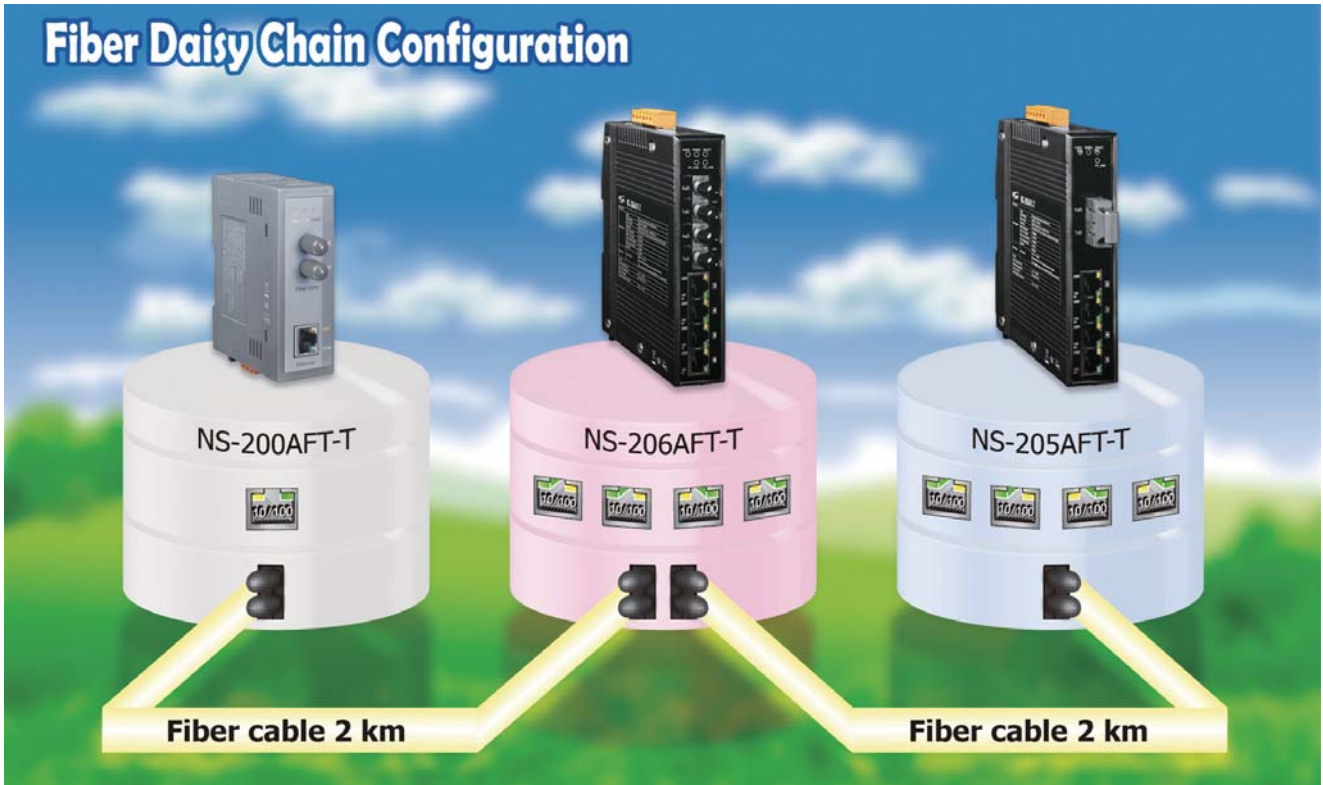| Model	NS-205AF Series	NS-206AF Series	NSM-205AF Series	NSM-206AF Series
EMS Protection				
ESD (IEC 61000-4-2)	± 4 kV Contact			
LED Indicators				
Status	PWR1, PWR2, PWR_Fault, Link/Act, 10/100M			
Ethernet				
Ports	4 x RJ-45, 10/100Base-TX			
Standards	IEEE802.3, 802.3u, 802.3x			
Processing Type	Store & forward			
MAC Table	2048			
Frame Buffer Memory	1 Mbit			
Flow Control	IEEE 802.3x flow control			
Isolation	1500 Vrms 1 minute			
Fiber				
Multi-Mode NS-205AFT-T NS-205AFC-T NSM-205AFT-T NSM-205AFC-T NS-206AFT-T NS-206AFC-T NSM-206AFT-T NSM-206AFC-T	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 Min. RX Overload: -8 dBm Budget: 12 dBm			
Single-Mode NS-205AFCS-T NSM-205AFCS-T NS-206AFCS-T NSM-206AFCS-T	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 Min. RX Overload: -5 dBm Budget: 19 dBm			
Single-Mode NS-205AFCS-60T NSM-205AFCS-60T NS-206AFCS-60T NSM-206AFCS-60T	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 Min. RX Overload: -5 dBm Budget: 30 dBm			
Power				
Reverse Polarity Protection	Yes			
Input Range	+12 ~ +48 VDC (Non-isolation, redundant input)			
Redundant Power Inputs	Yes			
Consumption	0.2 A @ 24 VDC	0.14 A @ 24 VDC	0.2 A @ 24 VDC	0.14 A @ 24 VDC
Alarm Output	Yes,Relay 2 A @ 30 VDC			
Mechanical				
Casing	Plastic (Flammability UL 94V-0)		Metal (IP30 Protection)	
Dimensions (mm)	31 x 157 x 123 (W x L x H)		25 mm x 168 mm x 131 mm	
Installation	DIN-Rail Mounting			
Environment				
Operating Temperature	-30 °C ~ +75 °C			
Storage Temperature	-40 °C ~ +85 °C			
Humidity	10% ~ 90% RH, non-condensing			

Pin Functions for Power Input

External power supply is connected using the removable terminal block:

PWR: Power input and should be connected to the power supply (+)

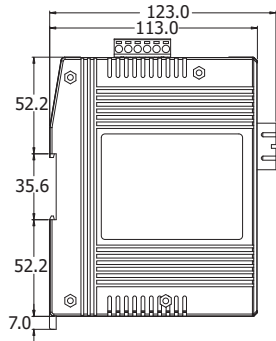GND: Ground and should be connected to the power supply (-)

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.
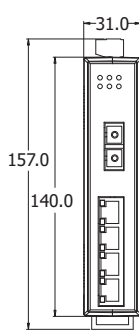
■ Applications

Fiber Daisy Chain Configuration

NS-200AFT-T   NS-206AFT-T   NS-205AFT-T

Fiber cable 2 km   Fiber cable 2 km

■ Dimensions (Units: mm)

NS-205AFC-T/NS-205AFCS-T/NS-205AFCS-60T

123.0
113.0
52.2
35.6
52.2
7.0

31.0
157.0
140.0

Left Side View   Front View

NS-206AFC-T/NS-206AFCS-T/NS-206AFCS-60T

123.0
113.0
52.2
35.6
52.2
7.0

31.0
157.0
140.0
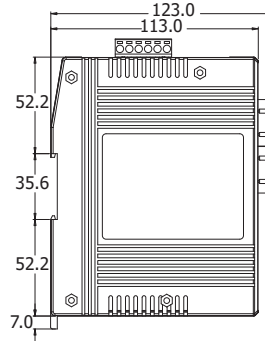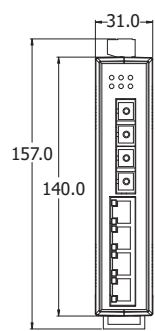
Left Side View   Front View

NSM-205AFC-T/NSM-205AFCS-T/NSM-205AFCS-60T

131.0
119.0
57.5
35.7
56.7
8.0

25.0
168.0
150.0
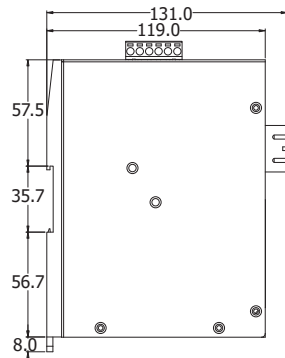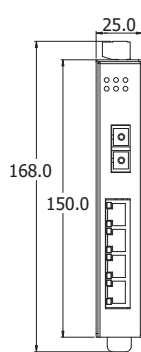
Left Side View   Front View

NSM-206AFC-T/NSM-206AFCS-T/NSM-206AFCS-60T

131.0
119.0
57.5
35.7
56.7
8.0

25.0
168.0
150.0
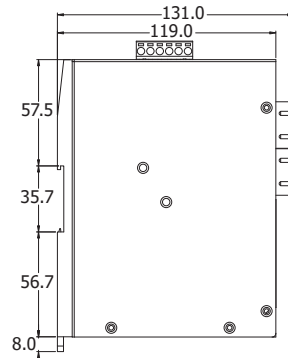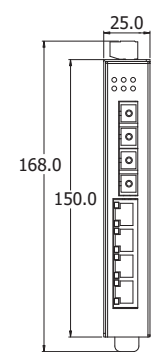
Left Side View   Front View

▇ Ordering Information

NS-205AFT-T CR	Multi-mode, ST Connector, 4-port 10/100 Mbps with 1 Fiber port Switch (RoHS)
NS-205AFC-T CR	Multi-mode, SC Connector, 4-port 10/100 Mbps with 1 Fiber port Switch (RoHS)
NS-205AFCS-T CR	Single-mode 30 km, SC Connector, 4-port 10/100 Mbps with 1 Fiber port Switch (RoHS)
NS-205AFCS-60T CR	Single-mode 60 km, SC Connector, 4-port 10/100 Mbps with 1 Fiber port Switch (RoHS)
NSM-205AFT-T CR	Multi-mode, ST Connector, 4-port 10/100 Mbps with 1 Fiber port Switch; metal case (RoHS)
NSM-205AFC-T CR	Multi-mode, SC Connector, 4-port 10/100 Mbps with 1 Fiber port Switch; metal case (RoHS)
NSM-205AFCS-T CR	Single-mode 30 km, SC Connector, 4-port 10/100 Mbps with 1 Fiber port Switch; metal case (RoHS)
NSM-205AFCS-60T CR	Single-mode 60 km, SC Connector, 4-port 10/100 Mbps with 1 Fiber port Switch; metal case (RoHS)
NS-206AFT-T CR	Multi-mode, ST Connector, 4-port 10/100 Mbps with 2 Fiber ports Switch (RoHS)
NS-206AFC-T CR	Multi-mode, SC Connector, 4-port 10/100 Mbps with 2 Fiber ports Switch (RoHS)
NS-206AFCS-T CR	Single-mode 30 km, SC Connector, 4-port 10/100 Mbps with 2 Fiber ports Switch (RoHS)
NS-206AFCS-60T CR	Single-mode 60 km, SC Connector, 4-port 10/100 Mbps with 2 Fiber ports Switch (RoHS)
NSM-206AFT-T CR	Multi-mode, ST Connector, 4-port 10/100 Mbps with 2 Fiber ports Switch; metal case (RoHS)
NSM-206AFC-T CR	Multi-mode, SC Connector, 4-port 10/100 Mbps with 2 Fiber ports Switch; metal case (RoHS)
NSM-206AFCS-T CR	Single-mode 30 km, SC Connector, 4-port 10/100 Mbps with 2 Fiber ports Switch; metal case (RoHS)
NSM-206AFCS-60T CR	Single-mode 60 km, SC Connector, 4-port 10/100 Mbps with 2 Fiber ports Switch; metal case (RoHS)