N-TRON
THE INDUSTRIAL NETWORK COMPANY

112FX4

PRODUCT FEATURES

- Compact, Space Saving Package
- Full IEEE 802.3 Compliance
- Eight 10/100BaseTX RJ-45 Ports
- Four 100BaseFX Ports, ST or SC Style
- Unmanaged Operation
- Extended Environmental Specifications
  - -40ºC to 80ºC Operating Temperature
  - >2 Million Hours MTBF
- Supports Full/Half Duplex Operation
- Auto Sensing 10/100BaseTX, Duplex, MDIX
- Full Wire Speed Communication
- Store-and-Forward Technology
- Redundant Power Inputs (10-49 VDC)
- ESD Protection Diodes on all RJ-45 Ports
- Surge Protection Diodes on Power Inputs
- LED Link/Activity Status Indication
- Hardened Metal DIN-Rail Enclosure

PRODUCT OVERVIEW

The N-TRON 112FX4 unmanaged industrial network switch is designed to meet the most demanding communications requirements while providing high throughput and minimum downtime. The 12-port Ethernet switch is the perfect low-cost solution for mission critical data acquisition, control, and Ethernet I/O applications.

Exceptional Quality

The ultra-compact 112FX4 provides exceptional performance and reliability under harsh conditions. Enclosed in a high-grade metal case, the switch offers a robust feature set that includes an extended temperature range, superior shock and vibration resistance, redundant power inputs, surge and ESD protection, and an exceptional MTBF—greater than two million hours. The space-saving design includes an attached DIN-rail bracket for quick installation.

Versatile Connectivity

The 112FX4 includes eight RJ-45 auto-sensing 10/100BaseTX ports. All ports support full/half duplex transmission and use N-TRON's proven Ethernet switching technology.

Setup is easy. The unit automatically configures itself on the network and auto-negotiates both speed and flow control for all copper ports.

For fiber optic networks, the 112FX4 supplies four 100BaseFX ports. These connections provide vital support for applications where EMI immunity or communication over long distances (up to 80 km) is required. N-TRON offers singlemode or multimode options, as well as SC- or ST-style connectivity.

Excellent Network Support

The 112FX4 is a brilliant plug-and-play solution for unmanaged operations, eliminating virtually all network collisions. Designed with advanced communication processing, store-and-forward programming and memory for up to 8,000 MAC-addresses, this powerful unit handles the demands of even the most complex networks. Intelligent auto-sensing ports instantly recognize and resolve 10/100BaseTX, MDIX and duplex conflicts. For added convenience, LEDs are provided to display link status and activity for each port.

RUGGED • RELIABLE • AFFORDABLE

112FX4 Specifications

Switch Properties
Number of MAC Addresses:	8000
Latency Typical:	2.6 µs
Switching Method:	Store-and-Forward

Case Dimensions
Height:	4.3"	(10.8 cm)
Width:	3.1"	(7.9 cm)
Depth:	4.6"	(11.5 cm)
Weight (max):	1.6 lbs	(0.73 kg)
DIN-Rail Mount:	35mm	

Electrical
Redundant Input Voltage:	10-49 VDC (Regulated)
Input Current (max):	455mA max.@24VDC
BTU/hr:	37.3 @ 24VDC
N-TRON Power Supply:	NTPS-24-1.3 (1.3A@24V)

Environmental
Operating Temperature:	-40ºC to 80ºC
Storage Temperature:	-40ºC to 85ºC
Operating Humidity:	5% to 95% (Non Condensing)
Operating Altitude:	0 to 10,000 ft.

Shock and Vibration (bulkhead mounted)
Shock:	200g @ 10ms
Vibration/Seismic:	50g, 5-200Hz, Triaxial

Reliability
MTBF:	>2 Million Hours

Network Media
10BaseT:	≥Cat3 Cable
100BaseTX:	≥Cat5 Cable

Fiber Transceiver Characteristics

Fiber Length	2km*	15km**	40km**	80km**
TX Power Min	-19dBm	-15dBm	-5dBm	-5dBm
RX Sensitivity Max	-31dBm	-31dBm	-34dBm	-34dBm
Wavelength	1310nm	1310nm	1310nm	1550nm

* Multimode Fiber Optic Cable
** Singlemode Fiber Optic Cable

Connectors
10/100BaseTX:	Eight (8) RJ-45 Copper Ports
100BaseFX:	Four (4) SC or ST Fiber Duplex Ports

Recommended Wiring Clearance
Front:	4"	(10.16 cm)
Side:	1"	(2.54 cm)

Regulatory Approvals
- *FCC: Title 47, Part 15, Subpart B, Class A; ANSI C63.4; ICES-003*
- *UL /cUL: Class I, Div 2, Groups A, B, C, D and T4*
- *CE: IEC 61000-4-2/3/4/5/6/8/11, EN 61000-6-2/4*
- *GOST-R Certified, RoHS Compliant*

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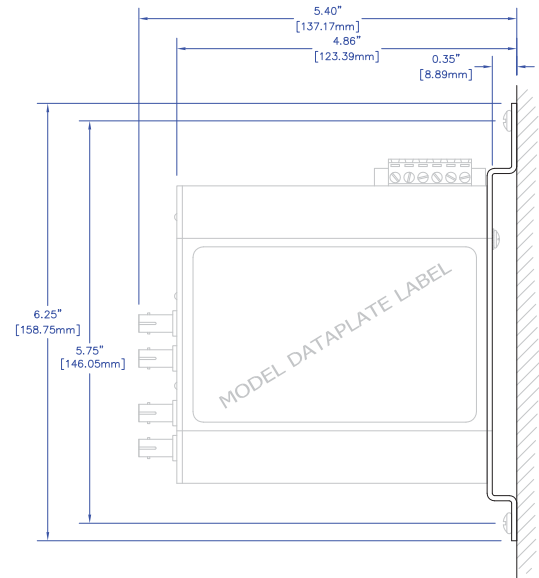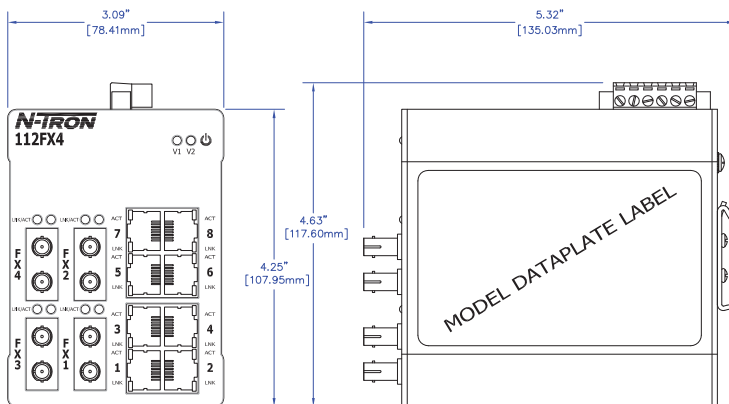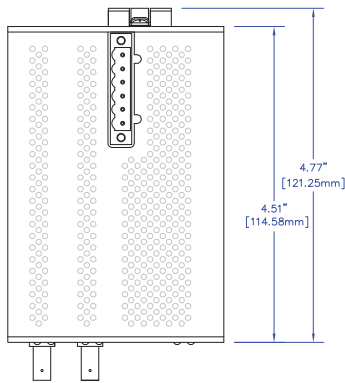**FAX: +86 (0) 21 6194 6699**

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REV 101103

112FX4 Industrial Ethernet Switch Ordering Information

112FX4-XX	Eight 10/100BaseTX Ports, Four Multimode100BaseFX Fiber Optic Ports
112FXE4-XX-YY	Eight 10/100BaseTX Ports, Four Singlemode100BaseFX Fiber Optic Ports
NTPS-24-1.3	N-TRON Power Supply (1.3 amp @ 24VDC)
CPMA-2	Compact Panel Mount (factory installed option)
URMK	Universal Rack Mount Kit

Where: XX = ST or SC
YY = 15, 40, or 80 for Singlemode, Blank for Multimode
E = Singlemode

5.40" [137.17mm]
4.86" [123.39mm]
0.35" [8.89mm]
6.25" [158.75mm]
5.75" [146.05mm]
MODEL DATAPLATE LABEL

OPTIONAL COMPACT PANEL MOUNT ASSY.
(P/N: CPMA-2)

4.77" [121.25mm]
4.51" [114.58mm]

3.09" [78.41mm]
5.32" [135.03mm]

N-TRON
112FX4

V1 V2

FX4 FX2 7 8 5 6
FX3 FX1 3 4 1 2

4.63" [117.60mm]
4.25" [107.95mm]

MODEL DATAPLATE LABEL