

# 105TX Industrial Ethernet Switch

N-Tron Networking Series



## ▶▶▶ Unmanaged Industrial Ethernet Switch

The *N-TRON® 105TX* is a low cost unmanaged five port Industrial Ethernet Switch. It is housed in a hardened, metal, DIN-Rail enclosure, and is designed for use in mission critical data acquisition, control, and Ethernet I/O applications.

### PRODUCT FEATURES

- Compact, Space Saving Package
- Full IEEE 802.3 Compliance
- American Bureau of Shipping (ABS) Type Approval
- EN50155 for Railway applications
- Five 10/100BaseTX RJ-45 Ports
- Unmanaged Operation
- Extended Environmental Specifications
  - -40°C to 80°C Operating Temperature
  - >2M Hours MTBF
- Supports Full/Half Duplex Operation
- Up to 1.0Gbs Maximum Throughput
- MDIX Auto Sensing Cable
- Auto Sensing Speed and Flow Control
- Full Wire Speed Communications
- Store-and-forward Technology
- Redundant Power Inputs (10-30 VDC)
- LED Link/Activity Status Indication
- Hardened Metal DIN-Rail Enclosure

### PRODUCT OVERVIEW

The *105TX* Industrial Network Switch is designed to solve the most demanding industrial communication requirements while providing high throughput and minimum downtime.

The *105TX* provides five RJ-45 auto sensing 10/100BaseTX ports. All ports are full/half duplex capable, using "state of the art" Ethernet switching technology. The *105TX* auto-negotiates the speed and flow control capabilities of the five TX port connections, and configures itself automatically.

Since the *105TX* is auto sensing, there will be no need to make extensive wiring changes if upgrades are made to host computers, plant systems, or Ethernet I/O modules. The switching fabric simply scales up or down automatically to match specific network environments.



The *105TX* supports up to 2,000 MAC addresses, enabling these products to support extremely sophisticated and complex network architectures.

The is an ideal candidate for upgrading existing hubs and repeaters to increase bandwidth and determinism by virtually eliminating network collisions. The *N-TRON 105TX* combines affordability and the plug & play simplicity of the unmanaged hub.

The *105TX* can simplify plant wiring by eliminating the need to bring data acquisition and control network connections back to a climate controlled environment. The *105TX* has extended operating environmental specifications to meet the harsh needs of the industrial environment. For cost savings and convenience it can be DIN-Rail mounted alongside Ethernet I/O or other Industrial Equipment.

To increase reliability the *105TX* provides dual redundant power inputs. LED's are provided to display the link status and activity of each port.

industrial  
networking

## 105TX SPECIFICATIONS

### Case Dimensions

Height:	2.9"	(7.3cm)
Width:	1.5"	(3.8 cm)
Depth:	3.6"	(9 cm)
Weight:	0.6 lbs.	(0.28 kg)
DIN-Rail:	35mm	

### Electrical

Input Voltage:	10-30 VDC
Steady Input Current:	215mA@24V
Inrush:	7.8Amp/0.7ms@24V

### Environmental

Operating Temperature:	-40°C to 80°C
Storage Temperature:	-40°C to 85°C
Operating Humidity:	10% 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
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### Network Media

10BaseT:	>Cat3 Cable
100BaseTX:	>Cat5 Cable

### Connectors

10/100BaseTX:	Five (5) RJ-45 TX Copper Ports
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### Recommended Wiring Clearance

Front:	2" (5.08 cm)
Top:	1" (2.54 cm)

## Ordering Information

105TX	Five 10/100BaseTX Ports
NTPS-24-1.3	DIN-Rail Power Supply 24V@1.3 Amp
100-MDR-1	Metal Din Rail Option*

\* MDR option must be specified with switch order - not field upgradable

## BENEFITS

### Industrial Network Switch

- Compact Size / Small Footprint
- Extended Environmental Specifications
- Hardened Metal DIN-Rail Enclosure
- High Performance
- High MTBF >2M Hours
- ESD Protection Diodes on RJ-45 Ports
- Surge Protection Diodes on Power Inputs

### Ease of Use

- Plug & Play Operation
- Auto Sensing 10/100BaseTX
- Auto Negotiation Full/Half Duplex
- MDIX Auto Cable Sensing
- Unmanaged Operation

### Increased Performance

- Full Wire Speed Capable
- Full Duplex Capable
- Eliminates Network Collisions
- Increases Network Determinism

### Regulatory Approvals

*FCC Title 47 Part 15 Class A; ICES-003- Class A  
CE: EN61000-6-2,4; EN61000-4-2,3,4,5,6; EN5501  
UL Listed (US and Canada) per ANSI/ISA-12.12.01-20  
Class I, Div 2, Groups A,B,C,D,T4A*

*GOST-R Certified*

*ABS Type Approval for Shipboard Applications*

*DNV-GL Type Approval Certification*

*EN50155 for Railway Applications*

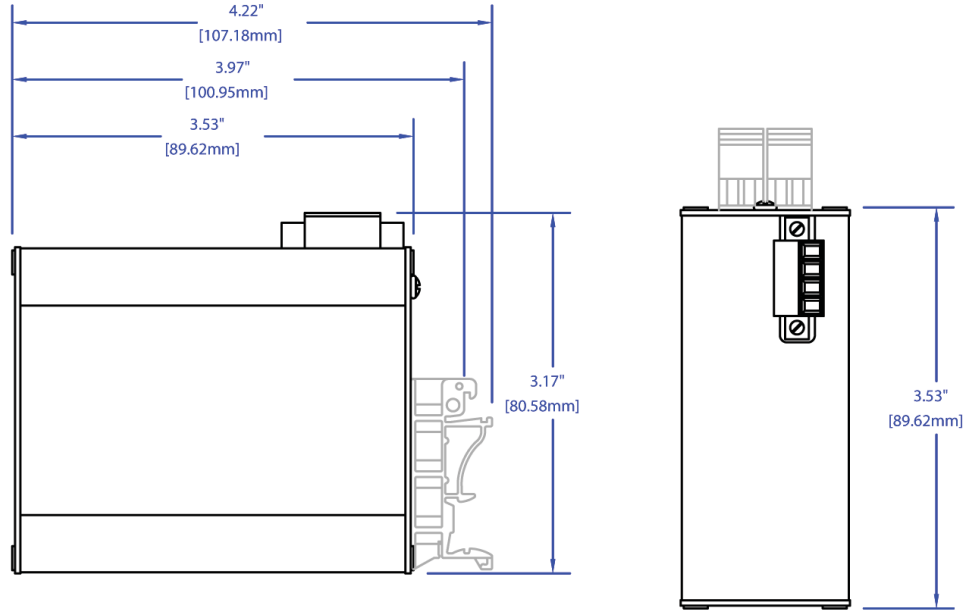
*RoHS Compliant*

Designed to comply with:

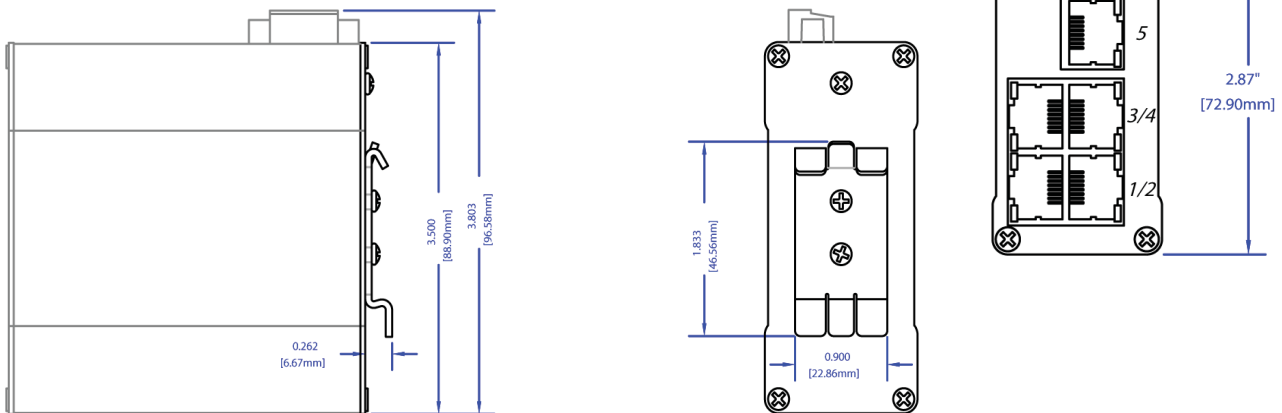
*IEEE 1613 for Electric Utility Substations*

*NEMA TS1/TS2 for Traffic Control Equipment*

### 105TX with Standard DIN rail Mount



### Optional 100-MDR-2 Metal DIN Rail Mount



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