

The *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
- Five 10/100BaseTX RJ-45 Ports
- Unmanaged Operation
- Extended Environmental Specifications
  - -40°C to 80° Operating Temperature
  - >2M Hours MTBF
- Supports Full/Half Duplex Operation
- Up to 1.0 Gb/s 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 *N-TRON® 105TX* Industrial Network Switch is designed to solve the most demanding industrial communications 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 the host computers, plant systems, or Ethernet I/O modules. The switching fabric simply scales up or down automatically to match your specific network environment.



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

The *N-TRON 105TX* is an ideal candidate for upgrading existing hubs and repeaters to increase bandwidth and determinism by virtually eliminating network collisions. The product also keeps the network affordable, while maintaining 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 the network switch 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.

## BENEFITS

### Industrial Network Switch

- Compact Size / Smaller 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 Sensing Full/Half Duplex
- MDIX Auto Cable Sensing
- Unmanaged Operation

### Increased Performance

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

### Contact Information

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### Ordering Information

|             |                                      |
|-------------|--------------------------------------|
| 105TX       | Five 10/100BaseTX Ports              |
| NTPS-24-1.3 | DIN-Rail Power Supply<br>24V@1.3 Amp |

## SPECIFICATIONS

### Physical

|                           |           |            |
|---------------------------|-----------|------------|
| Height:                   | 2.88"     | (7.31cm)   |
| Width:                    | 1.50"     | (3.81 cm)  |
| Depth:                    | 3.55"     | (9.02 cm)  |
| Including DIN-Rail Mount: | 4.22"     | (10.72 cm) |
| Weight:                   | 0.54 lbs. | (0.25 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%<br>(Non Condensing) |
| Operating Altitude:    | 0 to 10,000 ft.                |

### Reliability

|       |                  |
|-------|------------------|
| MTBF: | >2 Million Hours |
|-------|------------------|

### Network Media

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

### Connectors

|               |                                  |
|---------------|----------------------------------|
| 10/100BaseTX: | Five (5) RJ-45 TX<br>Copper Port |
|---------------|----------------------------------|

### Recommended Wiring Clearance

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

### Regulatory Approvals

FCC Title 47 Part 15 Class A,  
CE: EN61000-6-2,4, EN55011, EN61000-4-2,3,4,5,6  
UL Listed (US and Canada) per ANSI/ISA-12.12.01-2000  
This apparatus is suitable for use in  
Class I, Div 2, Groups A,B,C,D,T4A  
Designed to comply with:  
IEEE 1613 for Electric Utility Substations,  
ABS Standards for Shipboard Applications,  
and NEMA TS1/TS2 for Traffic Control Equipment

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