

The *102MC-FL* is a 10BaseT to 10BaseFL transparent Industrial Media Converter. It is housed in a ruggedized DIN-Rail enclosure, and is designed for use in industrial data acquisition, control, and Ethernet I/O applications.

## PRODUCT FEATURES

- Legacy 10BaseT to 10BaseFL Media Converter
- One RJ-45 10BaseT Port
- One 10BaseFL Port (ST style)
- Simple Repeater
- Compact Size, Smaller Footprint
- Hardened ESD Protection Diodes on TX Port
- Surge Protection Diodes on Power Inputs
- Redundant Power Inputs (10-30 VDC)
- Full IEEE 802.3 Compliance
- Supports Half Duplex Fiber Operation
- Unmanaged Operation
- Extended Environmental Specifications
  - -20° to 70°C Operating Temperature
  - >2M Hours Measured MTBF
- LED Link/Activity Status Indication
- Rugged Industrial DIN-Rail Enclosure

## PRODUCT OVERVIEW

The *N-TRON™ 102MC-FL* unmanaged transparent Industrial Media Converter is designed to allow the connection of RJ-45 10BaseT copper Ethernet devices to your 10BaseFL fiber cabling infrastructure.

The *102MC-FL* provides one 10BaseT port and one 10BaseFL port. The RJ-45 10BaseT port is half duplex capable and provides manual configuration for MDI and MDIX capabilities. For added security, ESD protection diodes are standard on the RJ-45 port. The 10BaseFL multimode fiber optic port utilizes an industry standard ST connector and is also configured for half duplex operation. The maximum operating distance is 2km for the fiber port and 100 meters for the copper port. The *102MC-FL* also supports straight-through or cross-over cable via an internal jumper.



The *N-TRON 102MC-FL* is well suited to convert 10BaseT industrial devices to fiber, allowing you to take advantage of your fiber based infrastructure and its inherent advantages. Compared to copper based systems, fiber provides increased noise immunity and longer cable lengths.

With an operating temperature of -20° to 70°C, and a MTBF greater than 2M hours, the *102MC-FL* has extended environmental specifications to meet the harsh needs of the industrial environment.

The compact *102MC-FL* comes housed in a rugged steel enclosure and can be DIN-Rail, or panel mounted alongside Ethernet I/O or other industrial equipment, for cost savings and convenience.

To increase reliability, the *102MC-FL* contains surge protection and redundant power inputs of 10-30VDC. LED's are provided to display the link status and activity of each port, as well as power on/off status.

## BENEFITS

### Industrial Media Converter

- Compact Size, Smaller Footprint
- Converts Legacy 10BaseT to 10BaseFL
- Simple Repeater
- ESD Protection Diodes on RJ-45 Port
- Surge Protection Diodes on Power Inputs
- High Reliability/Availability
- Extended Environmental Specifications
- Ruggedized DIN-Rail Enclosure
- High Performance
- High MTBF >2M Hours (measured)

### Ease of Use

- Unmanaged Media Converter
- Plug & Play Operation
- Redundant Power Inputs
- Supports Straight-through or Cross-over Cable via Jumper
- LED Link/Activity Status Indication
- Compact DIN-Rail Package

## SPECIFICATIONS

### Physical:

|         |           |            |
|---------|-----------|------------|
| Height: | 3.49"     | (8.86 cm)  |
| Width:  | 2.01"     | (5.10 cm)  |
| Depth:  | 4.00"     | (10.16 cm) |
| Weight: | 0.625 lbs | (0.28 kg)  |

### Electrical:

|                       |                  |
|-----------------------|------------------|
| Input Voltage:        | 10-30 VDC        |
| Steady Input Current: | 100mA @ 24V      |
| Inrush:               | 7.3Amp/1.0ms@24V |

### Environmental:

|                        |                                |
|------------------------|--------------------------------|
| Operating Temperature: | -20°C to 70°C                  |
| Storage Temperature:   | -40°C to 85°C                  |
| Operating Humidity:    | 10% to 90%<br>(Non Condensing) |
| Operating Altitude:    | 0 to 10,000 ft.                |

### Shock and Vibration (bulkhead mounting)

|                    |                        |
|--------------------|------------------------|
| Shock:             | 200g @ 10ms            |
| Vibration/Seismic: | 50g, 5-200Hz, Triaxial |

### Fiber Transceiver Characteristics

|                    |          |            |
|--------------------|----------|------------|
| Fiber Type         | 50/125µm | 62.5/125µm |
| TX Power Min       | -17dBm   | -13.5dBm   |
| RX Sensitivity Max | -34.4dBm | -34.4dBm   |
| Wavelength         | 850nm    | 850nm      |

### Network Media:

|                     |                                    |
|---------------------|------------------------------------|
| 10BaseT:            | >Cat3 Cable, 100m maximum distance |
| 10BaseFL Multimode: | 50-62.5/125µm,<br>100/140µm, 200µm |

### Connectors:

|                     |                       |
|---------------------|-----------------------|
| 10BaseT (shielded): | One (1) RJ-45 TX Port |
| 10BaseFL:           | One (1) ST Fiber Port |

### Recommended Wiring Clearance:

|        |              |
|--------|--------------|
| Front: | 2" (5.08 cm) |
| Top:   | 3" (7.62 cm) |

### Regulatory:

FCC Part 15 Class A

### Contact Information

|  |   |
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| N-TRON Corp.<br>820 S. University Blvd.,<br>Suite 4E<br>Mobile, AL 36609 USA<br>TEL: (251) 342-2164<br>FAX: (251) 342-6353<br>Website: www.n-tron.com<br>Email: N-TRON_Info@n-tron.com | N-TRON Europe GmbH<br>Alte Steinhäuserstr 19<br>6330 Cham / Zg<br>Switzerland<br>TEL: +41 41 7406636<br>FAX: +41 41 7406637 |
|--|---|

### Ordering Information

|             |   |
|-------------|---|
| 102MC-FL    | 10BaseFL multimode fiber ST style connector |
| 300PM       | Panel mount kit                             |
| NTPS-24-1.3 | DIN-Rail Power Supply 24V@1.3 Amp           |

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