

# SER-485-IR Industrial Isolated Converter

N-Tron Networking Series



## Industrial Isolated Converter

The SER-485-IR is our premium Industrial RS-422/485 Isolated Repeater. Designed for rugged industrial environments, it is UL listed and certified for use in Class 1 Division 2 locations. Powerful Optical Isolation on both data ports protects your equipment and data from damaging ground loops and surges. Additional isolation on the power supply circuits adds a third degree of protection.

### PRODUCT FEATURES

- Supports Data Rates up to 115.2 Kbps
- Extends Signal 4,000 feet (1200 Meters)
- Wide -40 to 80°C Temperature Range
- 10 to 48 VDC Input Power Range
- 2000 V 3-Way Optical Isolation
- UL Class 1 DIV 2 Listed
- Built-in, Switchable Termination & Bias

### PRODUCT OVERVIEW

Packaged in a rugged ABS plastic case, this repeater operates in wide temperature extremes. With a 35mm DIN rail mounting bracket, the SER-485-IR is easy to integrate into your control panel or other industrial equipment.

Installation and configuration is easy with DIP switches to set up baud rate and serial communications mode. Removable terminal blocks make wiring a snap. Power is connected through separate terminal block that accepts 10 to 48 VDC from any external source.



### Specifications

#### Serial Technology

|                  |   |
|------------------|---|
| RS-422           | TD, RD, GND   |
| RS-485 4-Wire    | TDA(-), TD(B+), RDA(-), RDB(+)                                |
| RS-485 2-Wire    | Data A(-), Data B(+)  |
| Serial Connector | 5 Position, Removable Terminal Block                          |
| Data Rate        | 2.4 to 115.2 kbps   |
| Isolation        | 2KV RMS, 1 minute   |
| Surge Protection | 600 W Peak Power Dissipation<br>Clamping time < 1 pico-second |
| Industrial Bus   | MODBUS ASCII/RTU  |
| Bias             | Built-in, Switchable, 1.2KΩ XMT/RCV                           |
| Termination      | Built-in, Switchable, 120Ω                                    |

#### Power

|                     |  |
|---------------------|--|
| Source              | External   |
| Power Connector     | 2 Position Removable Terminal Block                |
| Input Voltage       | 10 to 48 VDC (56 VDC max)                          |
| Power Consumption   | 0.5 W (Typical), 1.3 W (termination on both sides) |
| Power Supply Part # | NTPS 24-1.3  |

#### Terminal Blocks

|                       |                    |
|-----------------------|--------------------|
| Wire Size Accepted    | 28 to 12 AWG       |
| Pitch                 | 5.08 mm            |
| Insulation Resistance | ≥ 500 MΩ @ 500 VDC |
| Maximum Torque        | 5 Kg / cm          |

#### Indicators

|       |                            |
|-------|----------------------------|
| Power | Red LED                    |
| Data  | Red LED For Each Data Port |

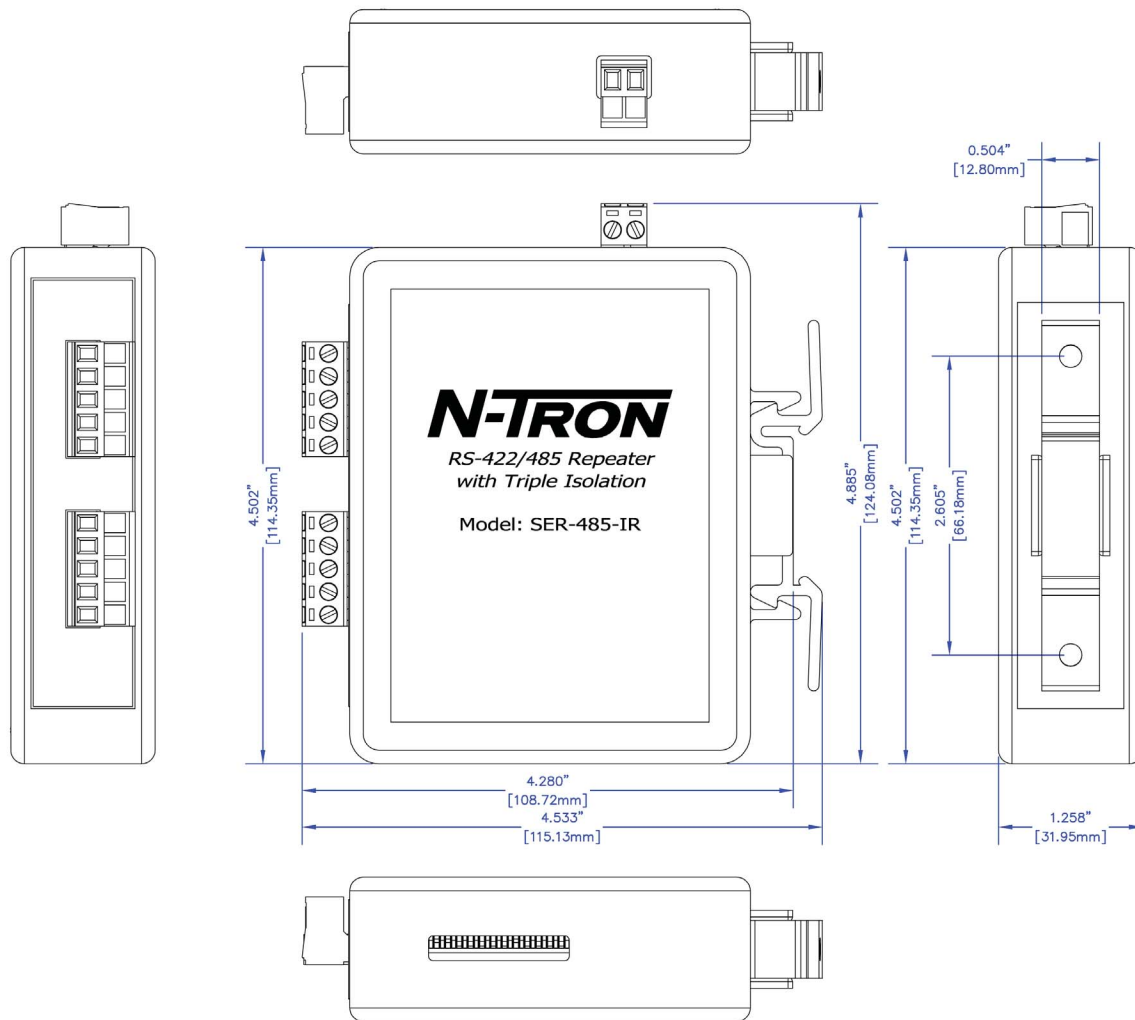
#### Mechanical

|                   |   |
|-------------------|---|
| Dimensions        | 4.9 x 4.5 x 1.3 in (12.3 x 11.3 x 3.2 cm) |
| Enclosure         | IP 20 Plastic, 35 mm DIN Mount            |
| Weight            | 0.49 lbs (222 g)                          |
| MTBF              | 114696 hours                              |
| MTBF Calc. Method | Parts Count Reliability Prediction        |

#### Environmental

|                      |   |
|----------------------|---|
| Op Temperature       | - 40 to 80°C (-40 to 176°F)                       |
| Storage Temp         | - 40 to 85°C (-40 to 185°F)                       |
| Op Humidity          | 0 to 95% Non-condensing                           |
| Regulatory Approvals | FCC, CE, UL<br>UL Class 1 DIV 2 Groups A, B, C, D |

# ▶▶▶ SER-485-IR Specifications



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