N-TRON
THE INDUSTRIAL NETWORK COMPANY

SER-485-IR

The SER-485-IR is our premium Industrial Isolated 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 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)

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
RegulatoryApprovals	FCC, CE, UL
	UL Class 1 DIV 2 Groups A, B, C, D

N-TRON
THE INDUSTRIAL NETWORK COMPANY
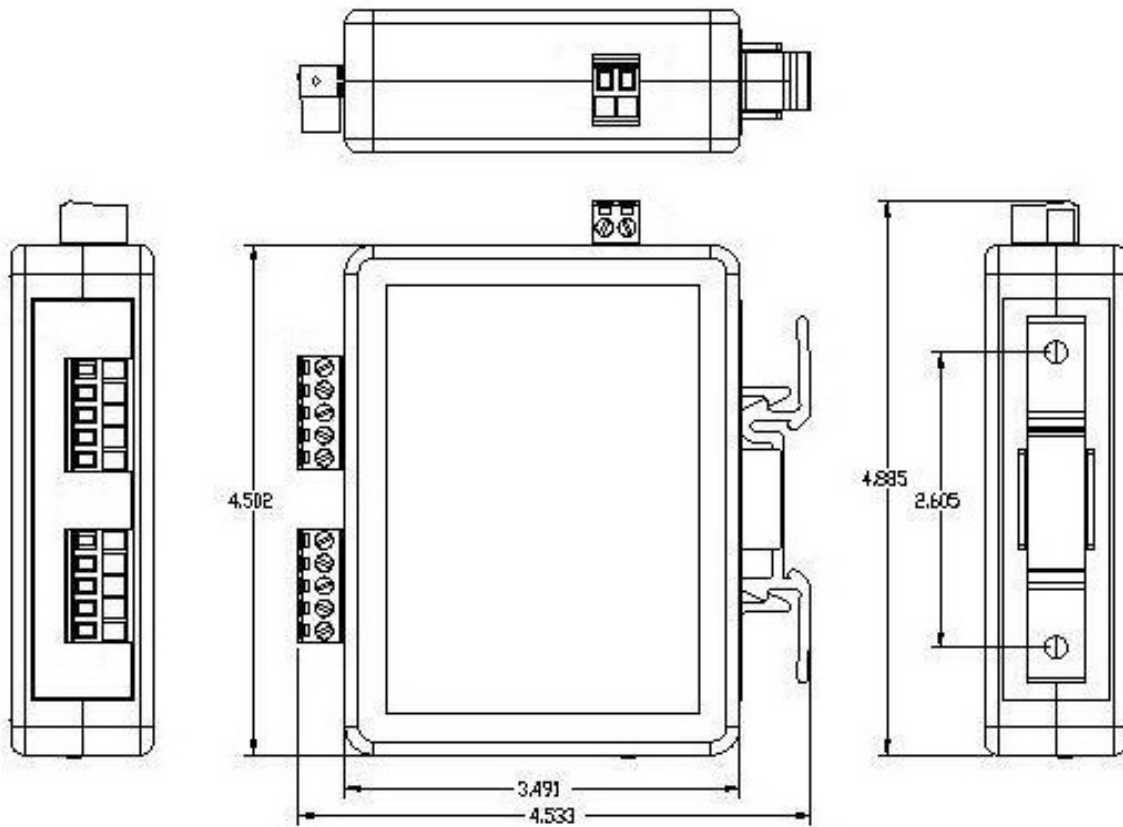
Contact Information

N-TRON Corp.
820 S. University Blvd., Suite 4E
Mobile, AL 36609 USA
TEL: (251) 342-2164
FAX: (251) 342-6353
Website: www.n-tron.com
Email: N-TRON_info@n-tron.com

N-TRON Asia
Unit 1209, Level 12
Chong Hing Finance Center
288 Nanjing Road West
200003 Shanghai
P.R. China
TEL: +86-021-6133-7770
FAX: +86-021-6133-7999

N-TRON Europe GmbH
Alte Steinhauserstr 19
6330 Cham / Zg Switzerland
TEL: +41 41 7406636
FAX: +41 41 7406637

REV 100105