SER-485-IC Industrial Isolated Converter

N-Tron Networking Series

▶▶▶ Industrial Isolated Converter

The SER-485-IC is our premium Industrial RS-232 to RS-422/485 Isolated Converter. Designed for rugged industrial use, it is UL approved and certified for operation in Class 1 Division 2 environments.

PRODUCT FEATURES

- Data Rates up to 115.2 Kbps
- 10 – 48 VDC Input Power Range
- Wide Operating Temperature
- 3-Way 2000V Optical Isolation
- Modbus ASCII/RTU Compatible
- UL Class 1 Division 2
- Built-in, Switchable Termination & Bias

PRODUCT OVERVIEW

This DIN rail mountable converter optically isolates and converts unbalanced, full or half-duplex RS-232 signals to balanced RS-422/485 signals at baud rates up to 115.2 Kbps. In addition to optical isolation, the unit has surge suppression on the RS-422/485 lines. Featuring Automatic Send Data Control circuitry, it does not require special software control of handshake signals in RS-485 mode. The removable terminal blocks for power and RS-422/485 signals make wiring easy. It is powered by a supply voltage of 10 to 48 VDC which is isolated from all data and signal ground lines. Configuration is made easy with a 12 position DIP switch on the bottom of the converter.

Specifications

Serial Technology

RS-232	TD, RD, GND
RS-422	TDA(-), TDB(+), RDA(-), RDB(+)
RS-485 4-Wire	TDA(-), TDB(+), RDA(-), RDB(+), GND
RS-485 2-Wire	Data A(-), Data B(+)
RS-232 CON.	DB9 Female (DCE)
RS-422/485 CON.	5 Position, Removable Terminal Block
Data Rate	1.2 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), 0.9W (w/Termination)
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

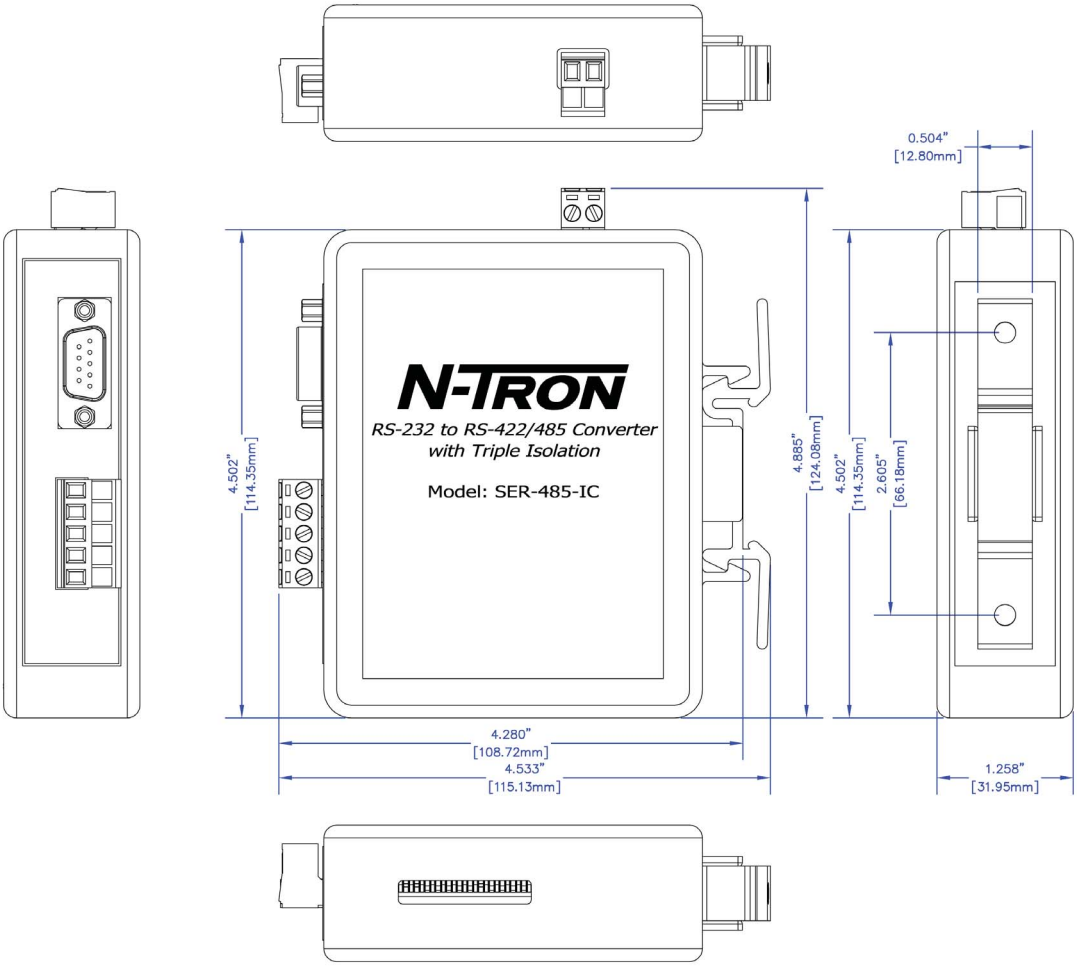
Power	Red LED
TD/RD	Red LED

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	0.45 lbs (204 g)
MTBF	254617 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



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