



RS485 PoDL Inserter

NE-INS-48

Features

- RS-485 Bus with DC Power delivery
- High noise immunity for industrial application
- Software transparencies to RS232 Modbus
- Baud rate 38400/19200/9600/2400 half duplex
- Support for 12V 450 mA per RS485 twisted pair line
- Meet or exceed EMS requirement
 - IEC 61000-4-2 contact discharge – $\pm 6\text{kV}$
 - IEC 61000-4-2 air gap discharge – $\pm 8\text{kV}$
 - IEC 61000-4-4 fast transient burst $\pm 2\text{kV}$

Description

NE-INS-48 is a RS-485 over power line transceiver for powered device side with on-off keying (OOK) modulation and demodulation function built in design for data communication line together with dc power feed.

Modulating data onto twist pair lines allows dc power delivery and data communication to share a common pair of twisted wires, resulting in significant reduction of the system installation cost.

NE-INS-48 transforming RS232 signals to OOK signals and insert the DC power and data line.

OOK modulation operates with immunity to data polarity for ease of system installations. The DC output with polarity rectifier for DC+ and DC- no matter the data wiring pairs polarity.

NE-INS-48 and NE-SPL-48 need to be used together.

Specifications

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
Operating Input Voltage		10.8	12	25	V
Internal Power Dissipation		-	6	-	W
Start up Time	Nominal Vin and constant resistive load			10	ms
Input Reflected Ripple Current			20		mApk-pk
Recommended input fuse	12V Input			0.5	A
Output Voltage	Same as Vin	-	-	-	V
Output Voltage Accuracy	Nominal Vin	-3.0		+3.0	%
Output Current Limit:		-	-	0.5	A
Baud Rate		-	-	38400	bps
Output Serial		RS232			
Short Output Protection		Continuous and automatic recovery			
Temperature Coefficient		-0.02		+0.02	%/°C

Dimension

W x D x H (mm)

