

UL Rated Current Loop Converter

232CLDR



PRODUCT FEATURES

- Converts RS-232 to 20mA current loop
- 2000V optical isolation protection from transients
- One Transmit current loop & Receive current loop
- Current loops can be set to Active or Passive
- -40 to 80°C operating temperature

The 232CLDR is a DIN rail mountable RS-232 to current loop converter. It is wide temperature rated and UL Recognized for industrial applications. It has one optically isolated 20 mA transmit loop and one optically isolated receive loop. Each loop can be set to either "Active" or "Passive." When set to "Active" an isolated 20 mA current is supplied for each loop (Transmit and Receive). One 10 to 30 VDC power supply (not included) provides power to the converter and both current loops.

The 232CLDR communicates at baud rates up to 19.2 kbps and can extend communications up to 600 meters (2,000 ft.). 2,000V optical isolation protects equipment from damaging ground loops and surges. Two LED's indicate data flow. Connections are made on terminal blocks.

ORDERING INFORMATION

MODEL NUMBER	SERIAL CONNECTOR	CURRENT LOOP CONNECTOR	POWER SOURCE FOR SERIAL SIDE
232CLDR	Terminal Block	Terminal Block	External power supply

ACCESSORIES

MDR-20-24 - DIN rail mount power supply 24VDC, 1.0 A output power

MDR-20-12 - DIN rail mount power supply 12VDC, 1.7 A output power

DRPM25 - 35mm DIN Rail to Panel Mount Bracket, 25mm wide

Current Loop Explained

Current loop devices use Current On or Current Off to transmit binary digits. Current loop signals can often transmit over circuits that serial signals can't traverse reliably, due to distance, marginal conductors and electrical noise.

Current loop converters from B&B Electronics interface RS-232 or RS-422/485 to the most common current loop ports – 20mA with open circuit voltages up to 30 V – at a maximum baud rate of 19.2 kbps. High speed optical isolators couple and isolate Transmit and Receive data. All B&B Electronics' current loop converters have a transmit (T+ and T-) loop and a Receive (R+ and R-) loop. Each loop may be operated as an active or passive loop. When the converter needs to provide the loop current, a 12 VDC power supply is required for the current loop side.

Contact B&B Electronics' Technical Support for information on modifications for higher loop currents and voltages.

Additional Reading
Current Loop Application Note
www.bb-elec.com/CurrentLoop

UL Rated Current Loop Converter

232CLDR



SPECIFICATIONS

SERIAL TECHNOLOGY

Data Rate 19.2 kbps maximum

RS-232

Connector Terminal block

Signals TD, RD, GND

Current Loop

Connector Terminal block

Signals T+, T-, R+, R-, GND

ISOLATION

Method Optical

Rating 2,000 V

POWER

Connector Terminal block

Input Voltage 10-30 VDC

Power Consumption 2.5 W

Source External

TERMINAL BLOCKS

Wire Size 24 to 14 AWG

Torque 4 kfg-cm

LED INDICATORS

Data LEDs RS-232 & Current Loop flash red when data is transmitted

ENCLOSURE

Material Plastic

IP Rating 20

Dimensions 2.5 x 7.9 x 9.5 cm (1.0 x 3.1 x 3.7 in)

Mounting 35 mm DIN (panel mount adapter option)

MTBF 401834

MTBF Calc. Method Parts Count Reliability Prediction

ENVIRONMENTAL

Operating Temperature -40 to +80°C (-40 to +176 °F)

Storage Temperature -40 to +85°C (-40 to +185 °F)

Operating Humidity 0 to 95% non-condensing

APPROVALS / CERTIFICATIONS - 232CLDR

FCC Part 15, CISPR, EN 55022: 2010 + AC:2011 Class A Emissions

CE

EN 61000-6-1: 2007 Generic Standards for Residential, Commercial and Light-Industrial Environments

EN 61000-4-2: 2009 Electro-Static Discharge (ESD)

EN 61000-4-3: 2006 +A1 +A2 +IS1 Radiated Field Immunity (RFI)

EN 61000-4-4: 2012 Electrical Fast Transients-Burst Immunity (EFT)

EN 61000-4-6: 2009 Conducted Immunity

Download complete Declaration of Conformity at www.bb.elec.com

MECHANICAL DIAGRAM

Dimensional Diagram of 232CLDR

