

# Current Loop to Serial Converter

Model 232CL9R

**B+B SMARTWORX**

Powered by

**ADVANTECH**

[www.advantech-bb.com](http://www.advantech-bb.com)



## PRODUCT FEATURES

- Optically isolated digital current loop to serial conversion
- Baud rates up to 19.2 kbps
- Transmit (T+ and T-) loop and Receive (R- and R-) loop
- Each current loop may be operated active or passive
- Designed for 20mA digital current loop (other values available)

Model 232CL9R is a port-powered RS-232 to current loop converter. No external power required for passive loop installations, but a power supply is required to generate an active loop.

## ORDERING INFORMATION

MODEL NUMBER	SERIAL CONNECTOR	CURRENT LOOP CONNECTOR	POWER SOURCE FOR SERIAL SIDE
232CL9R	DB9 Female	Terminal Block	Port-powered or external power supply

## ACCESSORIES

**SM16-12-V-ST** - Power Supply, 12VDC 500mA, stripped and tinned leads, Level VI

## 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 SmartWorx interface RS-232 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 SmartWorx' 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 SmartWorx for information on modifications for higher loop currents and voltages.

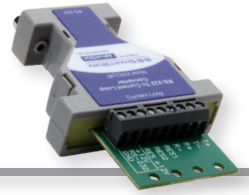
## SPECIFICATIONS

SERIAL TECHNOLOGY	
Data Rate	19.2 kbps maximum
<b>RS-232</b>	
Connector	DB9 female
Signals	TD, RD, GND
<b>Current Loop</b>	
Connector	Terminal block
Signals	T+, T-, R+, R-, GND
<b>POWER</b>	
Source	Terminal Block
Input Voltage	12V DC @ 100 mA
<b>MECHANICAL</b>	
MTBF	714354
MTBF Calc. Method	Parts Count Reliability Prediction
<b>ENVIRONMENTAL</b>	
Operating Temperature	0 to +70 °C (+32 to +185 °F)
Storage Temperature	-40 to +85 °C (-40 to +185 °F)
Operating Humidity	0 to 95% Non-Condensing
<b>APPROVALS / CERTIFICATIONS</b>	
FCC Part 15, CISPR, EN 55022 + AC:2011 Class A Emissions	
CE	
EN 61000-6-1 Generic Standards for Residential, Commercial and Light-Industrial Environments	
EN 61000-4-2 Electro-Static Discharge (ESD)	
EN 61000-4-3 +A1 +A2 +IS1 Radiated Field Immunity (RFI)	
EN 61000-4-4 Electrical Fast Transients-Burst Immunity (EFT)	
EN 61000-4-6 Conducted Immunity	

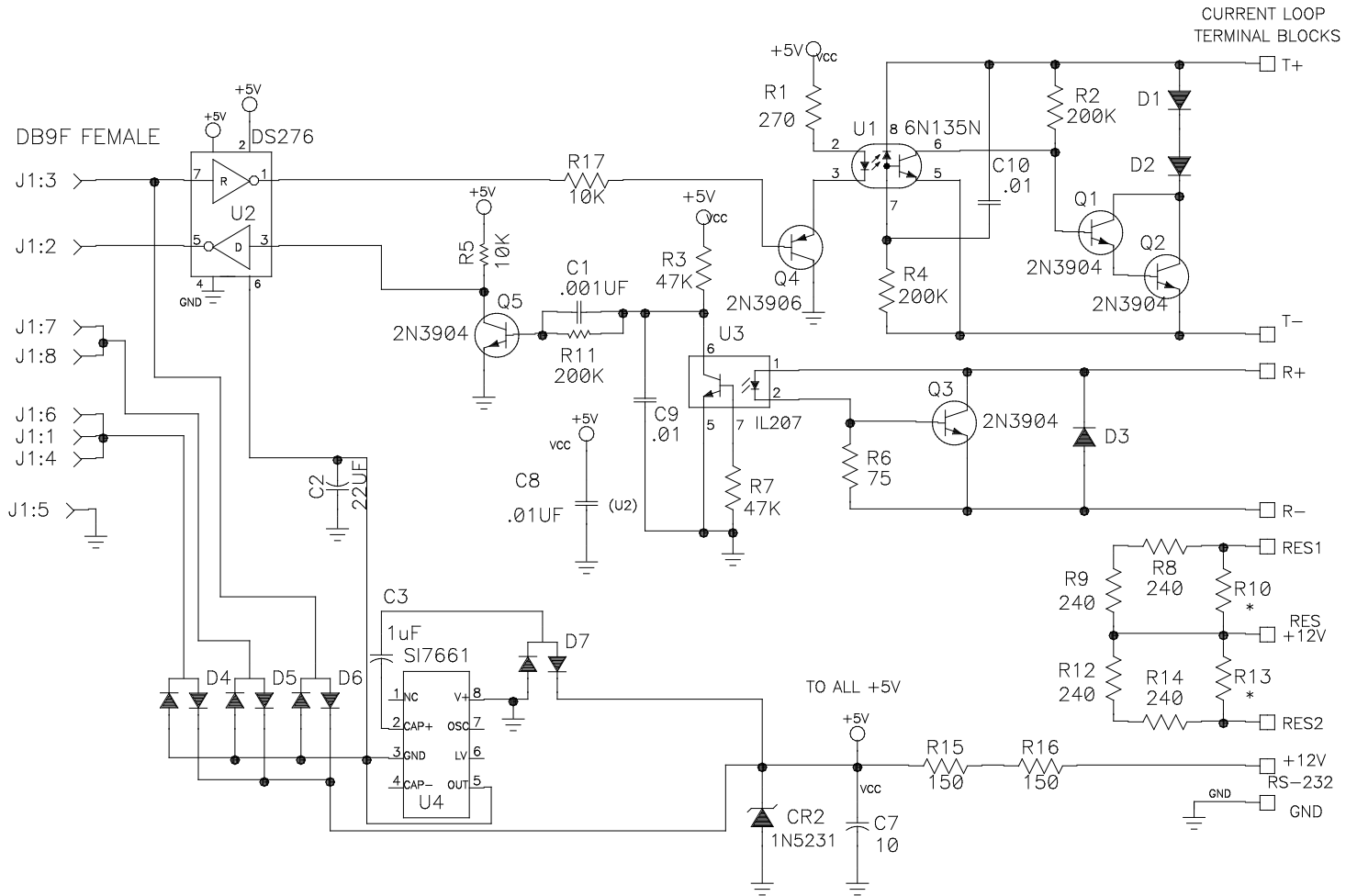
All product specifications are subject to change without notice.  
232CL9R\_3217ds

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### SCHEMATIC



\* INDICATES OPTIONAL THROUGH HOLE REPLACEMENT.