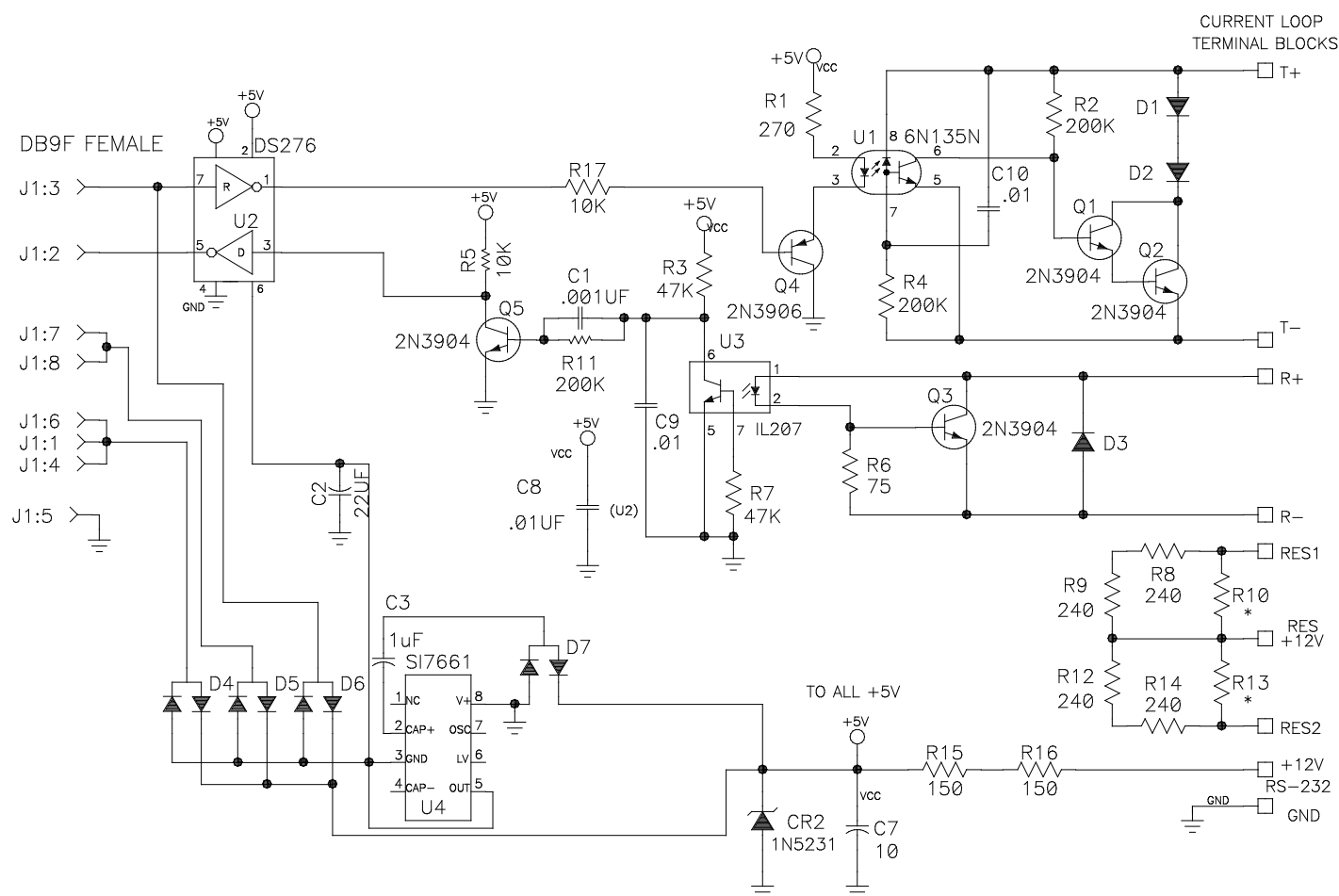**B&B ELECTRONICS**

**PRODUCT INFORMATION**

# 9 Pin RS-232 to Current Loop Converter
## Model 232CL9R

The Model 232CL9R is a passive 9 pin RS-232 to current loop converter. This converter requires a 12VDC-power supply at 100mA. Additional resistors are supply for an active source.



* INDICATES OPTIONAL THROUGH HOLE REPLACEMENT.

Figure 1.

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To connect the converter to an existing current loop port, you must first determine if the port is active or passive. For a port to be active, it must have an internal power supply which provides the 20mA current for the transmitter, receiver, or for both. This information should be available in the instruction manual. If the instruction manual is not available the simplest way to determine this is to break the loop (disconnect it) and see if there is any DC voltage across the output or input pairs.

Current loop interfaces normally consist of four wires. They are usually labeled T+, T-, R+, and R-. T+ and T- are the transmit plus and transmit minus lines and data is output from that device on those lines. The R+ and R- lines are the receive plus and receive minus lines and data is input into that device on these lines.

Interconnection of the two current loop devices is different depending on whether your unit is active or passive. Connection to an active current loop port is very simple. Your unit's T+ and T- lines go to the B&B unit's R+ and R- lines, and your unit's R+ and R- lines go to the B&B unit's T+ and T- lines, as shown in figure 2.

Note: The R+ & R- indentification doesn't imply a direct connection across the receiver.



Note: The T+ & T- indentification doesn't imply a direct connection across the transmitter.
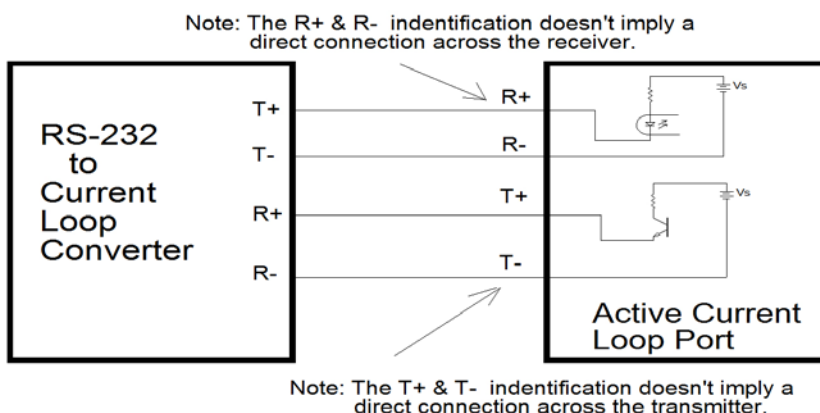
Figure 2. Connection to an Active Current Loop

Connection to a passive current loop port requires a 12 VDC power supply. Use the 470 ohm resistors inside of our converter to create a 20 ma current source, as shown in figure 3.
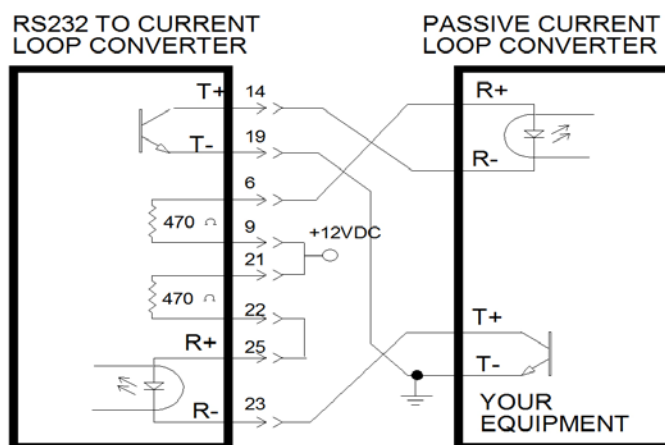


Figure 3. Connection to a Passive Current Loop

Interconnection of two B&B current loop converters also requires the use of a 12 VDC power supply since they are both passive ports. See figure 4.
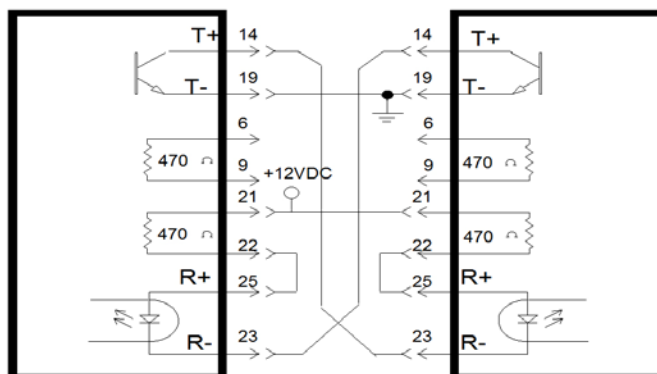
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Figure 4. Interconnection of Two Current Loop converters

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