

## Troubleshooting

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 supplied for an active source.

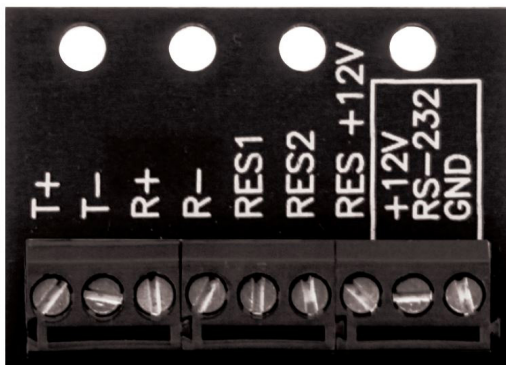
To connect the converter to an existing current loop port, you must first determine if the port is active or passive.

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.

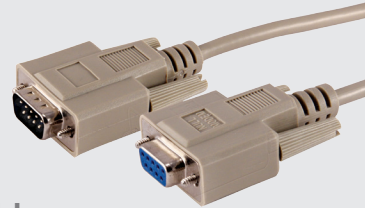
Interconnection of the two current loop devices is different depending on whether your unit is active or passive.

Connection to an active current loop port is very simple. Your unit's T+ and T- lines go to the B+B SmartWorx unit's R+ and R- lines. Your unit's R+ and R- lines go to the B+B SmartWorx unit's T+ and T- lines.



Document number – 710-11126-00\_232CL9R\_4516qsg

## Recommended Accessories



Cable  
9PAMF6

**B+B SMARTWORX**

Powered by

**ADVANTECH**

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

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## QUICK START GUIDE



### 232CL9R

9-Pin RS-232 to Current Loop Converter

Before you begin, be  
sure you have the following:

+ 232CL9R

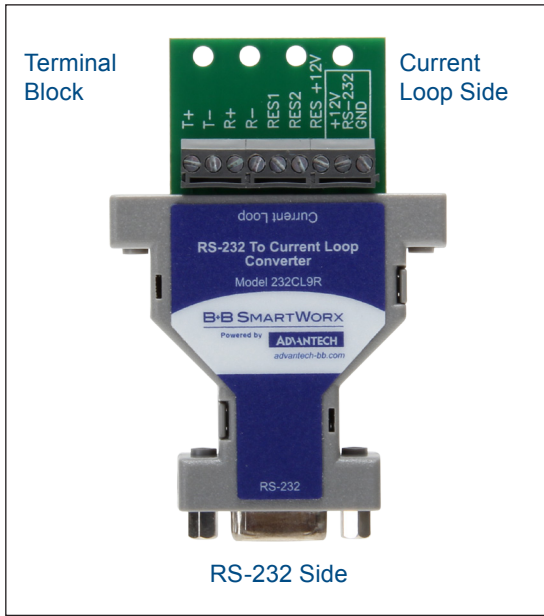
**B+B SMARTWORX**

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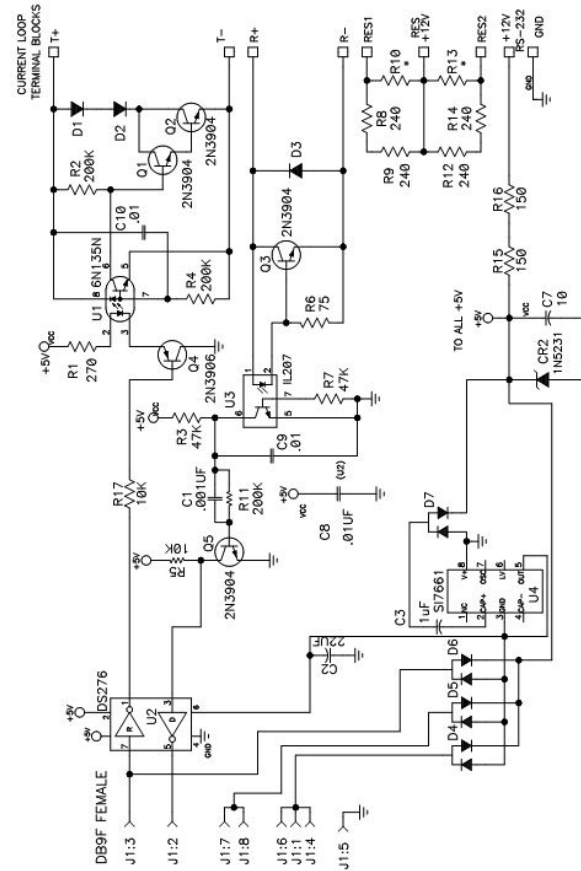
Fast and easy on the web: [www.advantech-bb.com](http://www.advantech-bb.com)

# Product Overview



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 SmartWorx unit's R+ and R- lines. Your unit's R+ and R- lines go to the B+B SmartWorx unit's T+ and T- lines.



• INDICATES OPTIONAL THROUGH-HOLE REPLACEMENT.

## 1 Power

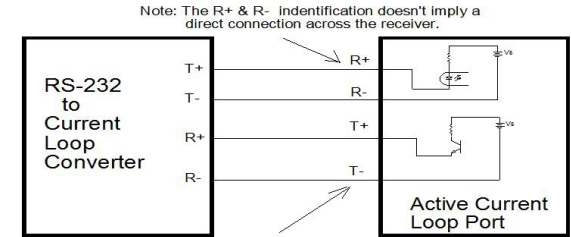
Connection to a passive current loop port requires a 12 VDC power supply. Use the 470 ohm resistors inside of our converter to create a 20 ma current source.

## 2 Port Status

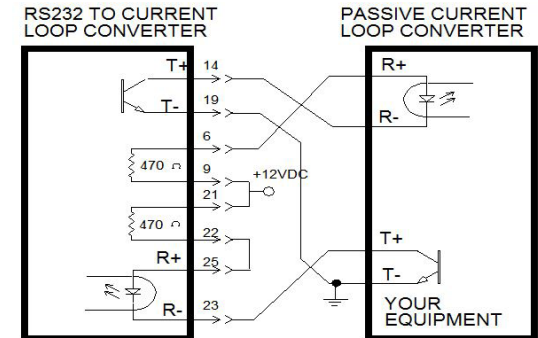
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For a port to be active, it must have an internal power supply which provides the 20mA current for the transmitter, receiver, or for both. This information should be available in the instruction manual. If the instruction manual is not available the 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.

## 3 Connection to an Active Current Loop



## 4 Connection to a Passive Current Loop



## 5 Interconnection of Two Current Loop Converters

