

Welcome to Nate's Tech Notes!

First are some questions,

- i) what is the voltage of the current source you are using?
- ii) are you using the resistors in the 2018 for current limiting?
- iii) how are the TP (twisted pair) connected between the 2018 and your other current loop unit?
- iv) is the other current loop device passive or active on its transmitter and on its receiver?
- v) how long is the TP connection?

Your answers to these questions would be very helpful for solving your application problem. Meanwhile here is some additional information to help you immediately. If after reading

There are a number of different ways in which you can connect the model 2018 to a current loop system. Here are some of the variables affecting the configuration of the connection.

1) Passive or Active Transmitters and Receivers.

- Both the transmitter and the receiver may independently be passive or active.
- ACTIVE: (definition) Transmitters and receivers are active if they provide the current source.
- PASSIVE: (definition) Transmitter and receivers do not source the current but simply act as switches.

2) Type of Communication.

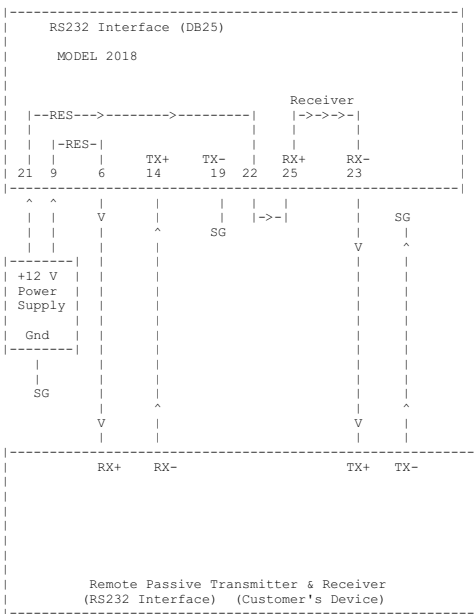
- a) FDH: Full duplex communication must use two TP (twisted pair).
- b) HDH: Half duplex communication may be implemented with either 1 or 2 TP.
- c) Simplex: Only one TP is needed.

3) The power supply voltage chosen to be the current source. I suggest using a power supply voltage not greater than +12 Volts and also using the two 560 Ohm resistors. On the cu

I will assume

- a) you are using 2 TP,
- b) you are using a voltage source for both the transmitter and receiver on the end of the model 2018.
- c) the current flow is from positive to negative (not electron flow!).
- d) that only one power source can be used to supply both the transmit and the receive current loops.
- e) the abbreviation SG = Signal Ground, the letter *V* is to be an error for showing the (positive) current flow, and similar understanding for *>*, *^*, etc.

On page 5 of the manual, Figure 4 shows the connection between the model 2018 (active) and a passive current loop device. Let me redraw it for you in case you do not have a copy of



I know that this ASCII diagram is marginal. If you need a clearer drawing, I can fax it to you if you provide me with your fax number.

It is important that your wiring does include 4 wires (2 TP) from end-to-end, i.e., from one current loop converter to the other. The importance of this is to be sure that the SG (100014)^Model 2018 Passive or Active Configuration: Don't burn it up!^June 12, 1997|^Welcome to Nate's Tech Notes!

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