

Q: What Terminals are used when connecting the 485LDR9 for RS-485 or RS-422?

A: Refer to Figures 1 to 4 for the most common connections. RS-232 Connections start at Figure 5.

Figure 1: 2-Wire RS-485

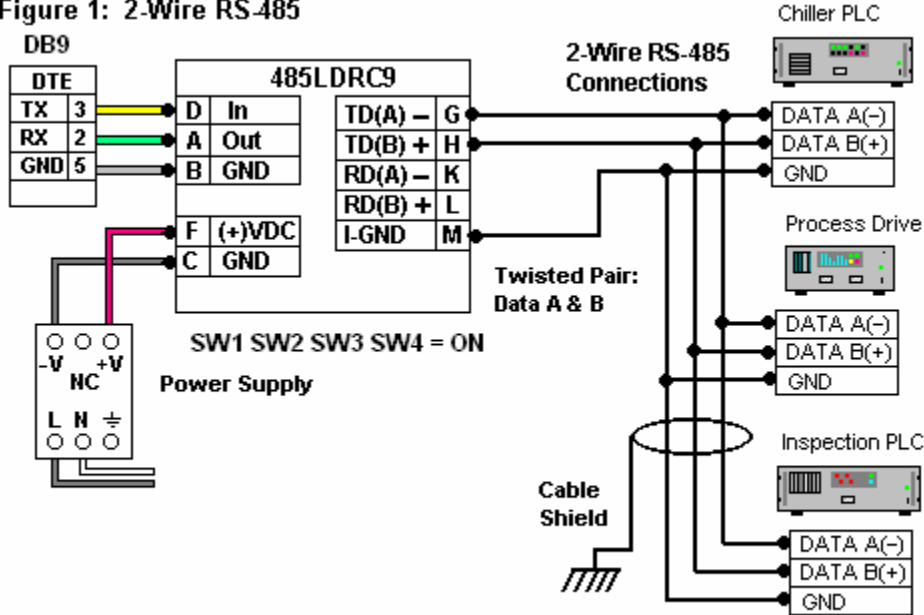
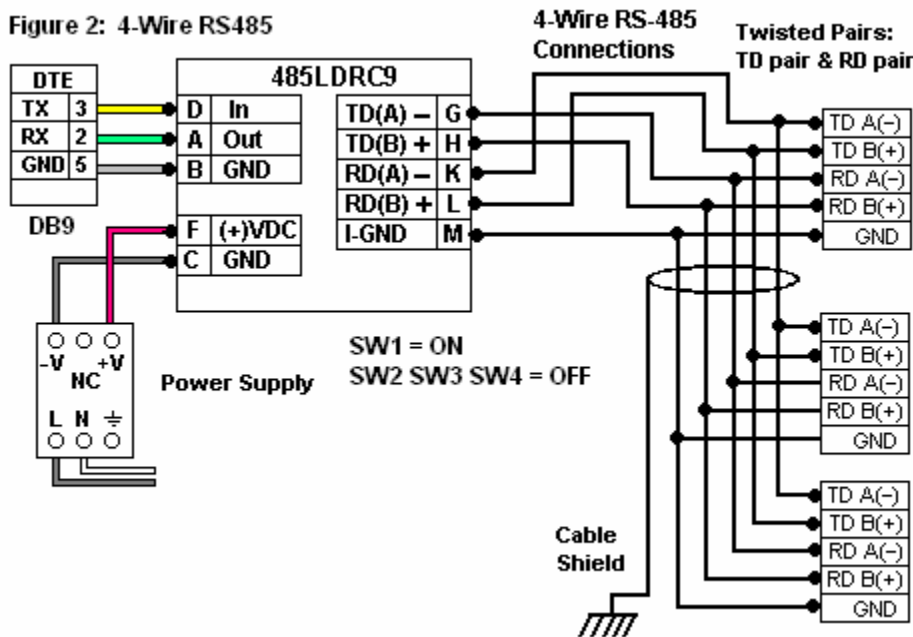


Figure 2: 4-Wire RS485



485LDR9 CONVERTERS FAQ INCLUDING 485DRC 485LDR9
 RS-422 RS-485 RS-232 CONNECTION DIAGRAMS

Figure 3: RS-422

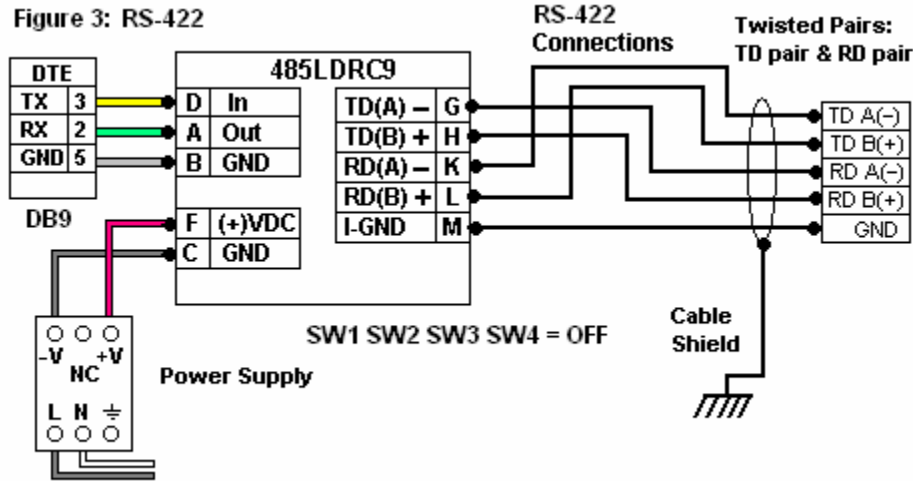
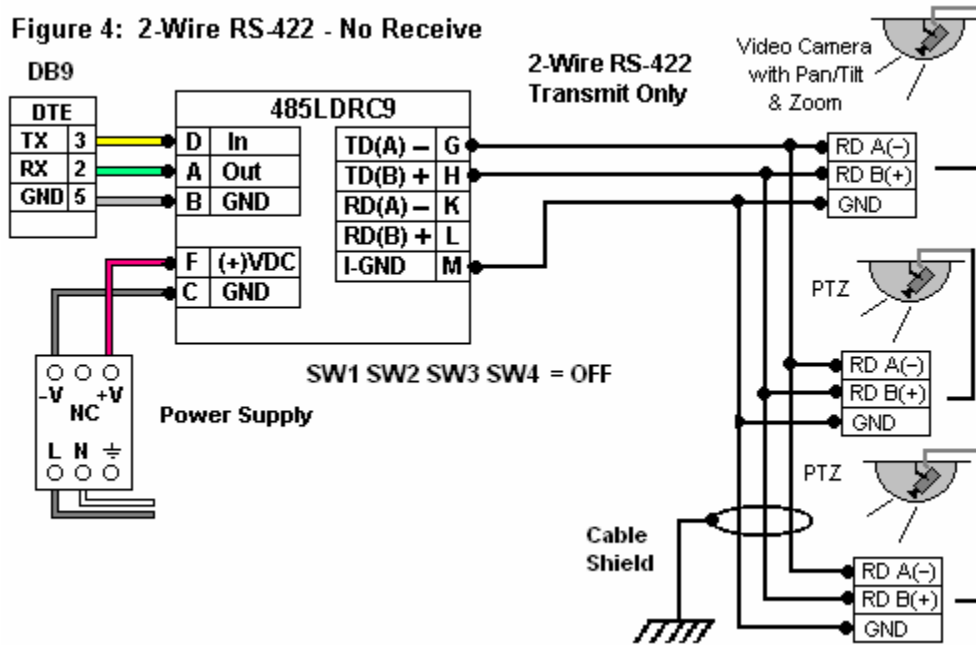


Figure 4: 2-Wire RS-422 - No Receive



RS-232 Connections

Figures 1 to 4 show terminal block connections to the DB9 connector of a computer, but the DB9 female connector on the 485LDRC9 will make the same connections using a straight through DB9F to DB9M cable. If the device is wired like a modem as DCE, then pins #2 & #3 must be cross-connected (swapped). The DB9F connector also includes loopbacks for DTR/DSR and RTS/CTS. Measure the DC voltage on pin #3 relative to pin #5, if none, measure pin #2. If pin #2 has voltage, a crossover connection is needed to use the DB9.

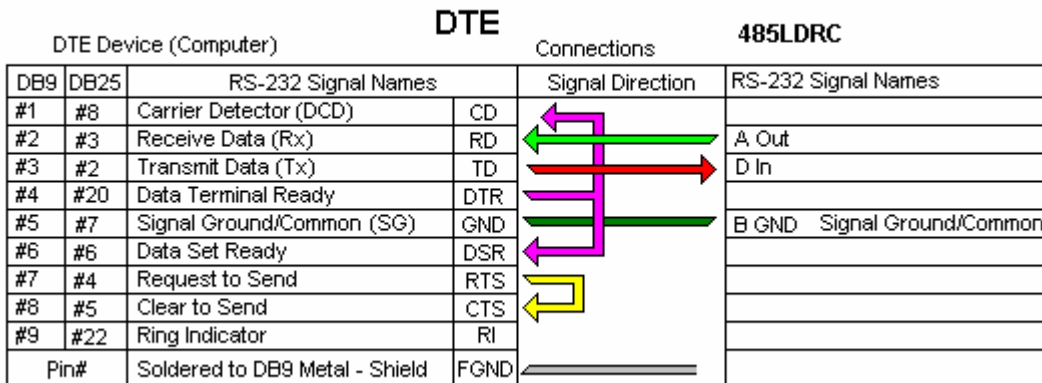
Many common installation problems are due to the RS-232 connections being reversed. When the converter has a Transmit LED, if it never flashes, check the RS-232 pinouts/wiring.

485LDRC9 CONVERTERS FAQ INCLUDING 485DRC 485LDRC
RS-422 RS-485 RS-232 CONNECTION DIAGRAMS

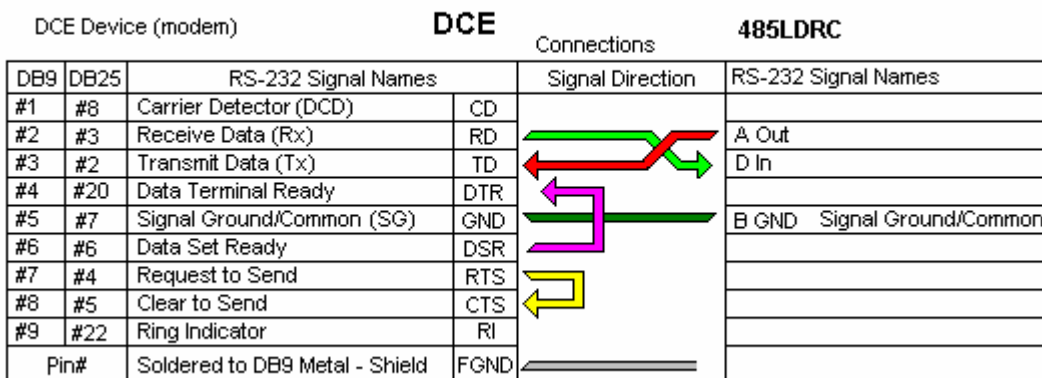
How to identify which of two lines is the output from the device:

Use a DC voltmeter, measure from the ground wire to each of the other two RS232 wires, while the RS232 device is powered up. Usually one lead has a minus (-) DC voltage, usually between -11 volts and -3 volts. Whichever lead has a minus voltage is the lead to connect to our Terminal D. The other lead usually has nothing or noise relative to ground. If neither lead has a minus (or positive) voltage on it relative to ground, recheck for OPEN cable connections to the RS232 device or the device pinouts. If the device can be configured multiple ways, make sure all the jumpers and such are set to RS-232.

A few devices may use very low power RS-232 ports which switch only between Ground and positive, so to identify which is line is active, the device must be set to transmit, then connect the ground wire to the 485LDRC and one of the wires to D, see if the TD indicator flashes. If not, try the other wire. If the data request is coming from the other end, and all that wiring is correct, and if it is being polled, the RD indicator should be flashing. Some DC meters may show a slight flicker of DC or AC voltage on a data line with changing data.



RTS/CTS & DTR/DSR/CD loopbacks may be needed.



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This information should help you make the needed connections.

**485LDRC9 CONVERTERS FAQ INCLUDING 485DRC 485LDRC
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