

Datasheet

RS232()RS422 Converter

RS Stock number [627-4572](#)



Description:

Converter for serial port connection up to 1.2 km over a twisted pair cable.
 Operates in auto-powered or powered mode (supplied with USB power supply cable).
 Can be configured in DCE mode or DTE mode.
 Used to create a mini network on RS232 serial ports for up to 32 users.
 Connection in Half duplex (2 wires) and Full duplex (4 wires).
 RS485 connection to 5-wire terminal (T+; T-; R+; R-; GND).
 RS232 connection to DB25 Female connector, supplied with DB25M - DB9F mini-adapter.

Specifications:

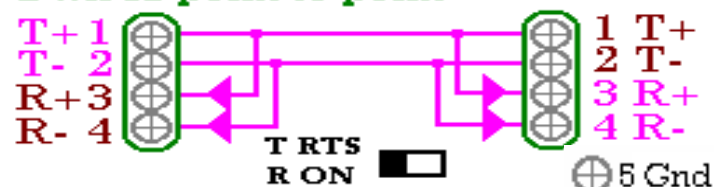
Connector A:	D-sub, 25-Pin (Serial) Female
Connector A Gender:	Female
Connector A Type:	D-sub, 25-Pin (Serial)
Connector B:	D-sub, 9-Pin (Serial)
Connector B Type:	D-sub, 9-Pin (Serial)

Applications:

4 wires FULL duplex point to point

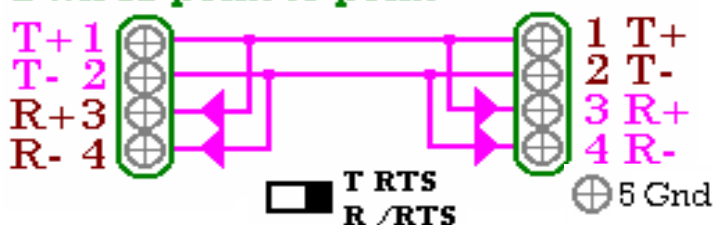


2 wires point to point



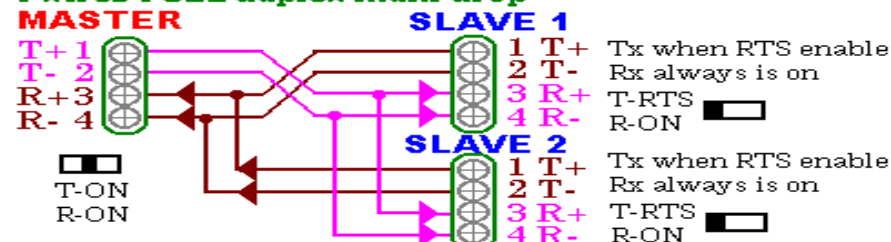
(Tx's data will be echoed)

2 wires point to point



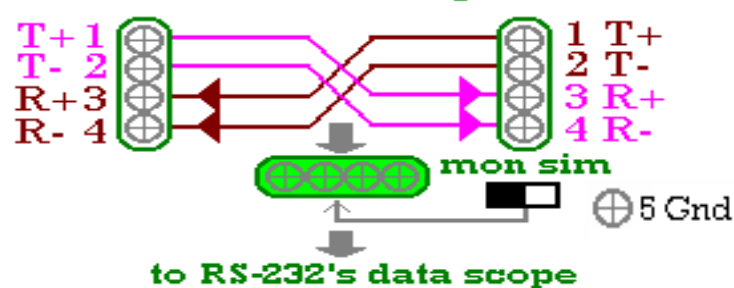
(Tx's data will not be echoed)

4 wires FULL duplex multi-drop



Note: Slave 1 & Slave 2's RTS couldn't enable simultaneously

on line data monitoring



DCE DTE
simulate DCE device

DCE DTE
simulate DTE device

DTE device's Td is output, DCE device's Td is input.

DTE device's Rd is input, DCE device's Rd is output.

Applications detail wiring:

DCE/DTE device setting

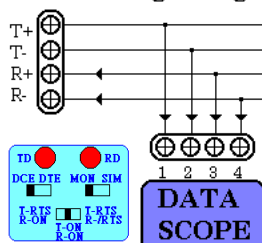
DTE system 485-I simulate DCE

2(TD) → 2(TD)
3(RD) ← 3(RD)

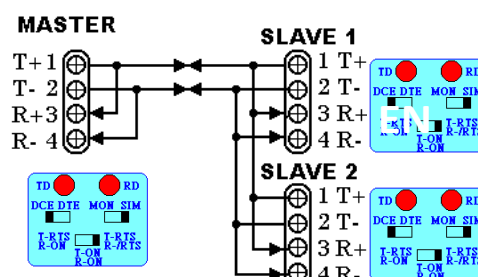
DCE system 485-I simulate DTE

2(TD) ← 2(TD)
3(RD) → 3(RD)

MONitoring setting



2 wires multi-drop wiring



Tri-state switch transmitter circuit receiver circuit



enabled

enabled



enabled
when RTS on

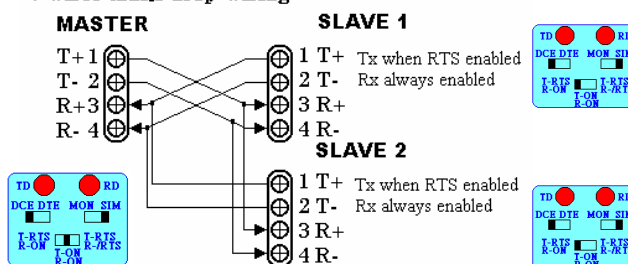
enabled



enabled
when RTS on

enabled
when RTS off

4 wires multi-drop wiring



Contention control by RTS from DTE system or by CTS from DCE system

In a multi-drop environment, the contention control is an effective way to avoid the contention problems caused by data collision when two devices are simultaneously attempting to transmit data. This unit uses a tri-positioned slide switch to control the contention by referring the RTS or CTS status. At T-RTS,R-ON position, an enabled RTS will turn on the transmitter. A disabled RTS will turn off the transmitter. The receiver is always enabled. This position is for full duplex with multi-drop environment. At T-ON, R-ON position the transmitter and receiver are always enabled. This position is for full duplex with point to point. At T-RTS, R-/RTS position, an enabled RTS will turn on the transmitter and turn off the receiver. A disabled RTS will turn off the transmitter and turn on the receiver. This position is for half duplex, point to point or multi-drop environment.

Installation instructions:

1.Plug converter securely into the business device.2.Ensure switches are set in accordance position. 3.Connect RS-422/485 wires to the 5-terminal block with AWG 24 gauge twist pair cable. 4. Check the power LED, it should be lit. The unit is ready for operation. 5. In the RS-485 multi-drop mode, terminal resistor are optional depending upon cable length, data rate, fan outs etc. If used, resistor value about 1K ohm. The terminal resistor should be located at approximate opposite ends of the system.

If system fails to work:1.check to see if power is available.2.check converter to see if it is plugged securely into business device.3.check connection on the cable 4.check slide switches are on the proper position. 5.check to see two systems are same data format, data rate etc. 6.in multi-drop mode, make sure that contention control setting are correct.

Loop back test:

To test the internal circuitry of the interface converter, connect a dumb terminal to the unit and proceed following steps: 1.Set DTE/DCE switch to DCE (terminal is a DTE device). 2.Set the contention control switch to T-ON, R-ON position. 3.Wiring 5-terminal block #1 to #3, #2 to #4 for loop back testing. 4.Set the terminal to full duplex and key-in data which will be echoed on the terminal screen. If data is echoed and correct, then the unit is a good one.