

RS232 to RS485 / RS422 converter

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This unit converts RS232 signals from your PC to balanced line RS485 or RS422 signals. This unit is fully opto-isolated which means it will protect your PC or laptop against power surges and lightning. To maintain full isolation, an external power supply is required for the RS485 circuit. The RS232 circuit is port powered from the DTR and the RTS signals. RTS also controls the RS485 transmitter and receiver.



Features

- * 30 x 65 mm in size (DB 9 gender bender size)
- * Software selectable for RS422 (4 wire - full-duplex) or RS485 (2 wire - half-duplex)
- * Fully opto-isolated - surge and lightning protected
- * Transmission speeds of up to 38400 bps (function of opto-isolators)
- * Standard 6 Volt 'AC / DC Adapter' power supply
- * Slew-rate limiting allows error free data transmission
- * Transmission lines of up to 1000 meters can be used

Connections

The DB9 Female connector, connects directly to the PC - RS232 male connector (Com 1 or Com 2). It may be connected with a short length of cable to the PC.

Table 1 : RS232 DB9 female pin outs

Signal name	DB9 Pin number
RS232 receive data	2
RS232 transmit data	3
DTR – must be connected, supplies power to circuit	4
GND – digital ground	5
RTS – Controls RS485 send and receive	7
CTS – Linked to RTS inside converter	8

The DB9 Male connector provides the connection between the RS485 interface and the data link. Only the data A and B signals need be connected to the remote end. The external power supply can be local.

Table 2 : RS485 DB9 male pin outs

Signal name	DB9 Pin number
RS485 data B	1
RS485 data A	2
DGND – digital ground. External power supply GND	5
External power supply +9V to +12V DC	6
RGND – reference ground via 120 ohm resistor	9

Note: RS422 information and connections are available on request from <http://www.designium.co.za/>