B&B ELECTRONICS

Model 422PP9TB

Port-Powered RS-232
to RS-422 Converter CE

The 422PP9TB is a port-powered two-channel RS-232 to RS-422 converter. It converts TD and RD RS-232 lines to balanced RS-422 signals. The unit can be powered from the RS-232 handshake lines, DTR and RTS. If port-powering the unit, at least one of these handshake lines must be present, but can be in any state. The 422PP9TB can also be powered externally on the terminal blocks. The RS-422 driver and receiver are always enabled.
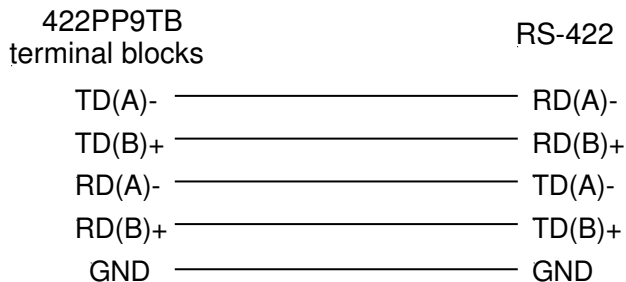
To satisfy the requirements of some software packages, the RS-232 handshake lines are looped back (tied together). RTS is connected to CTS, and DTR is connected to DSR and DCD.

Connections

The 422PP9TB is configured to transmit both directions between an RS-232 and RS-422 system. The RS-232 side is pinned out to connect directly into the COM port on your computer or any other DTE device (Table 1). Connections to the RS-422 side of the converter are made through terminal blocks. When connecting to an RS-422 system, the 422PP9TB **must** be connected with the proper polarity as shown in Figure 1. When no data is being sent and the driver enabled, the RS-232 line is negative and the RS-422 line TD(A) is negative with respect to TD(B).

Table 1 - RS-232 Pin Out	
Signal	**DB-9 Female Pin #**
TD	3
RD	2
RTS	7
CTS	8
DTR	4
DSR	6
DCD	1
GND	5

Figure 1 - Connection to an RS-422 System

422PP9TB
terminal blocks

RS-422

TD(A)- ———————— RD(A)-
TD(B)+ ———————— RD(B)+
RD(A)- ———————— TD(A)-
RD(B)+ ———————— TD(B)+
GND ———————— GND

PRODUCT INFORMATION

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B&B ELECTRONICS *(vertical, left margin)*

PRODUCT INFORMATION *(vertical, left margin)*

Biasing Resistors

The biasing resistors for the RS-422/RS-485 receiver are 4.7k Ohm resistors. These resistors are labeled R1 and R2 (See Figure 2). Refer to B&B Electronics RS-422/485 Application Note for further information on biasing.

Figure 2
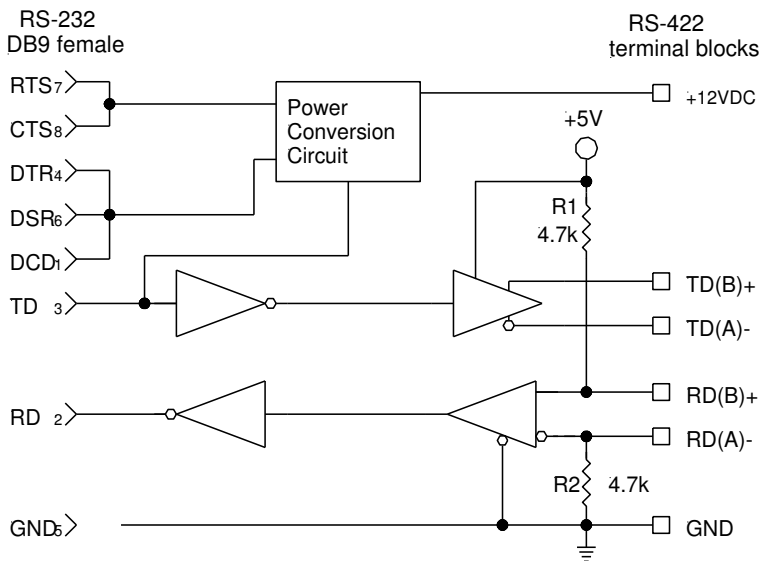
Specifications

Communication: RS-422
Data Rate: 115.2 kbps max.
Power: Port-powered from handshake lines on the RS-232 side,
                      or 12 to 16 VDC at 40 mA on the terminal blocks.
Dimensions: 3.5 x 1.3 x 0.7 in (8.9 x 3.3 x 1.7 cm)
Temperature Rating: 0 to 70°C

NOTE: When using an external supply, the supply should be connected only to specifically labeled power inputs (power jack, terminal block, etc.). Connecting an external power supply to the handshake lines may damage the unit. Contact technical support for more information on connecting an external power supply to the handshake lines.

DECLARATION OF CONFORMITY

Manufacturer's Name: B&B Electronics Manufacturing Company
Manufacturer's Address: P.O. Box 1040
                                707 Dayton Road
                                Ottawa, IL 61350 USA
Model Number: 422PP9TB
Description: 9-Pin Port-Powered RS-422 Converter
Type: Light industrial ITE equipment
Application of Council Directive: 89/336/EEC
Standards: EN 55022
                                EN 61000-6-1
                                EN 61000 (-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11)

Robert M. Paratore, Director of Engineering

CE

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