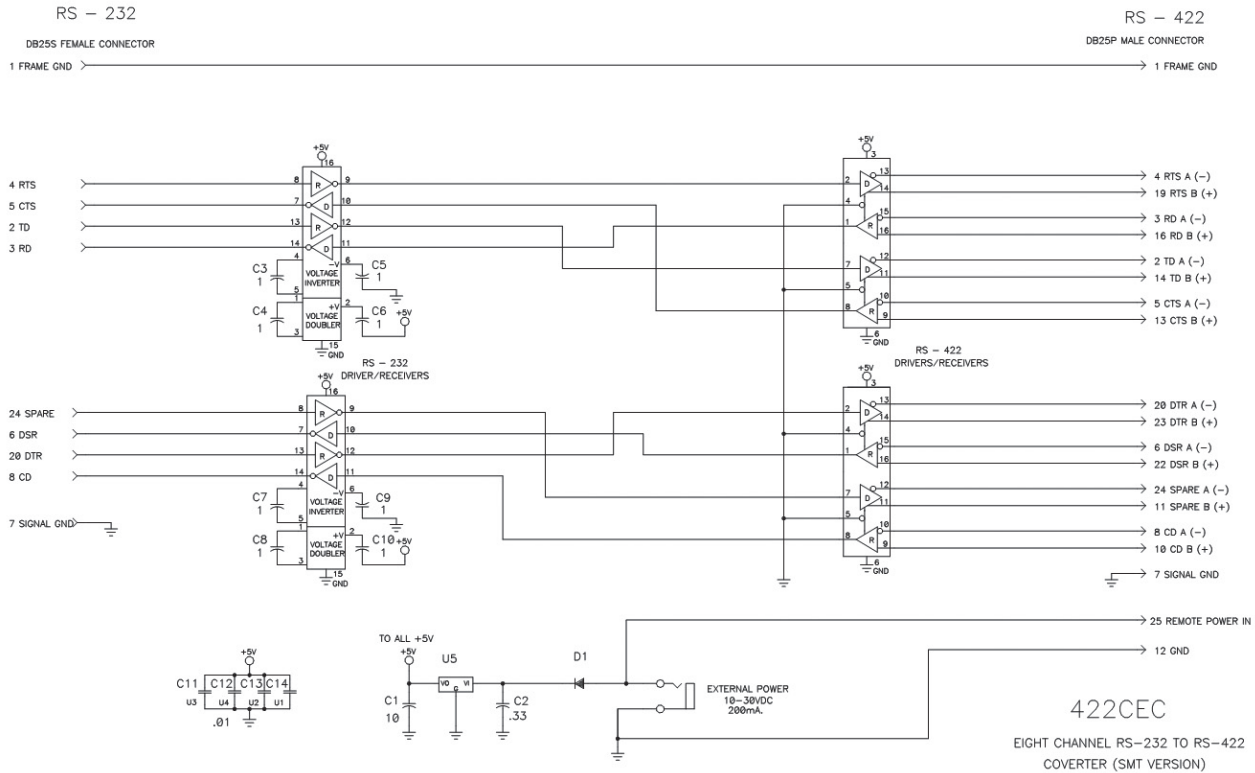


6 | 422CEC Schematic Diagram



+ QUICK START GUIDE



Model 422CEC

8-Channel RS-232 to RS-422 Converter

Recommended Accessories

12 VDC Power Supply, 6 W, Int'l AC Input, 2.5mm Plug # SMI6-12-V-P230-C1



Serial Adapter Cable, DB9F to DB25M, 6 ft (1.8m) # 232CAM



Before you begin, be sure you have the following:

- + 422CEC Serial Converter
- + 12 VDC Power Supply (sold separately)

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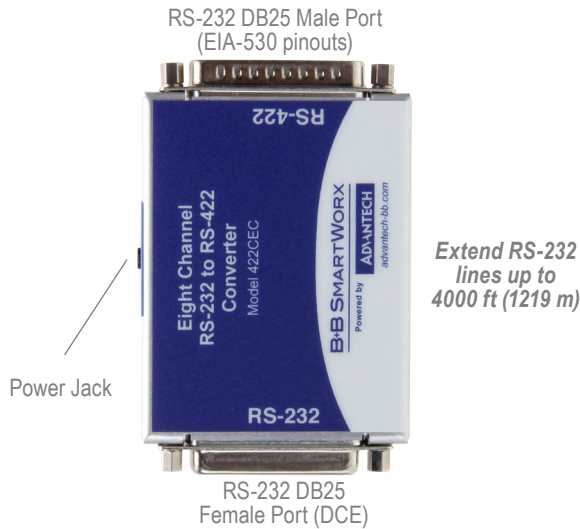
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Product Overview



422CEC SPECIFICATIONS

Data Rate	Up to 115.2K baud
Signals	Converts eight RS-232 channels to RS-422
Signals Supported	TD, RD, RTS, CTS, DTR, DSR, DCD, spare
Power	10-30 VDC, 110 mA (unloaded) Additional current for external loading.

1 | Getting Started

Model 422CEC, RS-232 to RS-422 converter converts unbalanced RS-232 signals to balanced RS-422 signals. Ten RS-422 receivers can be connected in parallel to any one RS-422 driver for use in multidrop systems.

The RS-422 Standard uses a balanced voltage digital interface to allow communications of 90K bits per second on cable lengths of 4000 feet (1219 meters). If this baud rate is exceeded the line length will decrease accordingly.

2 | Polarity

The polarity of the two RS-422 lines must be correct. With no data being sent, the RS-232 line should be negative and the RS-422 "A" terminal should be negative with respect to the "B" terminal.

3 | Termination Resistor

The wire recommended in the RS-422 Standard is number 24 AWG copper conductor, twisted-pair telephone cable with a shunt capacitance of 16pF per foot.

For long runs and/or high data rates, it is recommended that the wires be terminated with a resistor at the Receive end. The twisted pair usually used has an impedance of about 100 Ohms, therefore a 100 Ohm resistor is normally used for the termination. The RS-422 side of the converter requires more power as the transmission line is increased and as the termination resistor value is reduced, therefore it may be necessary to use a termination resistor that is larger than 100 Ohms.



The RS-422 driver has the ability to drive 10 RS-422 receivers connected in parallel. A system of multiple receivers may require some experimentation with resistors, line lengths, grounding, etc.

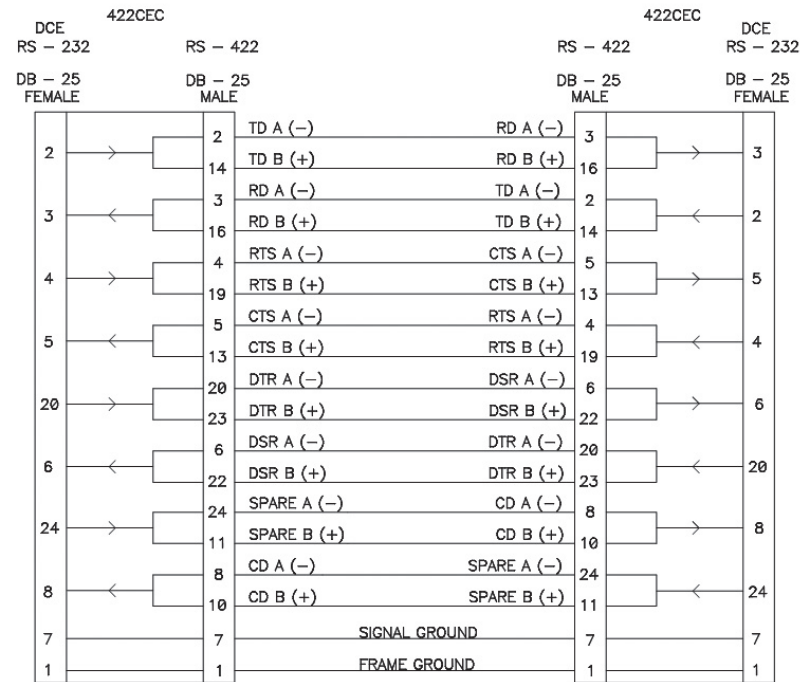
4 | Protective Ground

The RS-422 Standard recommends that Protective Ground (pin 1) be connected to a good "green wire" ground. This may be already connected in your RS-232 equipment.

Protective Ground and Signal Ground should be connected through to each end of the system and be connected to each other using a 100 Ohm 1/2 Watt resistor at one end only. If a shielded twisted pair is used the shield should be connected to Protective Ground.

5 | RS-232 Signal Distance

Figure 1 below shows the interconnection of two (2) 422CEC converters. This allows you to extend your RS-232 line up to 4000 feet. If you do not require all the handshake lines, you may leave these disconnected.



CABLE CAN BE UP TO 4000 FEET
SHIELDED TWISTED PAIR

Figure 1. Interconnection of Two 422CEC Converters