



## Models: 232LPTTL, 232LPTTL33 Four Channel RS-232 to TTL/CMOS Converters



### Description

Model 232LPTTL converts RS-232 to 5VDC TTL/CMOS compatible levels. Model 232LPTTL33 converts RS-232 to 3.3VDC TTL/CMOS compatible levels. Two channels are used to convert from RS-232 to TTL/CMOS signals and two channels are used to convert from TTL/CMOS signals to RS-232. These converters support TD, RD, RTS, and CTS. DB9S female connector on the RS-232 side. DB9P male connector on the TTL/CMOS side. This unit is powered from the RS-232 data and handshake lines, whether the lines are high or low.

Pins used are:

<u>RS-232 DB9S Female Pin</u>	<u>Function</u>	<u>TTL/CMOS DB9P Male Pin</u>
3 (input) .....	TD .....	3 (output)
2 (output) .....	RD .....	2 (input)
7 (input) .....	RTS .....	7 (output)
8 (output) .....	CTS .....	8 (input)
5 (signal gnd) .....	GND .....	5 (signal gnd)

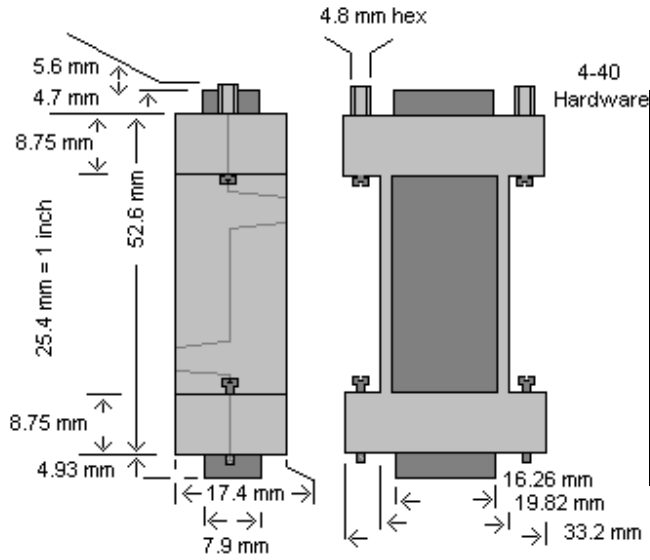
Pin 5 is signal ground for both connectors. Both models are powered by the signals on pins 7(RTS), 4(DTR), and 3(TD). These handshake lines can be in either the high or low condition, but must be present to power the converter. The unit can work at baud rates up to 115.2 kbps.

It is important that TTL/CMOS logic, and only TTL/CMOS logic (0 to +5 VDC for the 232LPTTL, and 0 to +3.3VDC for the 232LPTTL33) is used for the TTL/CMOS side of the converter. The maximum sinking current for one TTL/CMOS output is 3.2 mA. The maximum source current for one TTL/CMOS is 1 mA. Signal levels are inverted by the converters. Please refer to table below.



### Polarity

5VDC TTL/CMOS Input	3.3VDC TTL/CMOS Input	RS-232 Output
Low (< .8V)	Low (< .8V)	+5V minimum, +9V typical
High (> 2V)	High (> 2V)	-5V minimum, -9V typical
5VDC TTL/CMOS Output	3.3VDC TTL/CMOS Output	RS-232 Input
+3.45V minimum, +4.6V typical	+2.4V minimum, +3.0V typical	Low (< .2V)
+.55V maximum, +.1V typical	+.55V maximum, +.1V typical	High (> 2.4V)

Model Number	Description
232LPTTL	Four Channel RS-232 to 5VDC TTL/CMOS Converter
232LPTTL33	Four Channel RS-232 to 3.3VDC TTL/CMOS Converter



Note: Male DB9 Connectors are sized slightly larger outside

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 Numbers:	232LPTTL, 232LPTTL33
Description:	4-Channel RS-232 to TTL/CMOS Converters
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)
 Michael J. Fahrion, Director of Engineering	
	

**Specifications**

Supply Voltage: Port-powered  
 Temperature Range: 0 to 70 °C  
 Data Rates: Up to 115.2 kbps

