



## Model IC1156A Four Channel RS-232 to TTL/CMOS Converter

### Description

The IC1156A converts RS-232 to TTL/CMOS compatible levels. Two channels are used to convert from RS-232 to 0 to +5 VDC signals and two channels are used to convert from 0 to +5 VDC signals to RS-232. This converter supports TD, RD, RTS, and CTS. The DB25S female connector is for the RS-232 side. The DB25P male connector is for 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</u> <u>DB25S Female</u>	<u>Function</u>	<u>TTL/CMOS</u> <u>DB25P Male</u>
<u>Pin</u>		<u>Pin</u>
3 (input) .....	RD .....	3 (output)
2 (output) .....	TD .....	2 (input)
5 (input) .....	CTS .....	5 (output)
4 (output) .....	RTS .....	4 (input)

Pin 7 is signal ground for both connectors. This unit is powered by the signals on pins 3(RD), 5(CTS), and 6(DSR). 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) 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 converter. Please refer to table below.

### Polarity

TTL/CMOS Input	RS-232 Output
Low (< .8V)	+5V minimum, +9V typical
High (> 2V)	-5V minimum, -9V typical

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

Model Number:	IC1156A	
Description:	4-Channel RS-232 to TTL/CMOS 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)	

### Specifications

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

