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## http://www.integrityusa.com



# CMOS-9-3A & CMOS-9-5A High Speed 3.3 Volt & 5.0 Volt RS-232 to CMOS Logic Converter

CMOS SPECIFICATTONS			
VCC	FUNCTION	SPEC	UNIT
3.3	INPUT LOW	.8 MAX	VOLT
3.3	INPUT HIGH	2.0 MIN	VOLT
3.3	OUTPUT LOW	.4 MAX	VOLT
3.3	OUTPUT HIGH	VCC –.6 MIN	VOLT
5.0	INPUT LOW	.8 MAX	VOLT
5.0	INPUT HIGH	2.4 MIN	VOLT
5.0	OUTPUT LOW	.4 MAX	VOLT
5.0	OUTPUT HIGH	VCC –.6 MIN	VOLT

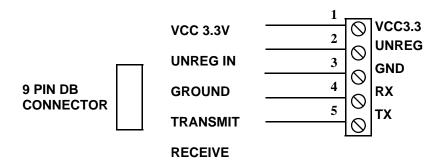
The **CMOS-9-3A** is the 3.3 volt unit. The **CMOS-9-5A** is the 5 volt unit.

For the **CMOS-9-5A** 5.0 volt is the unit to use in lieu of the 3.3V stated in this manual.

### Electrical Characteristics:

- \* ESD rated to 15000V
- \* V+ voltage 7.5Vdc to 24Vdc
- \* V+ input is diode protected with a 1N4004
- \* Power consumption is nominally 5 ma.

# CMOS-9-3A & CMOS-9-5A CONNECTIONS



### **General Operational Notes:**

- 1) There are NO special RS-232 settings required for operation
- 2) TxD is connected to DB9 pin 3
- 3) RxD is connected to DB9 pin 2
- 4) GND is connected to DB9 pin 5
- 5) V+ reverse polarity is diode protected
- 6) A power source is required for proper operation

### **Performance Characteristics:**

- 1) The CMOS-9-3A supports data rates up to 120.0 KBPS.
- 2) The CMOS-9-3A output voltage low is .4 v max.
- 3) The CMOS-9-3A output voltage high is 3.5 v min.
- 4) The CMOS-9-3A input logic threshold low voltage is .8 max.
- 5) The **CMOS-9-3A** input logic threshold high voltage is 2.0 min.

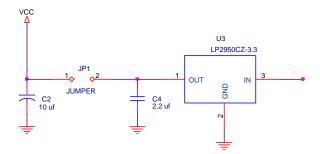
### DTE vs. DCE:

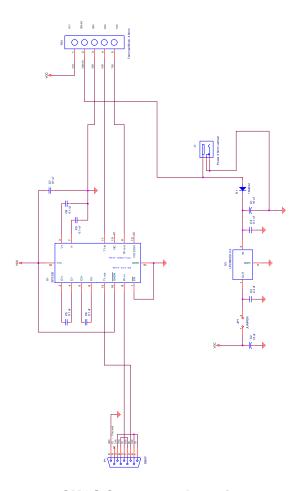
The **CMOS-9-3A** expects the transmitted data to be present on pin 3 of the DB9 connector. Conversely, the received data is output on pin 2 of the DB9 connector. If the inverse is required, use a NULL MODEM cable, or switch the TxD and RxD signals.

RS-232 TxD transmitted data: DB9 pin 3 RS-232 RxD received data: DB9 pin 2

### Notes:

- 1) The GND IS at terminal 3.
- 2) We suggest our PS9 9Vdc 400ma power supply.
- 3) 3.3 volts is available at terminal 1.
- 4) If you remove the jumper on the board you can power the board with 3.3 volts at terminal 1.





**CMOS Converter schematic** 

### WARRANTY

Integrity Instruments warranties all products against defective workmanship and components for the life of the unit. Integrity Instruments agrees to repair or replace, at it's sole discretion, a defective product if returned to Integrity Instruments with proof of purchase. Products that have been mis-used, improperly applied, or subject to adverse operating conditions fall beyond the realm of defective workmanship and are not convered by this warranty.

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