Industrial 3-Wire Port-Powered RS232 Isolator

(Part Number: CVT-232A-3)

CE

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■ INTRODUCTION

The CVT-232A-3 is a compact, rugged, industrial-grade, port-powered, 3-wire RS-232 isolator. This product optically isolates three (3) RS-232 lines (TX, RX and GND), and the 5000V optical isolation effectively protects your RS-232 devices from ground loops, noise problems, transient surges, remote lightning and spikes. The unit is efficiently powered from the RS-232 data line, and it comes with the auto-sensing and self-adjusting features, which automatically adjust baud rate, parity, stop bit and other COM port parameters to the devices that they are connected to. Therefore, it requires no external power or software drivers, making the unit a highly reliable and truly plug-and-play device.

■ FEATURES

- Port-powered, no external power is required.
- Handshake lines tied together to meet acknowledgement requirements.
- Industrial grade enclosed in a rugged, rustless ABS housing.
- 5000V optical isolation effectively protects your RS-232 devices from ground loops, transient surges, remote lightning and spikes.
- Optical isolation eliminates ground loop and noise problems.
- Plug and play (hot-pluggable, data format auto-sensing and self-adjusting).
- Operating temperature: -40ºF to 185ºF (-40ºC to 85ºC).
- Built-in 600W surge protection, 15kV static protection and circuit protection.
- Surface Mount Technology manufactured to RoHS and ISO-9001 standards.
- Safety: Strictly certified by TUV (Cert No. SG-CE-090012).
- 5-year manufacturer's warranty.

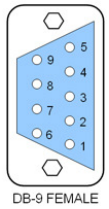
■ SPECIFICATIONS

Compatibility:	EIA/TIA RS-232C standard
Power Source:	Port power from RS-232 data line
Current Consumption:	Less than 10mA
Optical Isolation:	5000Vrms (AC, 1 min)
Baud Rates:	300 to 38,400bps (auto-sensing and self-adjusting)
Distance:	RS-232: 16ft (5m)
Connector:	DB-9 female connector and DB-9 male connector
Surge Protection:	600W
Static Protection (ESD):	Up to 15KV
Dimensions (H x W x D):	0.63 x 1.3 x 2.5 in (16 x 32 x 63 mm)
Weight:	0.83 oz (23.5 g)
Operating Temperature:	-40ºF to 185ºF (-40ºC to 85ºC)
Operating Humidity:	Up to 90% RH (no condensation)

■ PIN ASSIGNMENT

DB-9 Female Connector:

Pin:	1	4	6	7	8	2	3	5
Signal:	DCD	DSR	DTR	CTS	RTS	TX	RX	GND
Function:	tied together			tied together		TX	RX	GND

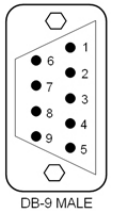


DB-9 FEMALE

Note: Some software requires handshake line acknowledgements. To satisfy the requirements, the CVT-232A-3's handshake lines are tied together (DCD, DSR, and DTR tied together, CTS and RTS tied together). Therefore, you don't have to modify your existing software.

DB-9 Male Connector:

Pin:	1	4	6	7	8	2	3	5
Signal:	DCD	DTR	DSR	RTS	CTS	RX	TX	GND
Function:	tied together			tied together		RX	TX	GND



DB-9 MALE

Note: Some software requires handshake line acknowledgements. To satisfy the requirements, the CVT-232A-3's handshake lines are tied together (DCD, DTR, and DSR tied together, RTS and CTS tied together). Therefore, you don't have to modify your existing software.

■ CONNECTIONS

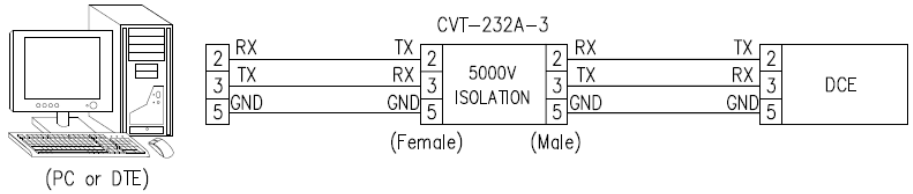


FIGURE 1: CVT-232A-3 CONNECTION DIAGRAM (DTE TO DCE)

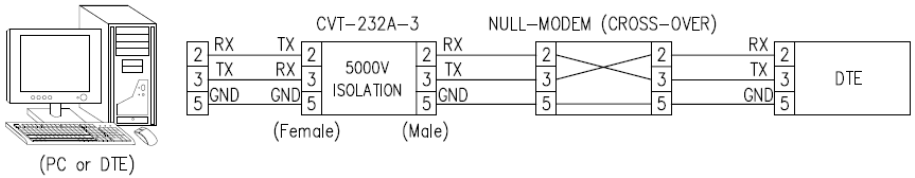


FIGURE 2: CVT-232A-3 CONNECTION DIAGRAM (DTE TO DTE)

■ DB-25 CONNECTIONS

CVT-232A-3 can also be used for DB-25 connectors; please refer to the DB-9 to DB-25 (DTE – DTE) conversion table below:

DB-9 Pin:	1	2	3	4	5	6	7	8	9
DB-25 Pin:	8	3	2	20	7	6	4	5	22
Signal:	DCD	RX	TX	DTR	GND	DSR	RTS	CTS	RI

■ TROUBLESHOOTING

Perform a loopback test by using CommFront's 232Analyzer software: Connect the female connector end of the isolator to your PC's COM port and connect the other end (male connector) to another of your PC's COM ports with a null-modem converter (or connect pin 2 to 3, pin 3 to 2, and pin 5 to 5). Then, run two instances of the 232Analyzer software on your PC. When you send commands from one COM port, you should receive the same commands from the other COM port. By performing a simple loopback test like this, you can test both the transmitter and receiver of your isolator. This is very helpful when you are in doubt about the performance of your isolator.