



**Industrial 3-Wire Externally-Powered  
High-Speed RS232 Isolator  
(Part Number: CVT-232A-4)**



<http://www.CommFront.com>



**INTRODUCTION**

The CVT-232A-4 is a rugged, industrial-grade, high-speed, 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 powered from an external 5V DC power supply, 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**

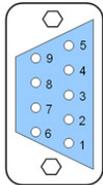
- External 5V DC powered, no port power from the RS-232 port is required.
- Supports high-speed serial data rates: 300 to 115,200bps.
- 5000V optical isolation effectively protects your RS-232 devices from ground loops, transient surges, remote lightning and spikes.
- Optical isolation eliminates ground loop and noise problems.
- Industrial grade enclosed in a rugged, rustless ABS housing.
- Plug and play (hot-pluggable, data format auto-sensing and self-adjusting).
- Operating temperature: -40°F to 185°F (-40°C to 85°C).
- 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
Current Consumption:	Less than 10mA
Power Source:	5VDC (External AC to DC power adapter included)
External AC/DC Power Adapter:	5VDC/500mA (Input: 100~240VAC 50/60Hz, US type A plug)
Optical Isolation:	5000Vrms (AC, 1 min)
Baud Rates:	300 to 115,200bps (auto-sensing and self-adjusting)
Distance:	RS-232: 16ft (5m)
Connector:	DB-9 female connector; DB-9 male connector with a 4-Way terminal block
Surge Protection:	600W
Static Protection (ESD):	Up to 15KV
Dimensions (H x W x D):	0.63 x 1.3 x 3.46 in (16 x 32 x 88 mm) (with termination board)
Weight:	1.34 oz (38 g) (with termination board)
Operating Temperature:	-40°F to 185°F (-40°C to 85°C)
Operating Humidity:	Up to 90% RH (no condensation)

## ■ PIN ASSIGNMENT

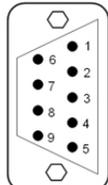
DB-9 Female Connector:



DB-9 FEMALE

Pin:	2	3	5
Signal:	TX	RX	GND

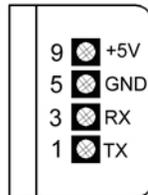
DB-9 Male Connector:



DB-9 MALE

Pin:	1	3	5	9
Signal:	TX	RX	GND	+5V

Termination Board (DB-9 Female Connector / Terminal Block):



- The numbers on the left indicate the pin assignment of DB-9 female connector and the terminal block.
- CAUTION: Be sure that the DC power applied to pin +5V and GND is within the range of +4.75V to +5.25V (5V ±5%). Excessive input voltage or incorrect polarity connection could damage the isolator.**

## ■ CONNECTIONS

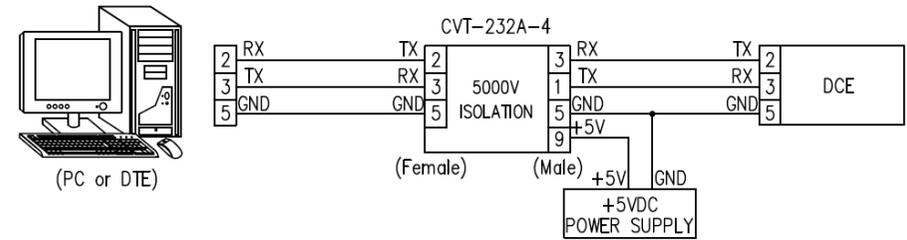


FIGURE 1: CVT-232A-4 CONNECTION DIAGRAM (DTE TO DCE)

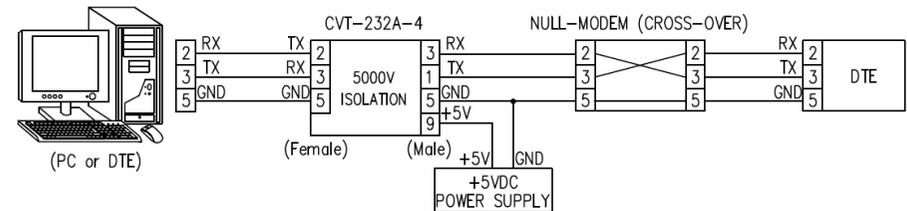


FIGURE 2: CVT-232A-4 CONNECTION DIAGRAM (DTE TO DTE)

## ■ TROUBLESHOOTING

Perform a loopback test by using CommFront's 232Analyzer software: Connect TX to RX, then send commands from the 232Analyzer software. You should receive an echo of the commands sent. By performing a simple loopback test like this, you can test both the transmitter and receiver of your repeater. This is very helpful when you are in doubt about the performance of your isolator.