



**Industrial Port-Powered RS232 ⇔ RS485 Converter**  
**(Part Number: CVT-485A-1)**

CE

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**Part Number: CVT-485A-1****■ INTRODUCTION**

The CVT-485A-1 is a slim, rugged, industrial grade, port-powered RS-232 to RS-485 converter, which can be used to convert any standard RS-232C port into a two-wire RS-485 port and vice versa. The unit features very high power efficiency (less than 8mA) and supports data direction auto-turnaround. It comes with a 5-way terminal block which can be attached to the converter securely without using screws and nuts, and the innovative selectable 120-Ohm end-of-line terminator design makes the termination easier than ever before, thus making the unit an ideal solution for quick installation and space-restricted applications.

**■ FEATURES**

- Port-powered with higher sensitivity and higher power efficiency.
- Designed for quick installation and space-restricted applications.
- Supports 128 nodes of RS-485 devices.
- Operates reliably from 300 to 115,200 baud.
- Industrial grade enclosed in a rugged, rustless ABS housing.
- Plug and play (hot-pluggable, data format auto-sensing and self-adjusting).
- Data direction auto-turnaround, no software drivers or flow control is required.
- Operating temperature: -40°F to 185°F (-40°C to 85°C).
- Built-in 600W surge protection, 15kV static protection and circuit protection.
- Built-in selectable 120Ω terminator for system reliability and easy installation.
- Rugged 5-way terminal block requires no screws and nuts.
- 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.

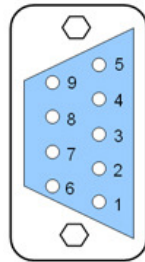
**■ SPECIFICATIONS**

Compatibility:	EIA/TIA RS-232C standard and RS-485 standard
Power Source:	Port power from RS-232 data line
Current Consumption:	Less than 8mA
Baud Rates:	300 to 115,200bps (auto-sensing and self-adjusting)
Distance:	RS-232 side: 16ft (5m); RS-485 side: Depending on power from RS-232 port, will transmit up to 4000ft (1.2km) at 19,200bps
Connector:	RS-232 side: DB-9 Female; RS-485 side: 5-Way Terminal Block
Maximum number of drops:	128
End-of-Line Terminator:	120Ω (built-in, selectable)
Surge Protection:	600W
Static Protection (ESD):	Up to 15KV
Dimensions (H x W x D):	0.63 x 1.3 x 2.7 in (16 x 32 x 69 mm) (with termination board)
Weight:	1.0 oz (28 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

RS-232 Side (DB-9 Female Connector):

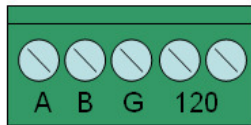
Pin:	1	4	6	7	8	2	3	5
Signal:	DCD	DSR	DTR	CTS	RTS	TX	RX	GND
Function:	tied together			tied together		TX	RX	GND



DB-9 FEMALE

Note: Some software requires handshake line acknowledgements. To satisfy the requirements, the CVT-485A-1's handshake lines (RS232 side) are tied together (DCD, DSR, and DTR tied together, CTS and RTS tied together). Therefore, you don't have to modify your existing software.

RS-485 Side (Terminal Block):



Terminal Block:	A	B	G	120
Function:	RS485+	RS485-	GND	Tie to turn ON the 120Ω end-of-line terminator

## CONNECTIONS

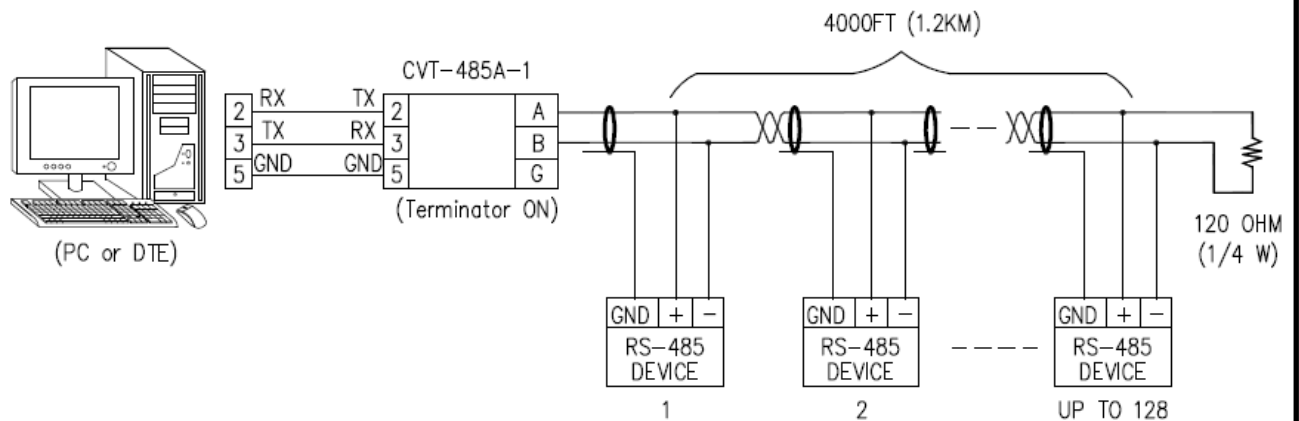


FIGURE 1: MASTER-SLAVE MULTI-DROP CONNECTIONS

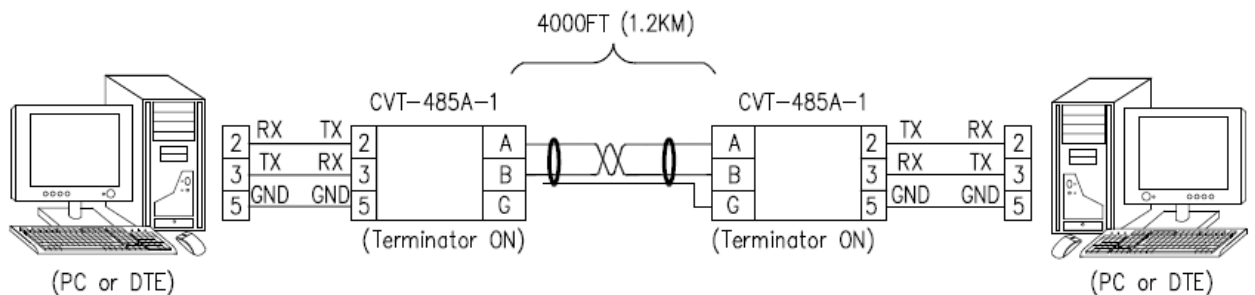


FIGURE 2: EXTENDING HALF-DUPLEX RS-232 DISTANCE (DATA ONLY)

