

CON-422-PE9

RS-232 to RS-422 Converter – 9 Pin

Datasheet Revision 2.6

SERIALCOMM.COM

GENERAL FEATURES:

- Plug-and-Play (hot-pluggable)
- Both rugged and built-in 120-ohm RS-422 terminal blocks are included for maximum flexibility
- Data direction auto-turnaround - no flow control necessary
- Port powered - no external power needed
- Built-in surge and static protection
- 5-year replacement manufacturer's warranty
- CE, FCC, RoHS and REACH certified



DESCRIPTION:

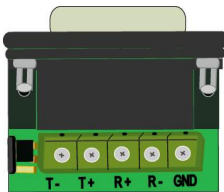
The SerialComm CON-422-PE9 is a bi-directional port powered RS-232 to RS-422 converter which converts a full-duplex RS-232 port to a full-duplex four-wire RS-422 port. A built-in data direction auto-turnaround feature automatically enables the RS-422 driver when data is present from the RS-232 port, eliminating the need for software drivers, and making the device fully plug-and-play. The CON-422-PE9 has a db-9 female connector on the RS-232 serial port, and db-9 male connector on the RS-422 port. Two separate terminal blocks, a rugged terminal block and a terminal block with built-in 120-ohm termination are included with the product for maximum flexibility. The terminal blocks plug into the RS-422 port, providing an optional screw-lug wire termination for the port. The unit is enclosed in a rugged ABS housing and is powered from the RS-232 data lines; no external power is required.

CERTIFICATIONS:

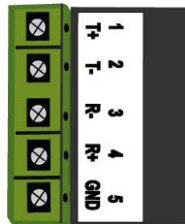


TERMINAL BLOCK SELECTION GUIDE:

The CON-422-PE9 comes with two terminal blocks for maximum performance and flexibility. One terminal block is a rugged terminal block which is sealed to provide protection from the elements and vibration. The other terminal block has a built-in 120-ohm termination selectable by a jumper on the terminal block. Both terminal blocks include fastening hardware.



TERMINAL BLOCK WITH 120-OHM TERMINATION

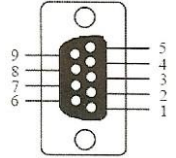


RUGGED SEALED TERMINAL BLOCK

PINOUT CONFIGURATION: RS-232 SIDE – DB9 FEMALE

SIGNAL	DCD	DTR	DSR	RTS	CTS	TX	RX	GND
PIN #	1	4	6	7	8	2	3	5
FUNCT.	TIED			TIED		TX	RX	GND

FEM. DB9



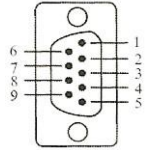
RS-422 SIDE – DB9 MALE OR TERMINAL BLOCK

SIGNAL	T+	T-	R-	R+	GND
PIN #	1	2	3	4	5
FUNCTION	T+	T-	R-	R+	GND

TERMINAL BLOCKS

Includes two terminal blocks - one for rugged applications and the other with selectable 120-ohm termination.

MALE DB9

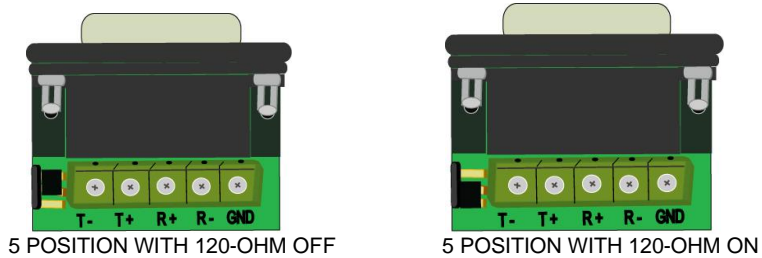


SPECIFICATIONS:

COMMUNICATION	
STANDARDS:	EIA/TIA RS-232C Standard and RS-422 Standard
BAUD RATES:	From 300 bps to 115,200 bps
CONNECTOR TYPES:	RS-232 Side: DB9 Female and RS-422 Side: either DB9 Male or 5-way Terminal Block
DISTANCE:	RS-232 Side: 16 ft (5m) and RS-422 Side: up to 4000 ft (1.2km)
MAX # OF CONNECTIONS:	32 Connection Drops
ELECTRICAL	
POWER SOURCE:	Port Powered From RS-232 Data Lines
CURRENT CONSUMPTION:	Less Than 10 mA
STATIC PROTECTION:	15KV Electric Static Discharge (ESD) Protection
SURGE PROTECTION:	600W Surge Protection
MECHANICAL	
HOUSING:	Rugged ABS
WEIGHT:	With Terminal Block: 1.2oz (36 grams) Without Terminal Block: 0.8oz (24 grams)
DIMENSIONS:	With Terminal Block: 3.17" X 1.33" X 0.73" (80.5 mm X 33.8 mm X 18.6 mm) Without Terminal Block: 2.47" X 1.33" X 0.70" (62.8 mm X 33.8 mm X 17.8 mm)
ENVIRONMENTAL	
OPERATING TEMP.:	-4° F to 140° F (-20°C to 60° C)
STORAGE TEMP.:	-40° F to 185° F (-40°C to 85° C)
OPERATING HUMIDITY:	5% To 95% - No Condensation
QUALITY	
PRODUCT SAFETY:	CE, FCC, RoHS and REACH third-party certified
QUALITY MANAGEMENT	Manufactured, and distributed to ISO 9001:2015 QMS
MEAN TIME BEFORE FAILURE:	232,353 Hours
RELIABILITY:	Low Failure Rate – 99+% Reliability Since Inception
WARRANTY:	5 Year Replacement Warranty

TERMINATION GUIDE:

One of the CON-422-PE9 terminal blocks has an optional built-in 120-ohm termination. 120-ohm termination is an advanced feature typically used to reduce noise and signal reflections. It is recommended to use 120-ohm termination if you are exceeding 600 feet in distance, 19.6K baud or in a electrical noisy or industrial environment. The terminal blocks are shipped with the 120-ohm termination in the off position but can be turned on by using the convenient jumper setting located on the left bottom of the terminal block.



TROUBLESHOOTING INSTRUCTIONS:

Using one CON-422-PE9 unit:

1. Check that all connections comply with the connection diagrams.
2. Perform a loop back test on one unit:
 - a) Connect the TX+ to RX+ and TX- to RX- on the RS-422 port.
 - b) Connect the RS-232 port to the PC RS-232 port.
 - c) Running a hyper terminal program on the PC, send ASCII characters to the CON-422-PE9 converter from one PC port, and check that the characters are received at the same PC port. This tests that the transmit and receive functions of the CON-422-PE9 unit is working properly.

Using two CON-422-PE9 units:

1. Check that all connections comply with the connection diagrams.
2. Perform a loop back test on two units:
 - a) Connect the two RS-422 ports.
 - b) Connect the two RS-232 ports to two PC RS-232 ports.
 - c) Running hyper terminal programs on both PCs, send ASCII characters to the CON-422-PE9 converter from one PC port, and check that the characters are received at the 2nd PC port. Repeat the test in the opposite direction. This tests that the transmit and receive functions of both CON-422-PE9 units are working properly.

APPLICATIONS:

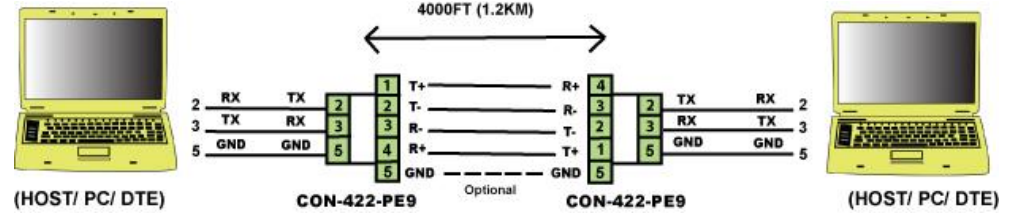


FIGURE 1: EXTENDING RS-232 DATA DISTANCE

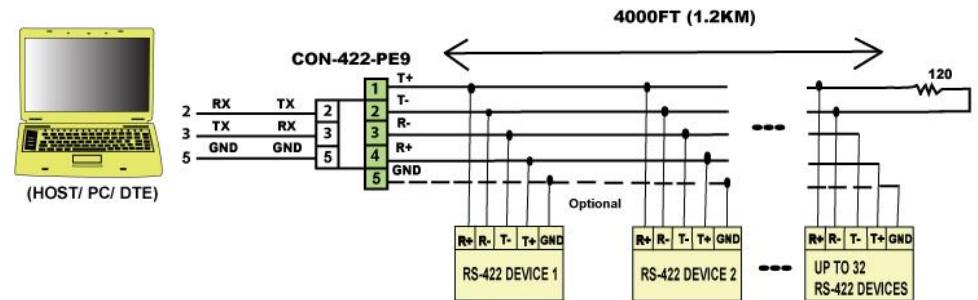


FIGURE 2: MASTER/SLAVE MULTIPLE DROP CONFIGURATION