**GENERAL FEATURES:**
- Plug-and-Play (hot-pluggable)
- Converts RS-485/RS-422
- Repeats RS-485 or RS-422
- 2500V Opto-isolation
- External 9V powered with included 120VAC/240VAC adapter
- Built-in surge and static protection
- 5-year replacement manufacturer’s warranty
- CE, FCC, RoHS, REACH certified

**DESCRIPTION:**
The SerialComm REP-485/422-9E is an industrial grade bi-directional externally powered 2.5K isolated RS-485 to RS-422 converter or RS-422 to RS-485 converter. This converter will also repeat RS-485 or RS-422 with opto-isolation. A built-in data direction auto-turnaround feature automatically enables the RS-485/RS-422 driver when data is present eliminating the need for software drivers, and making the device fully plug-and-play. The REP-485/422-9E is an effective solution for protecting RS-485 and RS-422 devices from voltage surges, lightning strikes, ground loop conditions and signal noise problems. The unit is external powered, so you do not have to worry about port-power. The REP-485/422-9E has a DB9 female connector on one RS-485/RS-422 port and a DB9 male connector on the other RS-485/RS-422 port. Two terminal blocks are included one for each RS-485/RS-422 port. The terminal block plugs into the RS-485/RS-422 port, providing screw-lug wire terminations for the port for easy installation. The unit is enclosed in a heavy-duty aluminum housing for rugged applications.

**CERTIFICATIONS:**

**TROUBLESHOOTING INSTRUCTIONS:**
Using one REP-485/422-9E unit:
1. Check that all connections comply with the connection diagrams.
2. Perform a continuity test on one unit:
   a) Connect the REP-485/422-9E in between RS-485/RS-422 path.
   b) If there is continuity in the data stream, then it is working. If the REP-485/422-9E is not being powered properly it will not work at all.

**SPECIFICATIONS:**

### COMMUNICATION

- **STANDARDS:** 2-wire RS-485 & 4-wire RS-422 Standards
- **BAUD RATES:** From 300 bps to 115,200 bps
- **CONNECTOR TYPES:** RS-485/RS-422 Side: either DB9 Male or 5-way Terminal Block.
- **DISTANCE:** RS-485/RS-422 Side: up to 4000 ft (1.2km)
- **MAX # OF CONNECTIONS:** 128 Connection Drops

### ELECTRICAL

- **DC/AC POWER ADAPTER:** 9-12VDC/1A (Input: 100-240VAC 50/60hz US Type A Plug)
- **OPTICAL ISOLATION:** 2500V (2500Vrms 1 min, AC)
- **CURRENT CONSUMPTION:** Less Than 100 mA
- **STATIC PROTECTION:** 15KV Electric Static Discharge (ESD) Protection
- **SURGE PROTECTION:** 600W Surge Protection

### MECHANICAL

- **HOUSING:** Aluminum Case
- **WEIGHT:** 3.6oz (100 grams)
- **DIMENSIONS:** 4.97” X 2.12” X 0.99” (126.4 mm X 54.6 mm X 25.0 mm)

### ENVIRONMENTAL

- **OPERATING TEMP.:** -40° F to 185° F (40°C to 85° 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, REACH Third-party Certified
- **QUALITY MANAGEMENT:** Manufactured and Distributed to ISO 9001:2015 QMS
- **RELIABILITY:** Low Failure Rate – 99+% Reliability Since Inception
- **WARRANTY:** 5 Year Replacement Warranty
APPLICATIONS:
RS-485 ISOLATED REPEATER OPTION:

FIGURE 1: REPEATING RS-485 DATA SIGNAL WITH ISOLATION

RS-422 ISOLATED REPEATER OPTION:

FIGURE 2: REPEATING RS-422 DATA SIGNAL WITH ISOLATION

RS-485 TO 4-WIRE RS-422 MODE OPTION:

FIGURE 3: CONVERT RS-485 TO RS-422

FIGURE 4: RS-485 TO MASTER/SLAVE MULTIPLE DROP CONFIG. IN RS-422 MODE

RS-422 TO 2-WIRE RS-485 MODE OPTION:

FIGURE 5: CONVERT RS-422 TO RS-485

FIGURE 6: RS-422 TO MASTER/SLAVE MULTIPLE DROP CONFIG. IN RS-485 MODE