ISO-232-3P9
Industrial High Speed
RS-232 Isolator 3-Wire - DB9

Datasheet Revision 2.5

GENERAL FEATURES:
- Plug-and-Play (hot-pluggable)
- High speed from 300 to 912,600 bps
- Industrial grade – high temperature range
- 5000V optical isolation
- Data direction auto-turnaround - no flow control necessary
- Port powered - no external power needed
- Built-in surge and static protection
- 5-year manufacturer’s warranty
- CE, FCC, RoHS and REACH certified

DESCRIPTION:
The SerialComm ISO-232-3P9 is an industrial grade bi-directional high-speed port powered 5000V opto-isolated RS-232 isolator which will operate reliably up almost 1 MBS. The ISO-232-3P9 optically isolates the 3 lines: TX, RX, and GND. Isolation protects the RS-232 ports from voltage surges, lightning strikes, GND loops and noise conditions. The ISO-232-3P9 has a DB9 female connector on the RS-232 serial port, and DB9 male connector on the other RS-232 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:

TROUBLESHOOTING INSTRUCTIONS:
Using one ISO-232-3P9 unit:
1. Check that all connections comply with the connection diagrams.
2. Perform a continuity test on one unit:
   a) Connect the ISO-232-3P9 in between RS-232 path.
   b) If there is continuity in the data stream then it is working. If the ISO-232-3P9 is not being powered properly it will not work at all.

Performing a voltage test:
1. Check that all connections comply with the connection diagrams.
2. Perform a detailed voltage test:
   a) Connect the ISO-232-3P9 in between RS-232 path.
   b) With a multi-meter perform the following test: Connect pin 1 to pin 5 and connect pin 2 to pin 3. When static pin 2 should be 0V and pin 3 should be 5.5V. When dynamic pin 2 should be 0V and pin 3 should be 3.7V.

SPECIFICATIONS:

STANDARDS:
- EIA/TIA RS-232C Standard

BAUD RATES:
- From 300 bps To 912,600 bps

CONNECTOR TYPES:
- RS-232 Side: DB9 Female and RS-232 Side: DB9 Male

DISTANCE:
- Both RS-232 Sides: 16 ft (5m)

POWER SOURCE:
- Port Powered From RS-232 Data Lines

OPTICAL ISOLATION:
- 5000 V (5000Vrms 1 min, AC)

CURRENT CONSUMPTION:
- Less Than 10 mA

STATIC PROTECTION:
- 15KV Electric Static Discharge (ESD) Protection

SURGE PROTECTION:
- 600W Surge Protection

HOUSING:
- Rugged ABS

WEIGHT:
- 0.8oz (24 grams)

DIMENSIONS:
- 2.47” X 1.33” X 0.70” (62.8 mm X 33.8 mm X 17.8 mm)

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 MANAGEMENT:
- Manufactured and Distributed to ISO 9001:2015 QMS

RELIABILITY:
- Low Failure Rate – 99+% Reliability Since Inception

WARRANTY:
- 5 Year Replacement Warranty
APPLICATIONS:

FIGURE 1: 5000V ISOLATION BETWEEN A DTE AND A DCE

FIGURE 2: 5000V ISOLATION BETWEEN TWO DTES