

**ISO-232-3P9**  
Industrial High Speed  
RS-232 Isolator 3-Wire - DB9  
Datasheet Revision 2.7



**GENERAL FEATURES:**

- Plug-and-Play (hot-pluggable)
- High speed from 300 to 912,600 bps
- Industrial grade – high temperature range
- 2500V 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 2500V 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 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.

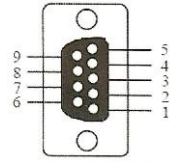
**PINOUT CONFIGURATION:**  
RS-232 SIDE – DB9 FEMALE

SIGNAL	TX	RX	GND
PIN #	2	3	5
FUNCTION	TX	RX	GND

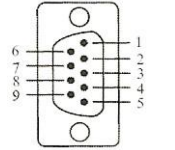
RS-232 SIDE – DB9 MALE

SIGNAL	RX	TX	GND
PIN #	2	3	5
FUNCTION	RX	TX	GND

FEM. DB9



MALE DB9



**SPECIFICATIONS:**

COMMUNICATION	
<b>STANDARDS:</b>	EIA/TIA RS-232C Standard
<b>BAUD RATES:</b>	From 300 bps To 912,600 bps
<b>CONNECTOR TYPES:</b>	RS-232 Side: DB9 Female and RS-232 Side: DB9 Male
<b>DISTANCE:</b>	Both RS-232 Sides: 16 ft (5m)
ELECTRICAL	
<b>POWER SOURCE:</b>	Port Powered From RS-232 Data Lines
<b>OPTICAL ISOLATION:</b>	2500 V (2500Vrms 1 min, AC)
<b>CURRENT CONSUMPTION:</b>	Less Than 10 mA
<b>STATIC PROTECTION:</b>	15KV Electric Static Discharge (ESD) Protection
<b>SURGE PROTECTION:</b>	600W Surge Protection
MECHANICAL	
<b>HOUSING:</b>	Rugged ABS
<b>WEIGHT:</b>	0.8oz (24 grams)
<b>DIMENSIONS:</b>	2.47" X 1.33" X 0.70" (62.8 mm X 33.8 mm X 17.8 mm)
ENVIRONMENTAL	
<b>OPERATING TEMP.:</b>	-40° F to 185° F (-40°C to 85° C)
<b>STORAGE TEMP:</b>	-40° F to 185° F (-40°C to 85° C)
<b>OPERATING HUMIDITY:</b>	5% To 95% - No Condensation
QUALITY	
<b>PRODUCT SAFETY:</b>	CE, FCC, RoHS and REACH Third-party Certified
<b>QUALITY MANAGEMENT</b>	Manufactured and Distributed to ISO 9001:2015 QMS
<b>MEAN TIME BEFORE FAILURE:</b>	306,066 Hours
<b>RELIABILITY:</b>	Low Failure Rate – 99+% Reliability Since Inception
<b>WARRANTY:</b>	5 Year Replacement Warranty

# APPLICATIONS:

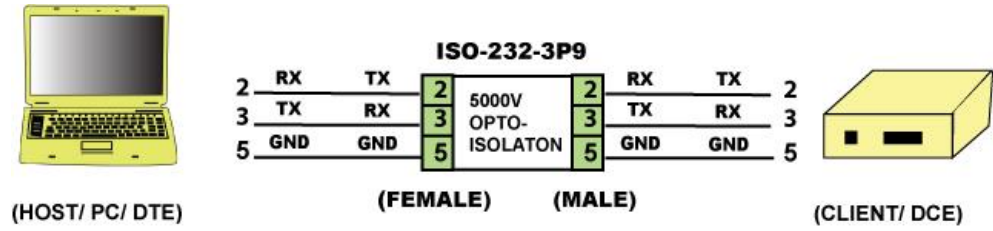


FIGURE 1: 5000V ISOLATION BETWEEN A DTE AND A DCE

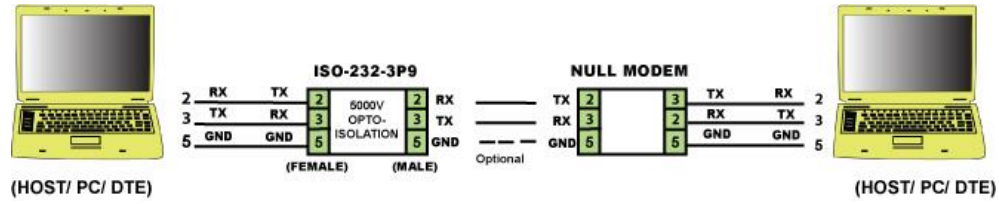


FIGURE 2: 5000V ISOLATION BETWEEN TWO DTEs