

ISO-232-3P9
Industrial High Speed
RS-232 Isolator 3-Wire - DB9
Datasheet Revision 2.3



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
- RoHS, CE, and FCC 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 db-9 female connector on the RS-232C serial port, and db-9 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.

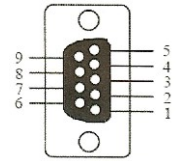
PINOUT CONFIGURATION:
RS-232 SIDE – DB9 FEMALE

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

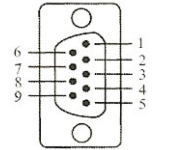
RS-232 SIDE – DB9 MALE

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

FEM. DB9



MALE DB9



SPECIFICATIONS:

COMMUNICATION	
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)
ELECTRICAL	
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/Sec Surge Protection
MECHANICAL	
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)
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 and RoHS Conformance Certified
QUALITY MANAGEMENT	Manufactured and Distributed to ISO 9001:2008
RELIABILITY:	Low Failure Rate – 99+% Reliability Since Inception
WARRANTY:	5 Year Replacement Warranty

APPLICATIONS:

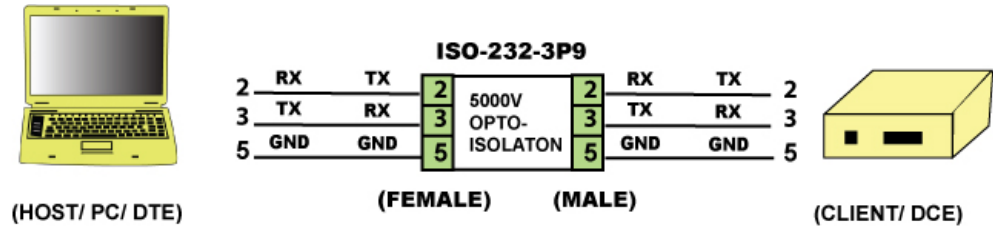


FIGURE 1: 5000V ISOLATION BETWEEN A DTE AND A DCE

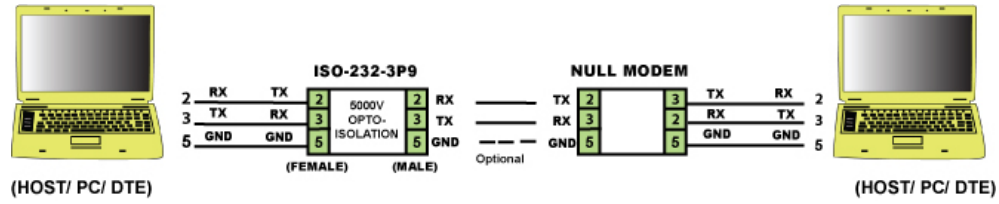


FIGURE 2: 5000V ISOLATION BETWEEN TWO DTEs