232i-9
232i-25

RS-232 TO RS-232 ISOLATORS

- **Provides up to 2,500 volts of Isolation.**
  Eliminates ground loops and noise problems.

- **High 115,200 baud rate.**
  Handles most baud rates.

- **Standard 9-pin and 25-pin connectors.**
  Fits on most RS-232 devices.

- **Bi-directional data transfer**
  Does not interfere with normal serial data flow.

- **Small external module.**
  Does not tie up a card slot.

- **Does not require an external power supply**
  Draws small amount of power from the serial control signals.

- **Manufactured to ISO 9000 and meets new European Electromagnetic compatibility requirements.**
  Improved quality product.

DESCRIPTION

The 232i series Isolators are self-powered RS-232 to RS-232 Isolators that provide up to 2,500 volts of isolation between a PC and an external serial device. The 232i Isolators are compact devices that can be inserted in the RS-232 data path and provide bidirectional data transfers at rates up to 115,200 baud. Use a 232i Isolator to eliminate ground loops and to protect the PC or any serial device from damage due to external transients.
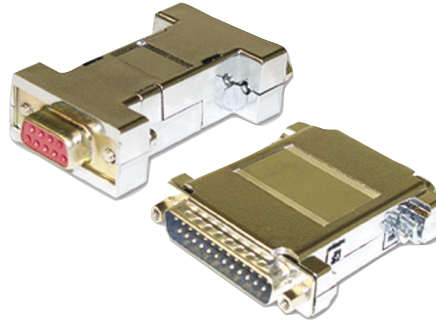
232i-9 and 232i-25 Isolators

Isolation

The 232i Isolators uses optical isolators to achieve 2, 500 volts of DC isolation. AC coupling is held to a minimum by the low capacitance in the optical isolators. Peak noise and voltage transients up to 75 volts are tolerated without data corruption.

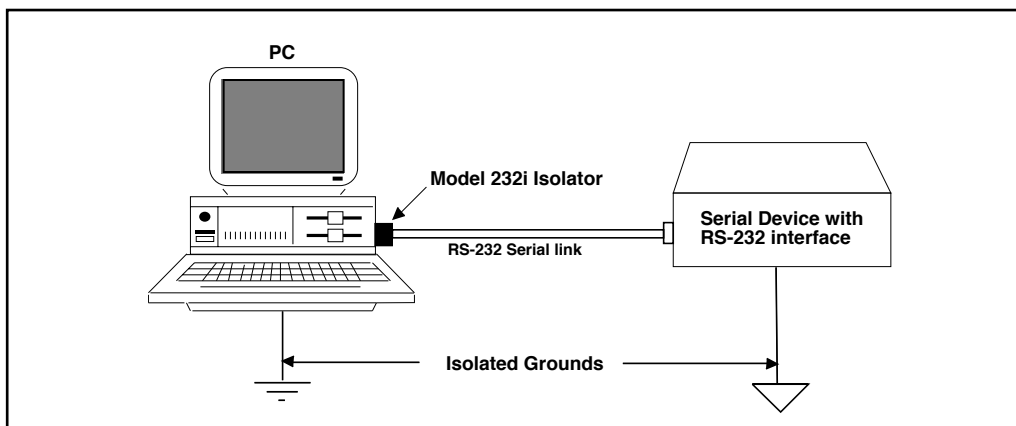### Protects the PC Motherboard

As more PCs include the RS-232 drivers on the motherboard, it is no longer possible to fix a damaged RS-232 driver chip by replacing an inexpensive Serial Interface Card. Instead the PC has to be dismantled and the surface mount chip replaced. Because this is a fairly difficult task and requires an experienced technician to avoid damaging the multilayer motherboard, it inevitably means taking the PC to a repair shop for several days.

The 232i Isolators can help prevent damage to the PC motherboard from ground loops or AC transients. Use a 232i Isolator to isolate serial devices where power ground loops or AC noise are known problems or in test applications. For serial data paths through noisy electrical environments, our RS-232 to RS-485 converters are recommended as their differential signals are more immune to induced noise.

CE Approved

Using a 232i to isolate a floating serial device

Converter Device Type

Each 232i has a male and female connectors. The female connector end plugs into a PC COM port and the male connector accepts standard RS-232 cables. The 232i's female connector is factory configured as a DCE (Data Communication Equipment) device for direct connection to a PC COM port. The male isolated connector is configured as a DTE (Data Terminal Equipment) device to mimic the PC COM port.

Handshake Connections

The 232i provides two isolated handshake signals that can be a user designated handshake pair. User can select a handshake pair from all of the popular handshaking protocols such as RTS/CTS, etc.

Application Support

For more information about serial communication or how to use converters, download Application Notes from our website at www.icsdatacom.com

SPECIFICATIONS

RS-232 Specifications

Connections
232i-25   DB 25 pin female and DB-25-pin male connectors
232i-9   DE-9 pin female and DE-9-pin male connectors

RS-232 Specifications

Signals	Tx, Rx, DSR, DCD and DTE
Input Voltage	
Space or On	+2.4 to +30 V
Mark or Off	-30 to + 0.8 V
Input Resistance	5 K ohm (typ.)
Output Voltage	+9 V or -9 V
Output resistance	300 ohm (typ)

Power Requirements

Draws 10 mA from RS-232 controls signals on both connectors

Physical

Size	67 mm L x 43 mm W x 20 mm L (2.63" L x 1.7" W x 0..8" H)
Temperature	
Operating	0 to + 60 °C
Storage	-20 to + 70 °C

Supplied Accessories

Instruction Manual on CD ROM

ORDERING INFORMATION

	Part Number
RS-232 Isolator with 9-pin female connector	232i-9
RS-232 Isolator with 25-pin female connector	232i-25