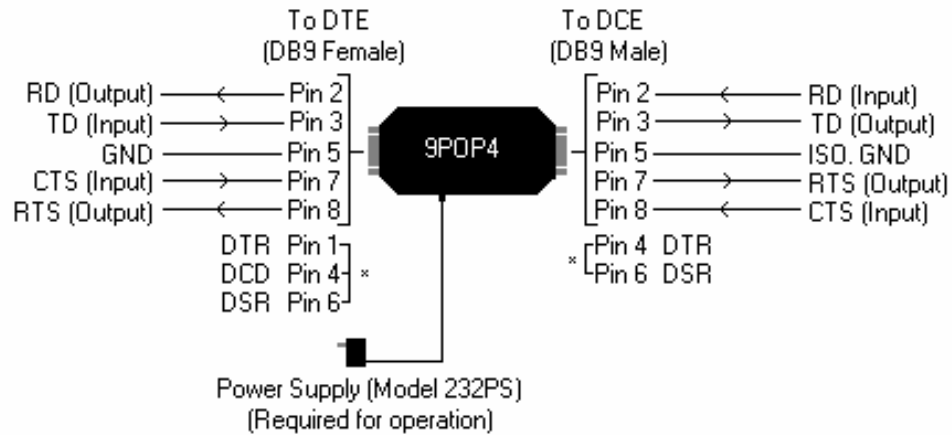




## Model 9POP4 9-Pin Single Supply RS-232 Optical Isolator

The Model 9POP4 isolates and protects RS-232 equipment from lightning surges, accidental high voltage shorts, and ground loops. RS-232 data signals TD, RD, RTS and CTS are supported at up to 115.2 kbps. The 9POP4 provides 2500 Volts RMS of isolation between sides.

The two sides of the isolator are powered from a single +12VDC power supply and maintain isolation. This powering configuration allows the device to be run in any system with only a single supply, regardless of the power levels on the RS-232 ports. Connections to the DTE device are made through a DB9 female connector. Connections to the DCE device are made through a DB9 male connector. 9POP4 pinouts are shown in Figure 1.



\* Pins connected together inside unit

**Figure 1: 9POP4 Pinouts**

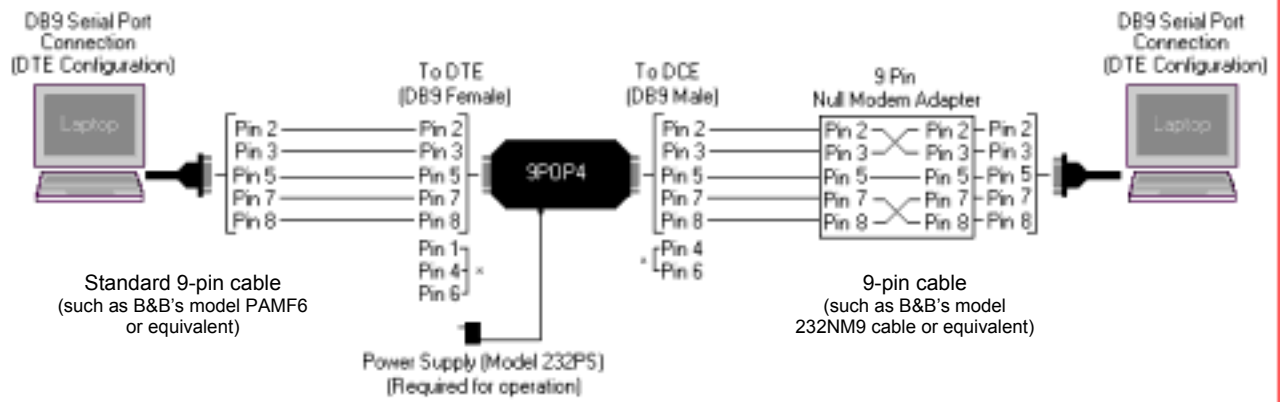
Typical DTE devices include PCs, terminals, and printers. Typical DCE devices include modems and multiplexers. Most computer DTE ports are male and most DCE ports are female. If the 9POP4 is inserted into a working system, it will only pass signals if inserted correctly. Therefore, if devices communicate with each other without the 9POP4 in the line, but not after it is installed, simply reverse the isolator using gender reversers and reinstall. Figures 2 and 3 both show applications where a Model 9POP4 would be used to optically isolate RS-232 devices.

DECLARATION OF CONFORMITY	
Manufacturer's Name:	B&B Electronics Manufacturing Company
Manufacturer's Address:	P.O. Box 1040 707 Dayton Road Ottawa, IL 61350 USA
Model Number:	9POP4
Description:	9-Pin, RS-232, 2-Wire, 1-Power Supply, Isolator
Type:	Light industrial ITE equipment
Application of Council Directive:	89/336/EEC
Standards:	EN 55022 EN 61000-6-1 EN 61000 (-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11)
William H. Franklin III, Director of Engineering	

International Headquarters:  
**B&B Electronics Mfg. Co.**

**B&B Electronics Ltd**

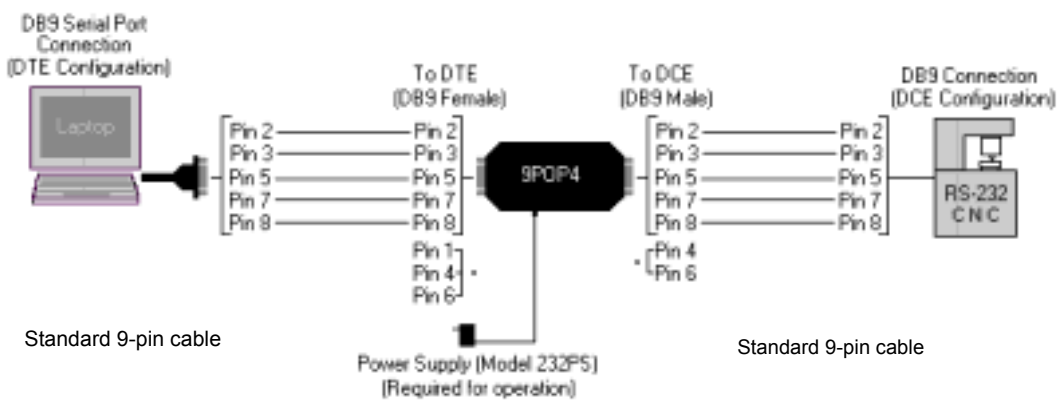
Delmation Products BV  
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www.delmation.nl



\* Pins connected together inside unit

**Figure 2: Isolating PC's using the 9POP4**

**NOTE:** Care should be taken when choosing the power supply if the full 2500V RMS isolation is required for your system. Many inexpensive supplies, including the unregulated supplies sold by B&B Electronics, only provide 1500V AC isolation between the primary and secondary windings.



\* Pins connected together inside unit

**Figure 3: Typical Industrial Application using the 9POP4**

**Specifications:**

- Transmission Mode: Asynchronous, half or full duplex, point-to-point communications
- Interface: RS-232
- Signals Supported: Transmit Data, Receive Data, Request to Send, Clear to Send
- Data Rates: 0 to 115.2 kbps
- Connectors: To DTE, DB9 female; to DCE, DB9 male
- Power Requirements: +12VDC @ 100mA (not included)
- External Power Connection: 2.5mm power jack (tip positive)
- Isolation: 2500 Volts RMS isolation for 1 minute (may be limited by external supply)
- Dimensions: 4.1 x 1.7 x .86 in (10.4 x 4.3 x 2.0 cm)
- Humidity: 5 to 95% non-condensing
- Temperature: 0-70°C (32-158° F)
- Minimum Air Clearance between DTE & DCE Sides: 0.197 in (5mm)
- Minimum Creepage Distance between DTE & DCE Sides: 0.315 in (8m)

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