

TCC-82

Port Powered RS-232 4-channel Isolator



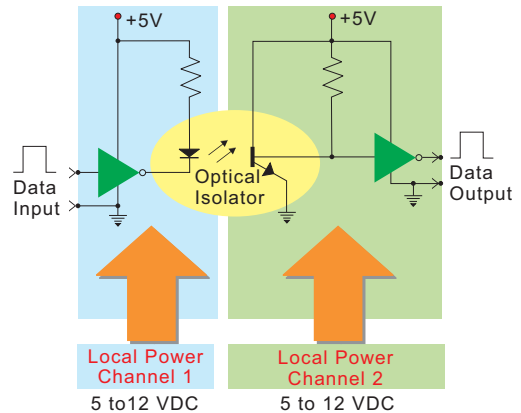
Features

- > 4 channels of 4 KV RMS isolation for 1 minute
- > External power source supported but not required
- > 15 KV ESD surge protection
- > Automatic baudrate detection
- > Compact size



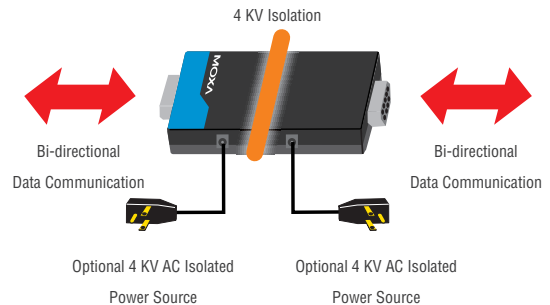
Introduction

The TCC-82 provides full electrical isolation for bi-directional serial communication between two RS-232 devices. In a compact, industrial-grade package, the TCC-82 provides optical isolation to both sides of an RS-232 connection for perfect protection against lightning surges, accidental high voltage shorts, and most of all, ground loops. The built-in, wide range optocouplers are tested to ensure that they can withstand more than 4 KV rms input to output for 1 minute. This means that the TCC-82 not only meets the requirements of general serial data communications, but also the high standards required by industrial automation and medical applications. Not only does the TCC-82 protect the Tx and Rx data lines, it also protects the RTS and CTS handshake lines, for a total of 4 optically isolated channels. With the TCC-82, you get complete protection for RS-232 communication.



External Power Source Not Required

The TCC-82 supports port-powered operation, meaning that it can obtain power directly from the attached serial devices. Power is obtained from the RS-232 Tx and Rx data lines and the RTS/DTR handshake lines, regardless of whether the signal is high or low, eliminating the need for an external power supply. However, external power is an option if handshake lines are not available, if the serial cable is too long, or if the serial device is a low powered device. For external power, the TCC-82 can use a 5 to 12 VDC adapter or the optional USB power cord. Note that both sides of the connection are powered independently, so if necessary, one side can rely on port power and the other can rely on an external power source.



When installing the TCC-82, we recommend that you connect all output signals. The TCC-82 obtains power from these signals even if they are not used by your system. Care should be taken when choosing the external power supply if your application requires the full 4 KV of isolation. Most commercial power supplies provide

only 1500 VAC isolation between the primary and secondary windings. If you are using external power for both sides of the TCC-82, make sure that separate power sources are used, each with sufficient isolation protection.

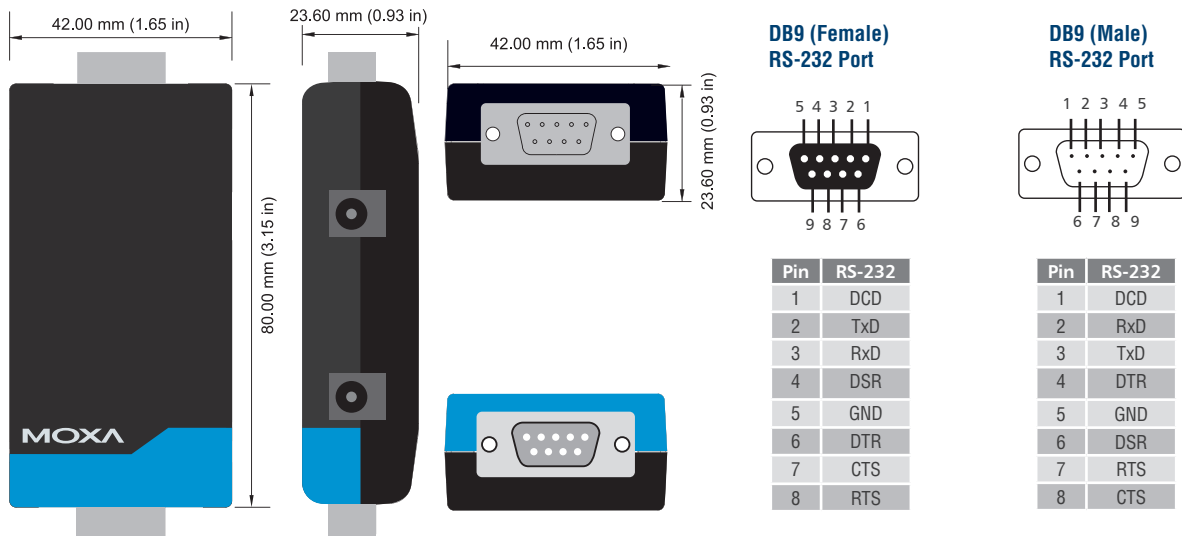
: Ordering Information

TCC-82: Port powered RS-232 isolator w/4 KV isolation and 15 KV ESD surge protection

Optional Accessories

- **Power Adapter:**
- **CBL-USBAP-50:** USB power cord (50 cm)
- **CBL-F9M9-20:** DB9 (male) to DB9 (female) RS-232 cable (20 cm)

Dimensions (unit = mm)



: Specifications

Communication

Baudrate: 300 bps to 115.2 Kbps

RS-232 DB9 Connector:

Signals: TxD, RxD, RTS, and CTS

Loop Back: DTR to DSR, and DCD

Surge Protection: 15 KV ESD

Optical Isolation: 4 KV RMS for 1 minute

Environment

Operating Temperature: 0 to 60°C (32 to 140°F)

Storage Temperature: -20 to 75°C (-4 to 167°F)

Humidity: 5 to 95% RH

Power

Input Power Source:

RS-232 port (TxD, RTS, DTR); power input jack

Input Power Voltage: 5 to 12 VDC

Power Consumption: 20 mA @ 5 VDC

Mechanical

Dimensions (W x D x H): 42 x 80 x 23.6 mm

Case: ABS

Weight: 60 ± 5 g

Regulatory Approvals CE Class B, FCC Class B

Warranty: 5 years