

TCC-100/100I

Isolated RS-232 to RS-422/485 Converter

Features

- RS-232 to RS-422 conversion with RTS/CTS support
- RS-232 to 2/4-wire RS-485 conversion
- 2 KV Isolation Protection (TCC-100I)
- Wall and DIN-Rail mountable
- Plug-in screw terminal block for easy RS-422/485 wiring
- PWR, Tx, Rx LEDs
- Surge protection, 16 KV ESD
- Operating temperature from -20 to 60°C



Introduction

TCC-100I is an isolated RS-232 to RS-422/485 converter designed for users who need an industrial grade interface conversion product to extend RS-232 transmission distance and increase networking capability. Its superior industrial application design, which includes

DIN-Rail mounting, terminal block wiring, external terminal block power, and optical isolation for system protection, makes TCC-100I suitable for use in critical industrial environments.

Auto Baud Rate Detection

TCC-100/100I incorporates a method for automatically detecting the serial signal baud rate by hardware. This is an extremely convenient feature for the user. Even if a device's

baud rate is changed, the signal will still be transmitted through the RS-232 to RS-422/485 converter without problem.

Isolation Protection

MOXA electrical Isolation technology uses two photo couplers to create a gap in each electrical signal. One photo coupler transforms the electrical signal into a light signal, which is transmitted across a small gap, and then the other photo

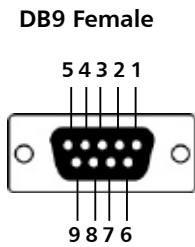
coupler transforms the light back into an electrical signal on the other side. In this way, the two electrical circuits are completely isolated from each other, limiting the damage that could otherwise be caused by power surges in the electrical signal.

Automatic Data Direction Control (ADDC™)

ADDC™ is a MOXA leading technology that uses a clever hardware solution to take care of the RS-485 data direction control problem. The TCC-100/100I converter uses embedded

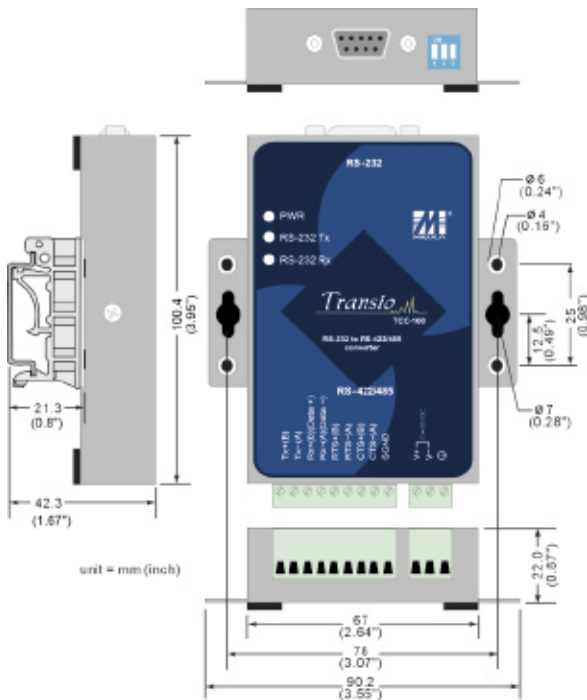
ADDC™ technology, a hardware data flow solution, to automatically sense and control data direction, making the hand shaking signal method unnecessary.

Pin Assignment



PIN	RS-232
1	DCD
2	TxD
3	RxD
4	DSR
5	GND
6	DTR
7	CTS
8	RTS
9	---

Dimensions



Ordering Information

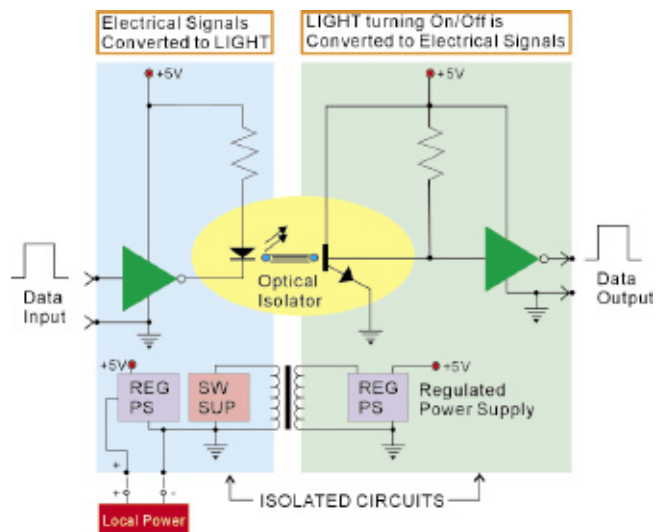
TCC-100:

RS-232 to RS-422/485 Converter;
DIN-Rail Mounting Kit and Manual included

TCC-100I:

Isolated RS-232 to RS-422/485 Converter;
DIN-Rail Mounting Kit and Manual included

Isolation Block Diagram



Specifications

Communications

RS-232 Signals: Tx, Rx, DTR, DSR, RTS, CTS, DCD, GND (DB9 Female Interface)

RS-422/485:

Supports RS-422, 4/2-wire RS-485 (DIP Switch selectable)

Supports 4-wire RS-422, up to 10 nodes, 1.2 km with RTS, CTS

Supports 4-wire RS-485, up to 32 nodes, 1.2 km
Supports 2-wire RS-485, up to 32 nodes, 1.2 km

RS-485 Data Direction Control: ADDC™

Baud Rate: 50 bps to 230.4 Kbps

Surge Protection: 16 KV ESD for all signals

Isolation: 2 KV (TCC-100I), Power/Signal

Environment

Operating Temperature: -20 to 60°C

Storage Temperature: -20 to 85°C

Humidity: 5 to 95% RH

Power

Input Power Voltage:

12 to 30 VDC External Power, Terminal Block

Reverse Protection: V+ and V- reverse protection

Over Current Protection:

Protection for 2 signals shorted together

Power Consumption: TCC-100: 3.4 W
TCC-100I: 4.68 W

Mechanical

Dimensions (W x D x H): 67 x 100 x 22 mm

90 x 100 x 22 mm (including DIN-Rail Mounting Kit)

Case: Aluminum

Plug-in screw terminal block: #22-#16 AWG

Color: Black

Weight: 148±5g

Regulatory Approvals CE, FCC (Class B)