# TCC-100/100I Series

*Industrial RS-232 to RS-422/485 converters with optional 2 kV isolation*

## Features and Benefits

- RS-232 to RS-422 conversion with RTS/CTS support
- RS-232 to 2-wire or 4-wire RS-485 conversion
- 2 kV isolation protection (TCC-100I)
- Wall mounting and DIN-rail mounting
- Plug-in terminal block for easy RS-422/485 wiring
- LED indicators for power, Tx, Rx
- Wide-temperature model available for -40 to 85°C environments

## Certifications

## Introduction

The TCC-100/100I Series of RS-232 to RS-422/485 converters increases networking capability by extending the RS-232 transmission distance. Both converters have a superior industrial-grade design that includes DIN-rail mounting, terminal block wiring, an external terminal block for power, and optical isolation (TCC-100I and TCC-100I-T only). The TCC-100/100I Series converters are ideal solutions for converting RS-232 signals to RS-422/485 in critical industrial environments.

## Specifications

### Serial Interface

| | |
|---|---|
| No. of Ports | 2 |
| Connector | Terminal block |
| Serial Standards | RS-232<br>RS-422<br>RS-485 |
| Baudrate | 50 bps to 921.6 kbps (supports non-standard baudrates) |
| Pull High/Low Resistor for RS-485 | 1 kilo-ohm, 150 kilo-ohms |
| RS-485 Data Direction Control | ADDC (automatic data direction control) |
| Terminator for RS-485 | N/A, 120 ohms, 120 kilo-ohms |
| Isolation | TCC-100I/100I-T: 2 kV (-I model) |

### Serial Signals

| | |
|---|---|
| RS-232 | TxD, RxD, RTS, CTS, GND |
| RS-422 | Tx+, Tx-, Rx+, Rx-, RTS (optional), CTS (optional), GND |
| RS-485-2w | Data+, Data-, GND |
| RS-485-4w | Tx+, Tx-, Rx+, Rx-, GND |

## Power Parameters

| | |
|---|---|
| Input Current | TCC-100/100-T: 47 mA (max)<br>TCC-100I/100I-T: 144 mA (max) |
| Input Voltage | 12 to 48 VDC |
| No. of Power Inputs | 1 |
| Overload Current Protection | Supported |
| Power Connector | Terminal block (for DC models) |

## Physical Characteristics

| | |
|---|---|
| Housing | Metal |
| IP Rating | IP30 |
| Dimensions | 67 x 100.4 x 22 mm (2.64 x 3.93 x 0.87 in) |
| Weight | 148 g (0.33 lb) |
| Installation | Wall mounting<br>DIN-rail mounting (with optional kit) |

## Environmental Limits

| | |
|---|---|
| Operating Temperature | Standard models: -20 to 60°C (-4 to 140°F)<br>Wide temp. models: -40 to 85°C (-40 to 185°F) |
| Storage Temperature (package included) | -40 to 85°C (-40 to 185°F) |
| Ambient Relative Humidity | 5 to 95% (non-condensing) |

## Standards and Certifications

| | |
|---|---|
| EMC | EN 55032/35 |
| EMI | CISPR 32, FCC Part 15B Class A |
| EMS | IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m<br>IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV<br>IEC 61000-4-5 Surge: Power: 1 kV<br>IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m<br>IEC 61000-4-8 PFMF |
| Safety | UL 60950-1 |
| Vibration | IEC 60068-2-6 |
| Environmental Testing | IEC 60068-2-1<br>IEC 60068-2-3 |

## MTBF

| | |
|---|---|
| Time | 3,017,857 hrs |
| Standards | Telcordia (Bellcore), GB |

## Warranty

| | |
|---|---|
| Warranty Period | 5 years |
| Details | See www.moxa.com/warranty |

## Package Contents

| | |
|---|---|
| Device | 1 x TCC-100/100I Series converter |
| Installation Kit | 1 x DIN-rail kit<br>1 x rubber stand |
| Cable | 1 x terminal block to power jack converter |
| Documentation | 1 x quick installation guide<br>1 x warranty card |

## Dimensions

Unit: mm (inch)
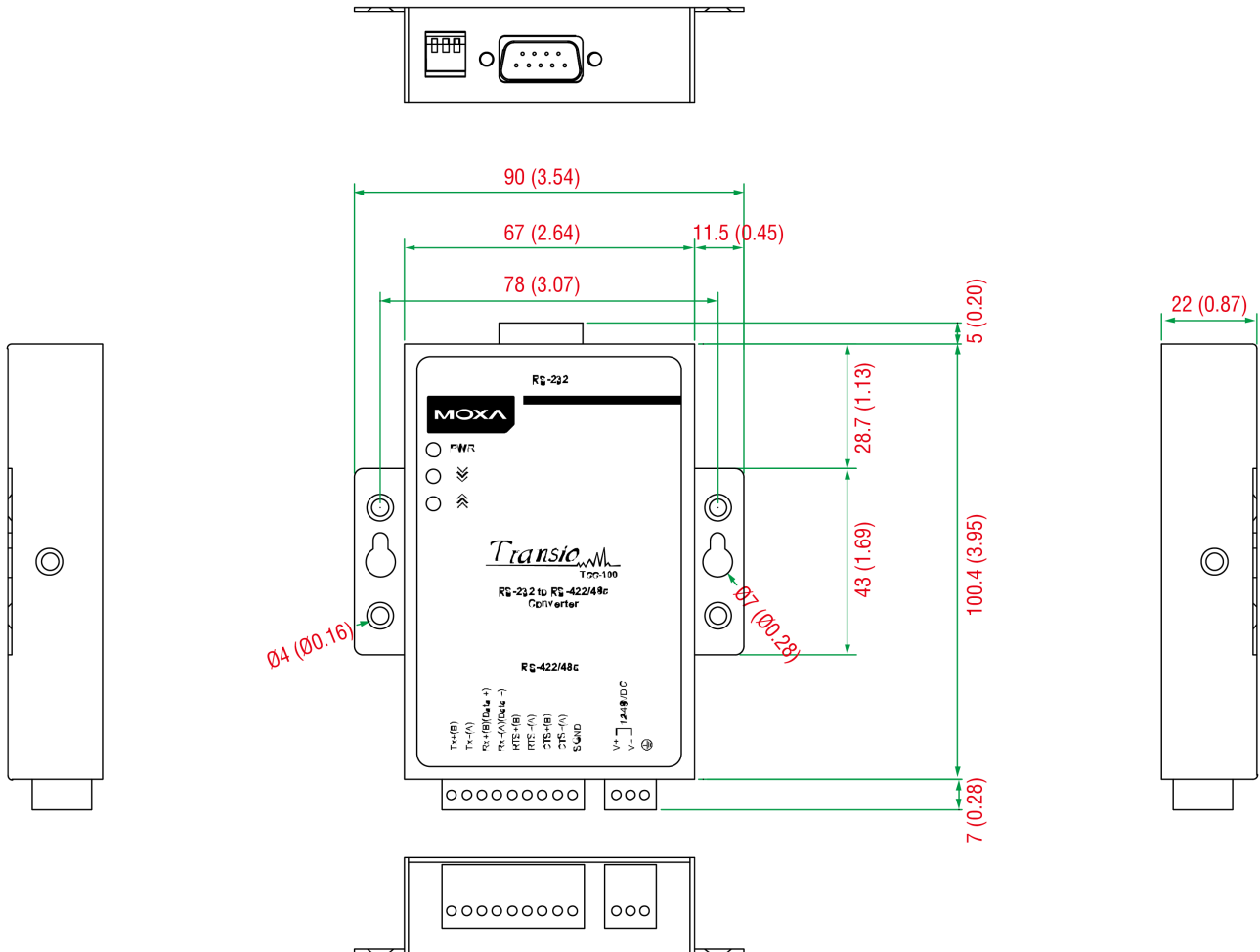


## Ordering Information

| Model Name | Isolation | Operating Temp. |
|---|:---:|:---:|
| TCC-100 | – | -20 to 60°C |
| TCC-100-T | – | -40 to 85°C |
| TCC-100I | ✓ | -20 to 60°C |
| TCC-100I-T | ✓ | -40 to 85°C |

## Accessories (sold separately)

### DIN-Rail Mounting Kits

| | |
|---|---|
| DK35A | DIN-rail mounting kit, 35 mm |

## Power Cords

| | |
|---|---|
| CBL-PJTB-10 | Non-locking barrel plug to bare-wire cable |

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