TCC-120/120I Series

Industrial RS-422/485 converters/repeaters with optional 2 kV isolation

Features and Benefits

- Boosts serial signal to extend transmission distance
- Wall mounting or DIN-rail mounting
- Terminal block for easy wiring
- Power input from terminal block
- DIP switch setting for built-in terminator (120 ohm)
- Boosts RS-422 or RS-485 signal, or converts RS-422 to RS-485
- 2 kV isolation protection (TCC-120I)

Certifications

Introduction

The TCC-120 and TCC-120I are RS-422/485 converters/repeaters designed to extend RS-422/485 transmission distance. Both products have a superior industrial-grade design that includes DIN-rail mounting, terminal block wiring, and an external terminal block for power. In addition, the TCC-120I supports optical isolation for system protection. The TCC-120 and TCC-120I are ideal RS-422/485 converters/repeaters for critical industrial environments.

Specifications

Serial Interface

Connector	Terminal block
No. of Ports	2
Serial Standards	RS-422, RS-485
Baudrate	50 bps to 921.6 kbps (supports non-standard baudrates)
Isolation	TCC-120I/120I-T: 2 kV
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

Serial Signals

RS-422	Tx+, Tx-, Rx+, Rx-, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w	Data+, Data-, GND

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Power Parameters

Input Current	TCC-120: 65 mA @ 12 VDC TCC-120-T: 65 mA @ 12 VDC TCC-120I: 180 mA @ 12 VDC TCC-120I-T: 180 mA @ 12 VDC
Input Voltage	12 to 48 VDC
No. of Power Inputs	1
Overload Current Protection	Supported
Power Connector	Terminal block (for DC models)
Power Consumption	TCC-120/120-T: 65 mA @ 12 VDC TCC-120I/120I-T: 180 mA @ 12 VDC

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	DIN-rail mounting (with optional kit), Wall mounting

Environmental Limits

Operating Temperature	Standard Models: -20 to 60°C (-4 to 140°F) 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 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 1 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m IEC 61000-4-8 PFMF
Environmental Testing	IEC 60068-2-1 IEC 60068-2-2 IEC 60068-2-3
Safety	EN 60950-1, IEC 60950-1
Vibration	IEC 60068-2-6

MTBF

Time	1,949,025 hrs
Standards	Telcordia (Bellcore), GB

Warranty

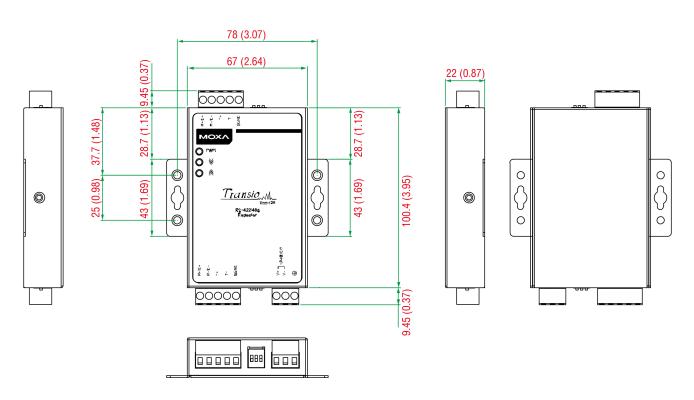|	
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x TCC-120/120I Series isolator
Cable	1 x terminal block to power jack converter
Installation Kit	1 x DIN-rail kit 1 x rubber stand
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)

Ordering Information

Model Name	Isolation	Operating Temp.
TCC-120	–	-20 to 60°C
TCC-120-T	–	-40 to 85°C
TCC-120I	✓	-20 to 60°C
TCC-120I-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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