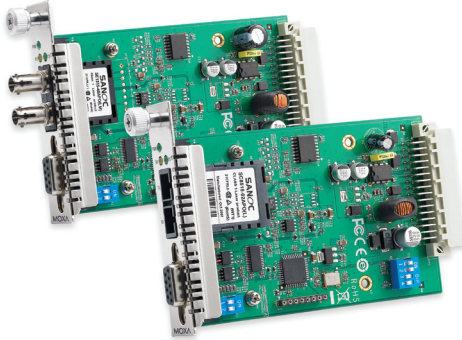


TCF-142-RM Series

RS-232/422/485 to fiber slide-in modules for the NRack System™



- > Extend RS-232/422/485 transmission up to:
 - 40 km with single-mode
 - 5 km with multi-mode
- > 1K or 150K ohm adjustable pull high/low resistor
- > “Ring” and “Point-to-Point” transmission supported



Introduction

The TCF-142-RM series of serial-to-fiber converters are slide-in modules that work with the TRC-190 chassis. The modules convert

from the RS-232, RS-422, or RS-485 signal to a fiber optic signal.

Automatic Baudrate Detection

The TCF-142-RM series can automatically detect the serial baudrate. This is an extremely convenient feature. Even if a device's baudrate

is changed, the signal will still be transmitted through the media converter without any problem.

Specifications

Optical Fiber Side

Fiber Connector: SC or ST

Cable Requirements:

Single-mode: 8.3/125, 8.7/125, 9/125, or 10/125 μm

Multi-mode: 50/125, 62.5/125, or 100/140 μm

Transmission Distance:

Single-mode: 40 km

Multi-mode: 5 km

Wavelength:

Single-mode: 1310 nm

Multi-mode: 850 nm

Tx Output:

Single-mode: > -5 dBm

Multi-mode: > -5 dBm

Rx Sensitivity:

Single-mode: -25 dBm

Multi-mode: -20 dBm

Point-to-Point Transmission: Half-duplex or full-duplex

Ring Transmission: Half-duplex

RS-232/422/485 Side

Connector: DB9

RS-232 Signals: TxD, RxD, GND

RS-422 Signals: TxD+, TxD-, RxD+, RxD-, GND

RS-485-4w Signals: TxD+, TxD-, RxD+, RxD-, GND

RS-485-2w Signals: Data+, Data-, GND

Baudrate: 50 bps to 921.6 kbps

ESD Protection: 15 kV for all signals

Physical Characteristics

Dimensions: 86.8 x 136.5 x 21 mm (3.42 x 5.37 x 0.83 in)

Environmental Limits

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

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

Ambient Relative Humidity: 5 to 95% (non-condensing)

Power Requirements

Input Voltage: 12 VDC

Power Consumption: 150 mA @ 12 V

Standards and Certifications

EMC: CE, FCC

EMI: FCC Part 15 Subpart B Class A

EMS:

EN 61000-4-2 (ESD) Level 3,

EN 61000-4-3 (RS) Level 2,

EN 61000-4-4 (EFT) Level 2,

EN 61000-4-5 (Surge) Level 2,

EN 61000-4-6 (CS) Level 2,

EN 61000-4-8 (PFMF) Level 3

Freefall: IEC 60068-2-32

Green Product: RoHS, CRoHS, WEEE

MTBF (mean time between failures)

Time: 514,926 hrs

Database: Telcordia (Bellcore), GB

Warranty

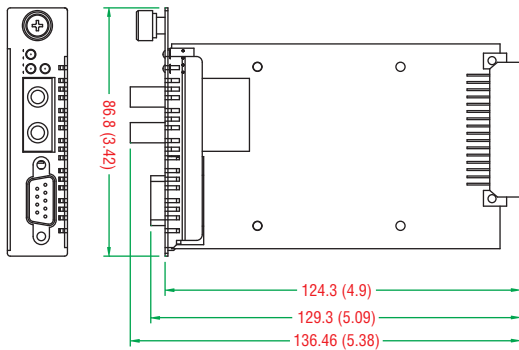
Warranty Period: 5 years

Details: See www.moxa.com/warranty

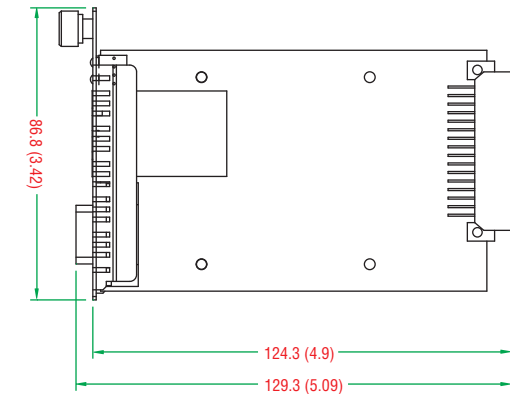
Dimensions

Unit: mm (inch)

TCF-142-M/S-ST-RM Series

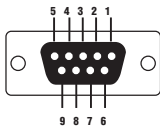


TCF-142-M/S-SC-RM Series



Pin Assignment

DB9 female connector



Pin	RS-232	RS-422/485-4w	RS-485-2w
1	–	RxD-(A)	Data-(A)
2	TxD	RxD+(B)	Data+(B)
3	RxD	TxD+(B)	–
4	–	TxD-(A)	–
5	GND	GND	GND
6	–	–	–
7	–	–	–
8	–	–	–
9	–	–	–

: Ordering Information

Available Models

TCF-142-M-SC-RM: RS-232/422/485 to multi-mode fiber slide-in module converter, SC connector

TCF-142-M-ST-RM: RS-232/422/485 to multi-mode fiber slide-in module converter, ST connector

TCF-142-S-SC-RM: RS-232/422/485 to single-mode fiber slide-in module converter, SC connector

TCF-142-S-ST-RM: RS-232/422/485 to single-mode fiber slide-in module converter, ST connector

Package Checklist

- 1 TCF-142-RM fiber converter
- Quick installation guide (printed)
- Warranty card