

TCF-142 系列

RS-232 / 422 / 485 轉光纖轉換器



特色與優點

- 環與點對點的傳輸模式
- 可延伸 RS-232/422/485：使用單模最遠達 40 公里(TCF-142-S)、使用多模最遠達 5 公里(TCF-142-M)
- 減少訊號干擾
- 保護免於電子干擾與化學侵蝕
- 串口傳輸速率高達 921.6 kbps
- 提供寬溫度型號，適合 -40 至 75°C 的作業環境

認證



簡介

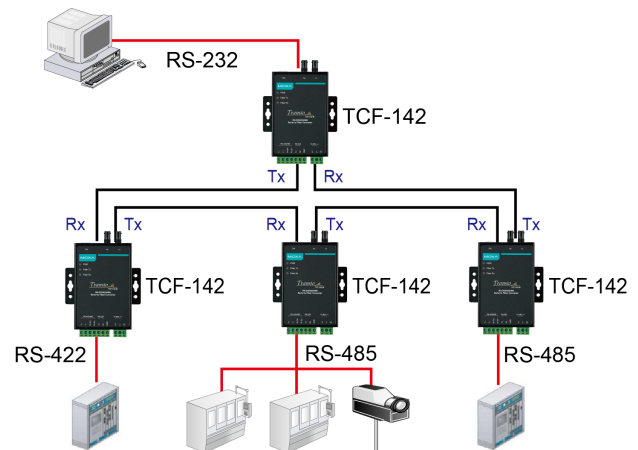
TCF-142 光纖轉換器配備有多重介面電路，可以處理 RS-232 或 RS-422/485 串列介面以及多模或單模光纖傳輸。TCF-142 轉換器可將串列傳輸距離延伸最遠可達 5 公里 (TCF-142-M, 多模光纖) 或 40 公里 (TCF-142-S, 含單模光纖)。TCF-142 可設定成轉換 RS-232 訊號或 RS-422/485 訊號，但非兩者同時。

自動速率偵測

TCF-142 轉換器可以自動偵測串列速率，這是一個非常方便的功能。即使裝置的速率改變，訊號仍將透過轉換器傳輸而且不會遺失任何資料。

環狀傳輸

TCF-142 可連接串列裝置至光纖環。形成環是將 TCF-142 的光纖 Tx 埠連接至相鄰轉換器的光纖 Rx 埠。當環設置完成後，只需使用 DIP 開關將 TCF-142 轉換器配置為環模式。當某個節點發射訊號時，訊號會沿著環傳輸，直到訊號返回到發射單元，發射單元隨即中斷訊號。利用 TCF-142，您可設定總周長高達 100 公里的光纖環。



自動資料導向控制

自動資料導向控制 (ADDC) 是 Moxa 研發的硬體資料流解決方案，用於處理 RS-485 資料導向控制。ADDC 可自動感應和控制 RS-485 資料導向，不再需要信號交換。

規格

Serial Interface

No. of Ports	2
Serial Standards	RS-232 RS-422 RS-485

Baudrate	50 bps to 921.6 kbps (supports non-standard baudrates)			
Flow Control	ADDC (automatic data direction control) for RS-485			
Optical Fiber	Low-Speed Fiber Module		Multi-Mode	Single-Mode
	Fiber Cable Requirements		50/125 μ m, 800 MHz	G.652
			62.5/125 μ m, 500 MHz	
	Typical Distance		5 km	40 km
	Wavelength	Typical (nm)	850	1310
		TX Range (nm)	840 to 860	1290 to 1330
		RX Range (nm)	800 to 900	1100 to 1650
	Optical Power	TX Range (dBm)	0 to -5	0 to -5
		RX Range (dBm)	0 to -20	0 to -25
		Link Budget (dB)	15	20
		Dispersion Penalty (dB)	1	1
Note: When using a power meter to measure the fiber TX power, set the baudrate to 9,600 bps and send data (00, ..., 0h) to the serial converter's serial port.				
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			
Connector	7-pin terminal block			
Latency	300 ns			
Serial Signals				
RS-232	TxD, RxD, GND			
RS-422	Tx+, Tx-, Rx+, Rx-, GND			
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND			
RS-485-2w	Data+, Data-, GND			
Power Parameters				
No. of Power Inputs	1			
Input Current	70 to 140 mA @ 12 to 48 VDC			
Input Voltage	12 to 48 VDC			
Overload Current Protection	Supported			
Power Connector	Terminal block			
Power Consumption	70 to 140 mA @ 12 to 48 VDC			
Reverse Polarity Protection	Supported			
Physical Characteristics				
IP Rating	IP30			
Housing	Metal			

Dimensions (with ears)	90 x 100 x 22 mm (3.54 x 3.94 x 0.87 in)
Dimensions (without ears)	67 x 100 x 22 mm (2.64 x 3.94 x 0.87 in)
Weight	320 g (0.71 lb)
Installation	Wall mounting

Environmental Limits

Operating Temperature	Standard Models: 0 to 60°C (32 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°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 IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 1 kV IEC 61000-4-5 Surge: Power: 1 kV IEC 61000-4-6 CS: 3 V IEC 61000-4-8 PFMF
Environmental Testing	IEC 60068-2-1 IEC 60068-2-2 IEC 60068-2-3
Safety	UL 60950-1
Vibration	IEC 60068-2-6

MTBF

Time	780,480 hrs
Standards	Telcordia (Bellcore), GB

Warranty

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

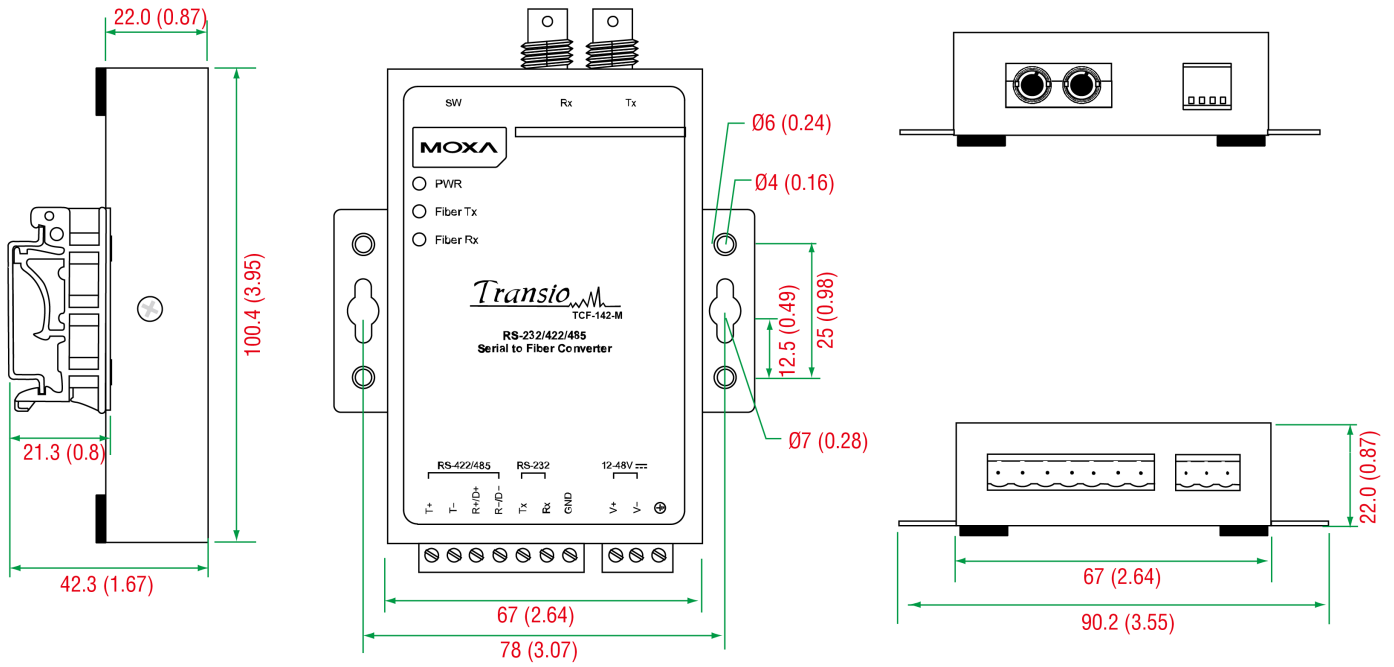
Package Contents

Device	1 x TCF-142 Series converter
Installation Kit	1 x rubber stand
Documentation	1 x quick installation guide 1 x warranty card

尺寸

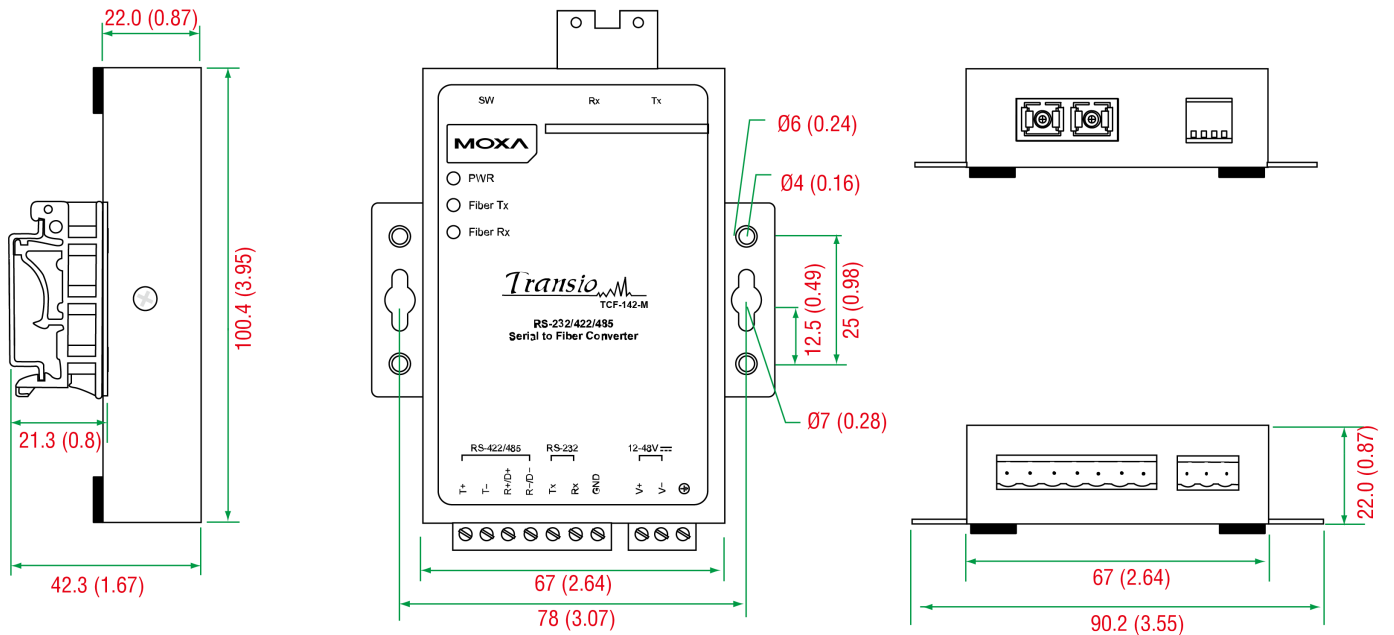
TCF-142-M/S-ST

單位：公釐 (英吋)



TCF-142-M/S-SC

單位：公釐 (英吋)



訂購資訊

Model Name	Operating Temp.	Fiber Module Type
TCF-142-M-ST	0 to 60°C	Multi-mode ST
TCF-142-M-SC	0 to 60°C	Multi-mode SC
TCF-142-S-ST	0 to 60°C	Single-mode ST

Model Name	Operating Temp.	Fiber Module Type
TCF-142-S-SC	0 to 60°C	Single-mode SC
TCF-142-M-ST-T	-40 to 75°C	Multi-mode ST
TCF-142-M-SC-T	-40 to 75°C	Multi-mode SC
TCF-142-S-ST-T	-40 to 75°C	Single-mode ST
TCF-142-S-SC-T	-40 to 75°C	Single-mode SC

配件 (選購)

DIN-Rail Mounting Kits

DK35A	DIN-rail mounting kit, 35 mm
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Power Adapters

PWR-12125-USJP-S1	Non-locking barrel plug, 12 VDC, 1.25 A, 100 to 240 VAC, United States/Japan (US/JP) plug, 0 to 40°C operating temperature
PWR-12150-AU-S2	Non-locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, Australia (AU) plug, 0 to 40°C operating temperature
PWR-12150-EU-S2	Non-locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, Continental Europe (EU) Plug, 0 to 40°C operating temperature
PWR-12150-UK-S2	Non-locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, United Kingdom (UK) plug, 0 to 40°C operating temperature
PWR-12150-CN-S1	Non-locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, China (CN) plug, 0 to 40°C

Power Cords

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