MxPro 5

Fibre Optic Converter

Introduction

The Mxp-631 media converters are equipped with a multiple interface circuit that can handle RS-232 or RS-422/485 serial interfaces and multi-mode or single-mode fiber. Mxp-631 converters are used to extend serial transmission up to 5km (Mxp-631-MM with multi-mode fiber) or up to 40km (Mxp-631-SM with single-mode fiber). The Mxp-631 converters can be configured to convert either RS-232 signals, or RS422/485 signals, but not both at the same time.

Automatic Baudrate Detection

The Mxp-631 converters 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 data loss.

Ring Operation

The Mxp-631 converters can be used to connect serial devices to a fiber ring. To form the ring, connect to the Tx port of one Mxp-631 to the Rx port of a neighbouring converter. Once the ring is set up, simply use the DIP switches to configure the Mxp-631 converters for "ring mode". When one node transmits a signal, the signal travels around the ring until it returns back to the transmitting unit, which then blocks the signal. With the Mxp-631, you can set up fiber rings that have a total circumference of up to 100km.

Automatic Data Direction Control (ADCC®)

ADDC® is a patented hardware data flow solution to handle RS-485 data direction control. ADDC® senses and controls RS-485 data direction automatically, making it unnecessary to use the hand shaking signal.

Features

- Extends RS-232/422/485 transmission up to:
- *40 km with single-mode - Mxp-631-SM
- *5 km with multi-mode - Mxp-631-MM
- Compact size
- Protects against electrical interference and chemical corrosion
- Supports baud rates of 50 bps to 921.6 Kbps
- Wide temperature models available (-40 to 75°C)

Specification

Fiber Connector	SC or ST
Cable Requirements	Single-mode: 8.3/125, 8.7/125, 9/125 or 10/125 Multi-mode: 50/125, 62.5/125 or 100/140
Transmission Distance	Single-mode: 40km Multi-mode: 5km
Wavelength	Single-mode: 1310nm Multi-mode: 850nm
Tx Output	Single-mode: > -5dBm Multi-mode: > -5dBm
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	Terminal Block
RS-232 Signals	Tx, Rx, 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
Physical Characteristics:	
Housing	Aluminium
Dimensions	Without ears: 67 x 100 x 22mm (2.64 x 3.94 x 0.87in) With ears: 90 x 100 x 22mm (3.54 x 3.94 x 0.87in)
Enviromental Limits:	
Operating Temperature	Standard Models: 0 to 60°C (32 to 140°F) Wide Temp Models: -40 to 75°C (-40 to 167°F)
Operating Humidity	5 to 95% RH
Storage Temperature	-40 to 75°C (-40 to 167°F)
Power Requirements:	
Input Voltage	12 to 48 VDC
Power Consumption	140ma @ 12V
Power Line Protection	2 Kv Burst (EFT), EN61000-4-4 2 Kv Surge, EN61000-4-5
Voltage Reversal Protection	Protects against V+/V- reversal
Over Current Protection	1.1A (protects against two signals shorted together)
Regulatory Approvals:	
FCC	Part 15 Subclass B
UL/CUL	UL60950-1
EMI	EN55022 1998, Class B
EMS	EN61000-4-2 (ESD), Criteria A, Level 3 EN61000-4-3 (RS), Criteria A, Level 2 EN61000-4-4 (EFT), Criteria A, Level 2 EN61000-4-5 (SURGE), Criteria A, Level 3 EN61000-4-6 (CS), Criteria A, Level 2 EN61000-4-8 (SFMF), Criteria A, Level 1
Warranty:	
Warranty Period	3 years

Order Codes and Options

Mxp-631-MM:	RS-232/422/485 to multi-mode optical fiber media converter
Mxp-631-SM:	RS-232/422/485 to single-mode optical fiber media converter
Mxp-542:	24VDC - 24VDC Convertor / Isolator (required if powering Mxp-631 from an MxPro 5 control panel)

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