MxPro 5

Fibre Optic Conversion

Introduction

Modern day networking often calls for system integration using Fibre Optic cables, which the Ad-Net network can fully suport using the Mxp-631 Fibre Optic conversion devices.

The devices convert RS-485 serial data from the Ad-Net network to Multi/Single-Mode fibre optic topology using the following part codes:

1) Mxp-631-MM - Multi-Mode for distances up to 5km

2) Mxp-631-SM - Single-Mode for distances up to 40km

Please check the cable variation installed onsite before ordering the appropriate convertors.

Automatic Baudrate Detection

The Mxp-631 converters are factory configured to receive data using Automatic Baudrate Detection, so no manual configuration of the internal setup switches should be required to terminate your Ad-Net network.

Point-Point vs Ring Operation

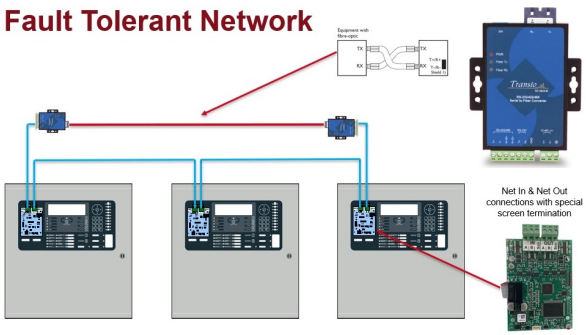
The Mxp-631-SM/MM convertors are compatible with the Ad-Net Fault-Tolerant network only and use the Point-Point communication method since the Ad-Net network forms its own 'Ring' topology. See example diagram opposite for method of connectivity.

Extenal DIP switches need to be configured on the device to select the method of recieving data transmission and appropriate toplogy as shown in the image opposite.

Automatic Data Direction Control (ADCC®)

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

Fault Tolerant Network



Fibre Optic Interface Setup

- Quick setup via DIP switch

Serial Connection	SW1	SW2
RS 485 (2 Wire)	OFF	ON

Built-in 120Ω Terminator This Node	SW3
Panel 1	ON

Fibre Mode	SW 4
Point-to-point mode	OFF



Features

- Extends RS-232/422/485 transmission up to:
- *Mxp-631-MM - Multi-Mode for distrances up to 5km
- *Mxp-631-SM - Single-Mode for distrances up to 40km
- 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
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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As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice.