



RS232/RS485/RS422 Over Fiber Optic Modem MWF501-D

1-port RS232/RS485/RS422 Over Fiber Converter, Self-Healing/Redundant Ring

➤ Features

- Support 1-port RS-232/RS-485/RS-422 to Fiber;
- Support Self-healing, Redundant Ring function;
- Supports up to 255 fiber nodes;
- Supports up to 128 nodes of RS-485/422 devices per fiber node;
- Plug-and Play(hot-pluggable);
- ST/SC/FC fiber optic connectors optional;
- Fiber optic range up to 20KM;
- 600W surge protection;
- 15kv static protection(ESD);
- Built-in selectable 120-Ohm end-of-line terminator for RS-485/RS-422 busses;
- Signal flow is automatically identified and transparently transmitted;
- Imported optical transceiver module to ensure the transmission distance;
- The baud rate adapts without changing the user protocol;
- Industrial design, aluminum housing;
- Support DIN-Rail installation;
- Support DC12-48V or AC/DC 220V;
- Working temperature range:-40~85°C;
- Warranty:5years



➤ Introduction

MWF501-D is a rugged, industrial grade, multi-functional, Din-Rail RS-232/RS-485/RS-422 to fiber optic converter which can convert either full-duplex, half-duplex RS-485 or full-duplex RS-422 data up to 20km with single-mode cable. The device is fully plug-and-play, and supports up to 255 fiber nodes.

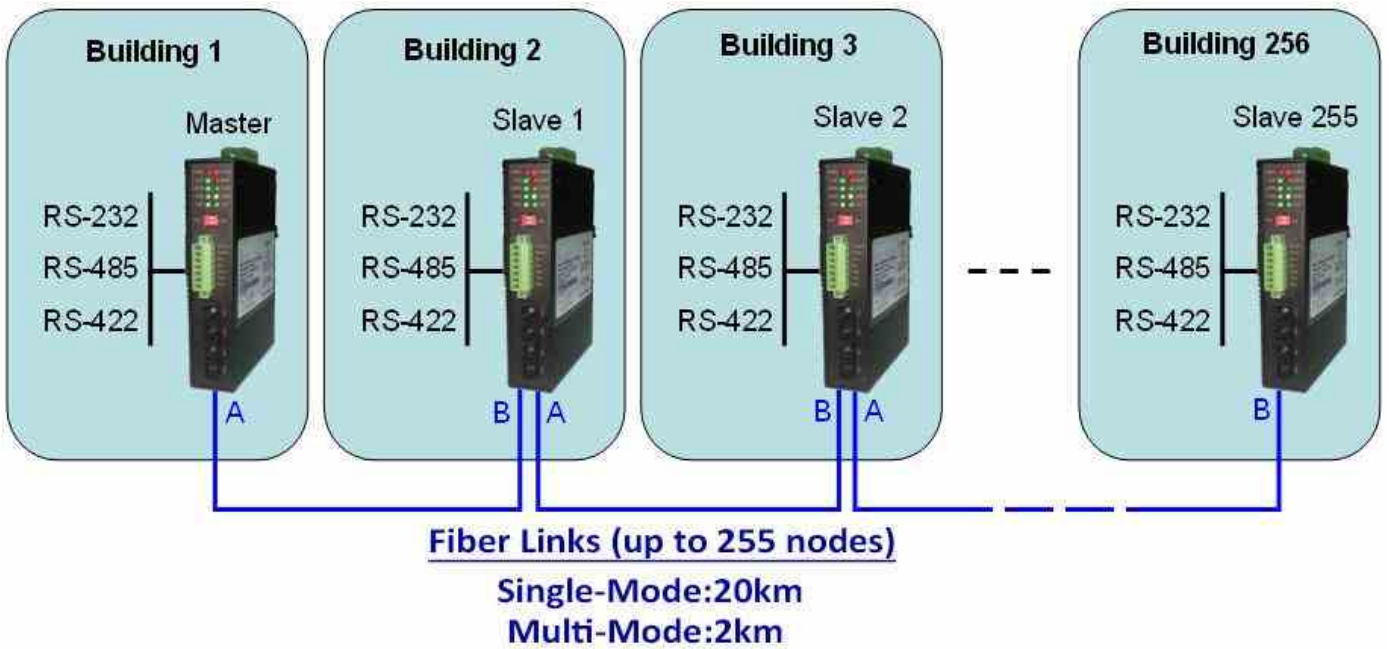
MWF501-D can be configured as a daisy-chain or a self-healing/redundant ring fiber network. When configured as a ring fiber network, the built-in self-healing feature allows the data to be transmitted clockwise or counterclockwise; therefore, failure of any individual converter will not affect other devices located on the same fiber ring, making the entire data network more robust and reliable.

MWF501-D is resistant to radio and electrical interference, such as EMI/RFI, transient surges and ground loops, built-in 600W surge protection, 15KV ESD and circuit protection, and it overcomes the limitations of conventional point-to-point fiber network and expands the serial data network in terms of distance, flexibility and reliability, widely used in various industrial controls, distributed data acquisition and other occasions, especially suitable for power system automation, traffic control and other departments.

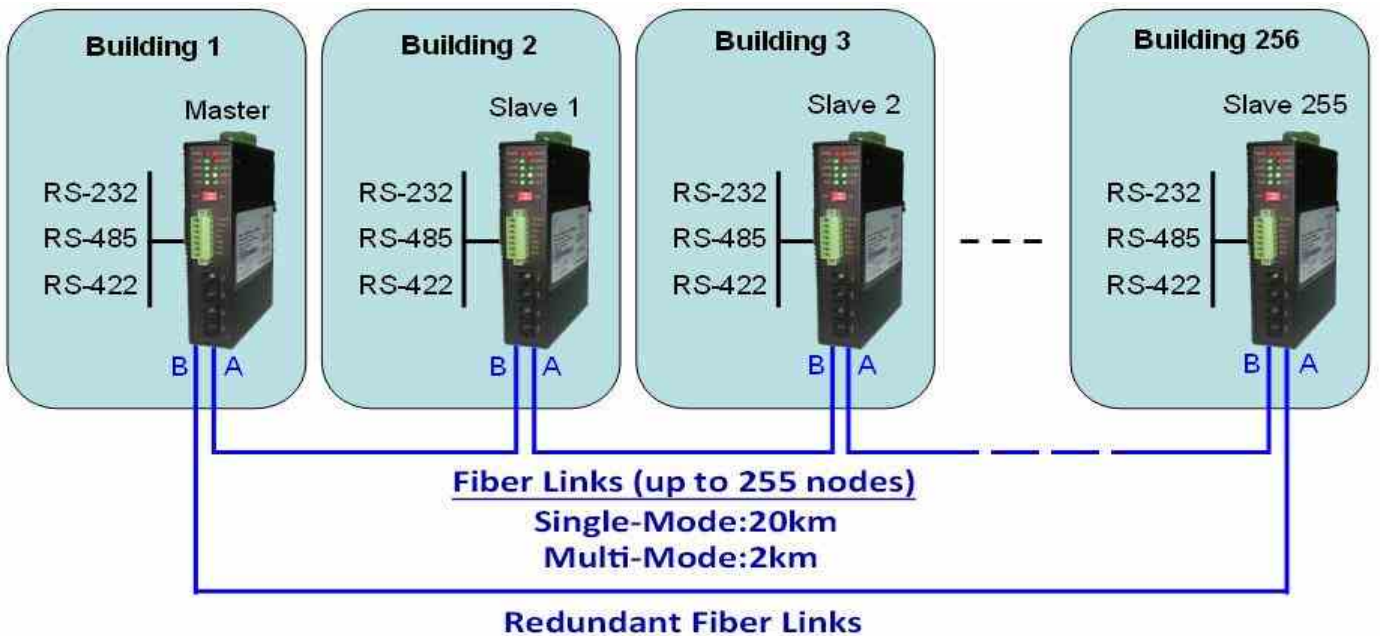
➤ Specification

Technical parameters	
Standard	Compliant with EIA RS-232, RS-485, RS-422
Interface	Serial Port: Meet RS-232/RS-422/RS-485 Physical characteristics, 7 ways Industrial terminal block
	Optical interface: Single/multi-mode optional, SC/ST/FC connector optional
Baud Rate	300bps~115.2Kbps, rate adaptive signal
LED Indicator	
Power indicator	POW
Master/slave indicator	MAIN, SUB
Data transmission indicator	LOOPA/B, TXA/B, RXA/B, TXD, RX
Power	
Power Supply	DC12-48V, AC/DC 220V
Interface	Industrial terminal block
Power	<5W
Overload protection	Support
Lightning protection	600W
Static protection	15KV
Physical Characteristics	
Shell	Aluminum housing
Dimension	144mm×33mm×97mm(H*D*W)
Weight	460g
Transmission distance	
Serial port line	RS-232, 15m@9600bps
	RS-422/RS-485, 1.2km@9600bps
Multi-mode fiber	1310nm, 2Km
Single mode fiber	1310nm, 20Km, 1550nm, 40km/60km/80km/100km
Working Environment	
Working Temp	-40~85°C
Storage Temp	-40~85°C
Relative Humidity	5%~95% (no-condensation)
Warranty	
Warranty	5 Years
Certification	CE, FCC, RoHS

➤ Application



APPLICATION 1: DAISY-CHAIN FIBER LINKS



APPLICATION 2: SELF-HEALING/REDUNDANT RING FIBER LINKS

➤ LED Indications

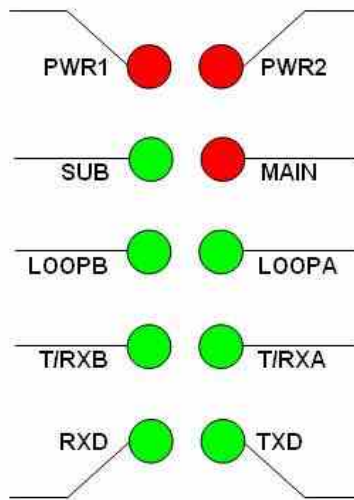
PWR1 Indicator
ON: Power supply 1 on
OFF: Power supply 1 off

SUB Indicator
ON: The unit is set as a slave

LOOPB Indicator
ON: Fiber loop B is in working condition

T/RXB Indicator
Flashing: Fiber port B is transmitting/receiving data

RXD Indicator
Flashing: Serial port is receiving data



PWR2 Indicator
ON: Power supply 2 on
OFF: Power supply 2 off

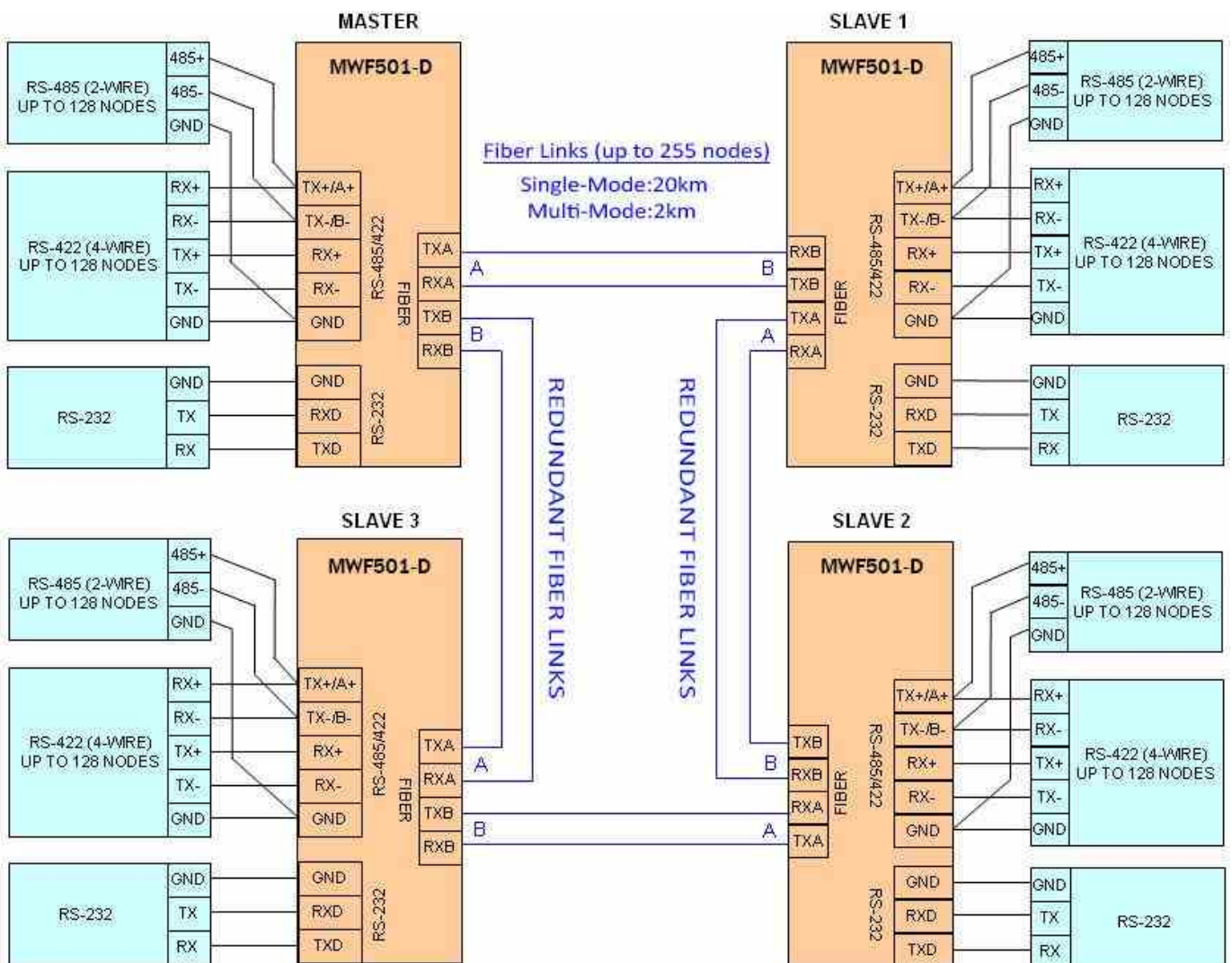
MAIN Indicator
ON: The unit is set as a master

LOOPA Indicator
ON: Fiber loop A is in working condition



T/RXA Indicator
Flashing: Fiber port A is transmitting/receiving data

TXD Indicator
Flashing: Serial port transmitting data

➤ Connection



➤ DIP Switch setting

Master/Slave and 120-Ohm Settings		
	DIP SW 1	ON: Master; OFF: Slave
	DIP SW 2	ON: 120-Ohm RS-485/422 End-of-Line Resistor Terminated OFF: 120-Ohm RS-485/422 End-of-Line Resistor Removed
Power 1 & 2 Inputs		
V1+/V1-: Power Supply 1 Input (12 to 48VDC)		
V2+/V2-: Power Supply 2 Input (12 to 48VDC)		
Power Alarm Output		
	Normally-Open Relay Alarm Output (Maximum Load: 1A/24VDC)	

➤ Ordering Information

Model NO.	Description
MW50F	1-port RS232/RS485/RS422 Over Fiber Modem, single fiber,20km, DC5-30V
MW80F	1-port RS232/RS485/RS422 Over Fiber Modem, single fiber,20km, DC5-30V or AC/DC 220V, Din-Rail
MWF501-D	1-port RS232/RS485/RS422 Over Fiber Modem, single fiber,20km, DC12-48V, AC/DC 220V, Redundant Ring

➤ Packing List

- RS232/RS485/RS422 Over Fiber Modem *1
- User manual * 1
- Certificate of quality * 1
- Warranty card * 1