# **MWF501 Series**

#### RS232/485/422 to Fiber Converter



- Support 1xRS232/485/422 serial port and 2x100Base-FX ports (multi/single-mode, SC/FC/ST connector)
- Support fast ring network redundancy function, suitable for one-master-to-multi-slave query communication system. In theory, it can connect 255 slave stations
- Serial port asynchronous communication rate 300bps to 115.2kbps transparent transmission, rate adaptive
- PCM pulse code modulation technology combined with digital phase-locked loop clock extraction technology
- Complete status indication, LED light alarm, easy maintenance and troubleshooting
- Resistant to electromagnetic interference, ground ring interference and lightning damage















### **Product Description**

MWF501 series RS232/485/422 serial port fiber ring network converter is a low-cost, adaptable to industrial environment, serial port data optical fiber transmission communication device with dual-ring self-healing function. This series of products is specially designed for industrial sites to build chain networks or dual-ring optical fiber networks to realize transparent transmission of 1×RS232/RS485/RS422 on the fiber ring network without changing the user agreement. In order to facilitate remote data communication between computers, external devices or intelligent instruments equipped with different standard serial interfaces, standard serial interfaces must be converted to each other. MWF501 series fiber converters have zero-delay automatic transceiver conversion inside. The unique I/O circuit automatically controls the direction of data flow without any handshake signals (such as RTS, DTR, etc.), ensuring that it is suitable for existing operating software and interfaces, which better solves the problems of long communication distance, high communication rate, and redundant self-healing. It also solves the problems of electromagnetic interference, ground ring interference, and lightning damage, greatly improving the reliability, security, and confidentiality of data communication.

MAIWE's fiber converter series support a variety of input range power supply options. In terms of structural installation, MWF501 series products can be wall-mounted or rail-mounted. As for the core components, the product adopts an industrial-grade quality design solution with a transmission rate of 300-115200bps. It can realize point-to-point, point-to-multipoint remote multi-machine communication network between main control computers, main control computer and microcontroller or peripherals, and realize multi-machine response communication. The product is widely used in industrial automation control systems and all-in-one cards, access control systems, parking systems, self-service banking systems, bus charging systems, canteen food sales systems, company employee attendance management systems, highway toll station systems, etc., are indispensable products for industrial communications.





## Features and Benefits

- Support asynchronous transparent transmission
- Dual-loop self-healing ensures network communication reliability
- Node RS-232/RS-485/422 optional
- PCM pulse code modulation technology combined with digital phase-locked loop clock extraction technology
- PDH technology platform, data dynamic storage and forwarding technology
- RS-485/422 line 600W/ms anti-lightning and 1500V anti-static protection
- RS-232 serial port protection circuit, hot-swappable
- Suitable for one-master-to-multiple-slave query communication systems. The number of access nodes is theoretically unlimited. It has the characteristics of convenient networking and flexible interfaces.
- Using large-scale programmable logic circuits and highly integrated optical transceiver devices, it is small in size and highly reliable.
- Serial port asynchronous communication rate 300bps to 115.2kbps transparent transmission, rate adaptive, RS-485 no delay transmission
- Provide RS-232, RS-485 or RS-422 serial ports through different pins, no dial setting required
- No delay and fully transparent communication, users do not need any debugging, plug and play
- Complete status indication, LED light alarm, easy maintenance and troubleshooting
- Industrial-grade design, aluminum alloy shell, wall-mounted or rail-mounted installation, ensuring long-term reliability of the product





Model				
Product Model	MWF501	MWF501-KG		
Interface				
Serial Port	1×RS232/485/422 serial port, baud rate of 300~115200bps			
Fiber Port	2×100Base-FX ports, FC/ST/SC connector, multimode 1310nm or single mode 1310nm/1550nm, Multimode fiber 62.5/125μm or 50/125μm, single mode fiber 9/125μm			
DIP Button	DIP 1: ON is the fiber ring network master station, OFF is the fiber ring network slave station DIP 2: ON is to enable the RS485 terminal resistor, OFF is to cancel the RS485 terminal resistor			
Indicator	Master-slave station indicator, optical port loopback indicator, optical port transceiver indicator, serial port transceiver indicator	Power indicator, master-slave station indicator, optical port loopback indicator, optical port transceiver indicator, serial port transceiver indicator		
Power Supply				
Input Voltage	DC 9~30V	DC12V, DC24V, DC48V, AC85~265V or DC110~370V power supply optional		
Power Consumption	< 2W	< 5W		
Physical Characteristics				
Dimensions	110×100×28 mm	140x35x100 mm (excluding DIN-rail mounting clip)		
Installations	Wall mounting	35mm standard DIN rail installation		
Weight	About 0.3kg	About 0.45kg		
Working Environment				
Operating Temp	-20℃~+75℃			
Storage Temp	-40°C~+85°C			
Relative Humidity	5%~95% (no condensation)			

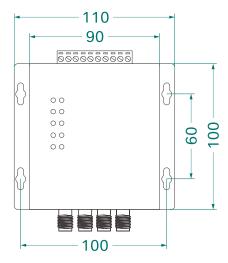




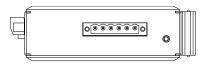
# Dimensions

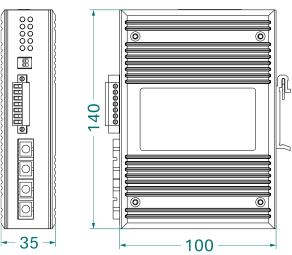
#### Unit: mm

MWF501



MWF501-KG









# Ordering Information

Standard Model	RS232/485/422	100M Fiber Port	Input Voltage
MWF501	1	2	DC 9~30V
MWF501-KG-DC12	1	2	DC12V (DC 9~18V)
MWF501-KG-DC24	1	2	DC24V (DC 18~36V)
MWF501-KG-DC48	1	2	DC48V (DC 36~72V)
MWF501-KG-AD220	1	2	AC85~264V/DC110~370V



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