MWF201 Plug-in fiber converter

1. **Function Introduction**

The MWF201 plug-in optical fiber converter realizes a long transmission distance of RS-232, RS-485 or RS-422 through optical fiber. The product has the characteristics of RS-485/422 which support multi-machine communication and convenient networking.Because optical fiber is used as the transmission medium, it has the advantages of high isolation voltage, anti-electromagnetic interference, and anti-lightning strike.Maiwe fiber optic converters are widely used in various industrial control, distributed data acquisition and other occasions, especially suitable for power system automation, traffic control and other industrial fields.

2. **Products Features**

1) RS-232,RS-485 or RS-422 interface are available.

2)Built-in 600W/ms anti-lightning and 1500V anti-static protector;

3)RS-485 signal flow direction is automatically identified, and the rate is 0～115.2Kbps adaptive;

4) RS-485 supports 128 nodes, and RS-422 supports 64 nodes;

5)Transmission distance of multi-mode is 5 kilometers, single-mode is greater than 20 kilometers;

6)The power supply and the transceiver indicator light correctly indicate the working status;

7)Industrial-grade design and all surface mount technology ensure the long-term reliability of the product.

3.**Technical index**

Power	DC5V
Electrical interface	DB9 pin terminal block
Rate	0～115.2Kbps adaptive
Fiber connectors	SC, ST, FC fiber connectors optional
Applicable fiber	Single mode 9/125μm, multimode 50/125μm, 62.5/125μm
wavelength	Single mode 1310nm/1550nm; multimode 850nm/1310nm
Transmission power	≥-8dBm
Optical receiver sensitivity	≤-20dBm
Transmission distnce	≥20Km
Error rate	≤10-9
Size	90mm×70mm×30mm

3. Instruction

1)fiber interface

MWF201 is used for point-to-point communication,SC/FC/ST fiber connector.

2)Electrical signal

The electrical signal of MWF201 is a DB9-pin terminal block, which is defined as follows:

Pin	1	2	3	4	5	6	7
definition	T+	T-	R+	R-	GND	TX	RX
Type	RS-485/RS-422				RS-232		

3)RS232 interface

Among the wiring terminals, 5, 6, and 7 are RS-232 interfaces, 5 is GND, 6 is TX (transmit signal), and 7 is RX (receive signal).

4)RS485/422 interface

The converter RS-485/422 interface automatically adapts.When used as an RS-485 interface, only three terminals 1, 2, and 5 are used, 1 is A+, 2 is B-, and 5 is GND.

When used as an RS-422 interface, pins 1, 2, 3, 4, and 5 are used. 1 is T+, 2 is T-, 3 is R+, 4 is R-, and 5 is GND.

5) Grounded

RS-485 (or RS-422) communication is recommended to be connected to GND, because RS-485 (or RS-422) communication requires that the potential difference between the two communication parties is less than 12V, and RS-485 is connected to 3 wires (A+, B-, GND), RS-422 is connected to 5 wires (TX+, TX-, RX+, RX-, GND), the signal ground wire is connected but do not connect to the ground.

6)Indicators

The MWF201 fiber optic converter provides three indicator lights, POW is the power indicator, TX indicates that there is data sent from the converter, and RX indicates that the converter receives external data.

5.Notes

1)This product is a precision equipment, so it should be kept away from moisture

2)When the equipment is not connected to the optical fiber, the optical port should be equipped with a protective cover.

6. Quality warranty

1)This product is damaged due to normal use, and it can be replaced within one year;

2) This product provides a five-year warranty service.

Transceiver rack platform

1.Product description

The fiber optic transceiver rack is a 2U fiber optic transceiver system with centralized management. The entire rack can be inserted into 16 optical fiber transceiver modules and 1 network management module (network management card is optional), each module can be used independently, different types of transceiver modules can be inserted in the same rack and work at the same time. The optical fiber transceiver rack adopts communication isolation technology to completely separate the system power supply from the transceiver module, ensuring the reliability of the entire system.

2.Products features

1)2U19-inch standard rack, which can be directly installed in the chassis, which is convenient for unified management and maintenance;

2)The network management optical fiber transceiver module supports hot swap;

3)Sixteen module slots can be inserted into 16 optical transceiver modules

4)Real-time monitoring of the power supply with full intelligence (display, alarm, self-recovery), modular power supply design, easy maintenance, good shielding, and prevent the electromagnetic signal generated by the power supply from interfering with the normal operation of the module group

5)It can monitor each optical fiber transceiver module, power supply module and fan;

6) Dual power supply hot backup, AC220V/DC48V power supply is optional.

3.Performance parameter

1)The maximum power parameter of the optical fiber transceiver module: DC5V/1A

2)The maximum number of boards: 17 modules (MAX: DC5V/1A) (including network management card), 1 network management module is located on the back of the rack

3)Normal working power of the fan: 12V/300mA

4)Working temperature: 0℃～50℃

5)Storage temperature: -40℃～70℃

6)Humidity: 5%～90% non-condensing

7)Frame size: 483mm×282.6mm×88.5mm (length×width×height)

4.Main monitoring parameters

1)Power supply, fan status

2)Equipment information of each transceiver module

3)Physical information of each port of each transceiver module

4)Setting information and working status information of each transceiver module

5.Schematic diagram of product appearance
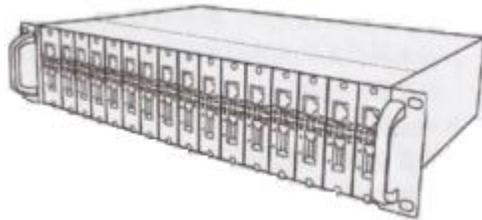
6.Power and indicator

1)Power outlet

AC socket: input AC 220V

DC socket: If it is a -48V model, the device + pole is connected to the power ground, and the device-pole is connected to the power supply -48V.

Note: Please check the polarity and voltage value of the power supply carefully and make sure that it is correct before connecting, otherwise it will cause permanent damage to the equipment. The company does not assume any responsibility for equipment failures caused by this!

2)Power indicators

Status	Implication
MB ON	The power supply is working normal
MB Off	Power failure
MN	Reserved for future use

7.Use environment

1)When using the optical fiber transceiver rack, the ambient temperature should be 0℃～50℃, and the humidity should be 5%～90%.

2)Place the fiber optic transceiver rack on a stable desktop or in a chassis, and avoid using it in the following environments as much as possible:

A：Places exposed to direct sunlight or high-temperature baking

B:Environment with drastic changes in temperature

C:Dusty or humid place

D:Environment with strong electric or magnetic field

E:Corrosive gas, flammable and explosive gas or chemical gas permeated place

8. Installation steps

1)First check whether the main and standby power modules on the backplane are properly inserted and firmly inserted;

2)Connect the AC220V/DC-48V power cord and turn on the power switch on the rear panel.