CAN Bus Fiber Converter

MWF - CAN - F

Product Description

◆Support CAN bus speed 0 ~ 500K, rate adaptive full transparent transmission;

◆The electrical interface is powered by an independent power supply module and completely isolates the ground loop;

◆Internal communication and bus data signals are optically isolated;

◆Supports a rich optical network structure, such as point-to-point, star, and chain type;

◆Industrial-grade design supports independent dual power redundancy, low power consumption and anti-jamming.

Product introduction

MWF-CAN series of products is a protocol-based industrial-grade optical fiber communication relay product designed by Wuhan Maiwei for CAN fieldbus long-distance data communication, which converts the cable communication of the bus into optical fiber communication. It realizes optical isolation of signals between bus segments, completely isolates electrical interference between bus segments, and has the functions of bus signal regeneration, extended transmission distance, increased number of nodes, and changing networking topology. This product supports various types of buses based on CAN2.0A/B such as: CAN, DeviceNet, CANOpen, SDS, NMEA2000, SAE J1939, SAE J2284, etc.

MWF-CAN series supports one-way cable data interface, one-way or two-way optical data interface, suitable for point-to-point, chain type (cascading transmission further distance), star type, ring network redundant communication structure. This product has Maiwe's original bus fault intelligent cut-off function. When a certain bus segment fails, it will not affect the other bus segment.

This series of products adopts Maiwe's original proprietary technology, resolves the bus protocol, and reproduces data through fiber optic forwarding, which greatly improves the anti-interference performance of the bus, supports 32 common rates of CAN bus (0-1M), and completely solves the high rate. Long distance transmission problems. Multimode fiber can transmit 2KM, and single mode fiber can transmit 20KM. The product reliably completes the CAN bus transmission through optical fiber, inherits and retains all the advantages of the CAN bus: peer-to-peer transmission, burst data, bus arbitration, etc., achieving high-speed long-distance transmission, electrical and ground isolation, and reduced interference. Performance, but also has the following advantages: industrial design, low power consumption, isolation protection, bus fault intelligent cutoff, relay alarm output, IP30 protection level, corrugated aluminum reinforced case, 35mm DIN rail mounting, wide power supply (DC10-36V) Input, dual power supply redundancy, etc.

Technical Specification

Electrical interface	
Interface Type	Industrial Terminal
Communication rate	Support 32 common rates (0~1Mbit/s), dial switch settings
Signal delay (Electrical interface)	1 frame+100ns
Protection	1500W Lightning Surge Protection, 15KV Electrostatic protection and prevention of co-channel interference, self-recovery overcurrent protection
Terminator	Built-in termination resistor
Optical Interface	
Optical type	Single multi-mode optional
Optical connector	SC/ST/FC optional, standard SC
Optical fiber wavelength	Multimode 1310nm, single mode 1310nm
Transmission fiber	Multimode 50/125um, 62.5/125um, 100/140um
	Single mode 8.3/125um, 9/125um, 10/125um
Transmission distance	Multimode 2Km, single mode 20/40/60/80km, more distance optional
Optical line error rate	＜10-9
Power	
Power Supply	Dual power redundant input, D10 ~36VC
Operating current	100mA@24VDC
Power	<3W
Access terminal	Industrial terminal block
Voltage Protection	Provides L1+/M/L2+ Reverse Protection
Current Protection	1A (Signal Short Protection)
Relay alarm output	electrical port fault / optical fiber link fault alarm output, Contact capacity: DC30V@1A, AC120V@1A
Physical Characteristics	
Shell	DB9 plastic case and DIN rail mounting
Dimension	136mm×105mm×52mm (Length × height × width)
Installation	Standard 35mm DIN rail mounting
Weight	0.8kg

Working Environment	
Operating Temperature	Standard type:　-10℃~70℃
	Wide temperature type: -40℃~85℃
Storage temperature	-40℃ ~ 85℃
Relative Humidity	5%~95%
Industry Standard	
EMI	EN550221998，Class A
EMS	EN61000-4-2（ESD），Criteria B，Level 4 EN61000-4-3（RS），Criteria B，Level 2 EN61000-4-4（EFT），Criteria B，Level 4 EN61000-4-5（Surge），Criteria B，Level 2 EN61000-4-2（CS），Criteria B，Level 2 EN61000-4-8（PFMF），Criteria A，Level 3
Certification	CE, FCC

Product Ordering Information

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MWF-CAN-F	1 CAN port, 1 single/ multimode optical ports, SC/ST/FC available(standard ST port), Supports peer-to-peer topology