

Fiber-Optic Systems - CAN Link

Model FO-CANFD & CANFD-R

- Monitor / Stimulate equipment under test (EUT) with differential CANFD Signals at rates up to 4 Mbit/s
- RFI/EMI validated for EMC at 200 V/m (46dB V/m) from 500 kHz to 18 GHz and 600V/m (pulsed 5% duty-cycle & 5 μ s rise-time) 1 GHz to 2.5 GHz
- Low-Power circuitry for operating >24 hours with 3 alkaline 'AA' batteries
- Fiber-Optic CANFD Receiver used with FO-CANFD EM Hardened Transceiver
- Universal AC power input
- Jumper selectable termination values of 60 Ω , 120 Ω , and ∞



Description

The *FO-CANFD* and *FO-CANFD-R* modules combine to create a robust and versatile differential CANFD link. Custom circuitry was specifically engineered to reduce latency providing a bi-directional link even at rates of 4 Mbit/s. The modules are inherently compatible with most differential CAN and CANFD protocols.

Designed for convenience, the *FO-CANFD* is capable of more than 24 hours of battery run time. The *FO-CANFD* modules are compatible with 'AA' sized alkaline batteries for easy replacement or more cost effective rechargeable batteries. The CAN bus pin-out is standard to most equipment avoiding custom cables.

The *FO-CANFD* modules have integrated filtering that ensures signal integrity. The *FO-CANFD* module shielding provides high immunity from electromagnetic interference (EMI) and electromagnetic pulse (EMP), while providing low radiated emissions. This allows for uncompromising electromagnetic compatibility (EMC) testing/engineering. The *FO-CANFD* modules are validated for EMC up to 200 V/m (46 dB V/m) at 500 kHz to 18 GHz, and 600V/m (pulsed 5% duty-cycle & 5 μ s rise-time) 1GHz to 2.55 GHz.

Fiber-Optic Systems - CAN Link

Specifications

PARAMETER	FO-CANFD SPECIFICATION	FO-CANFD-R SPECIFICATION
System Characteristics and Performance (all specs over temperature)		
General		
TX/RX Signal Type	Differential	Differential
Data Rate	Up to 4 Mbit/s	Up to 4 Mbit/s
Copper Length Equivalent of Both Modules ¹	19.7 m @ 1 MHz	19.7 m @ 1 MHz
Termination Resistance		Jumper selectable 60Ω / 120Ω / ∞
Power Source	3-AA batteries	Universal AC input
Battery Life (alkaline batteries)	>24 Hours	
Physical		
Input / Output Connector	D-Sub 9 pin	D-Sub 9 pin
Optical Connectors	ST	ST
Optical Cables	Multimode graded-index 62.5/125 μm or 100/140 μm	Multimode graded-index 62.5/125 μm or 100/140 μm
Optical Cable Length ²	49 ft (15 m) maximum @ 1 Mbit/s	49 ft (15 m) maximum @ 1 Mbit/s
Environmental		
Operating Temperature	32 °F to 122 °F (0 °C to 50 °C)	32 °F to 122 °F (0 °C to 50 °C)
EMC	200 V/m (46 dB V/m) at 500 kHz to 18 GHz 600 V/m (pulsed 5 % duty-cycle & 5μs rise-time) 1 GHz to 2.5 GHz	
QUALITY AND SAFETY		
CE Mark	Declaration of Conformity provided	Declaration of Conformity provided

¹ Does not include the delay for fiber-optic cable

² Longer fiber-optic cable lengths possible at lower data rates

8500 Ance Road
Charlevoix, MI 49720
Tel: 231-547-5511
Fax: 231-547-7070
02-13-24
Rev. A

MICHIGAN SCIENTIFIC
corporation
<http://www.michsci.com>
Email: mscinfo@michsci.com

321 East Huron Street
Milford, MI 48381
Tel: 248-685-3939
Fax: 248-685-5406