

# FO512

Fiber Optic Modem

## FEATURES



- Master/Local Operation
- Electrical Isolation
- Eliminates Lightning Damage
- 6 LED indicators
- Anti streaming circuits
- Battery Backup
- Complies with NEMA/170/2070 Environmental Specs.
- Operates Full Duplex in a Multi-Drop/ Point to Point
- Single Mode or Multi Mode
- Rugged Aluminum case

## DESCRIPTION

The FO512 is a dual mode, full duplex, multi-drop, communications link designed to interconnect electronic equipment using RS-232 ports via fiber optic cables.

Two sets of front mounted fiber-optic receptacles mate to ST type connectors (FC and SC connectors are available).

There are 6 LED's located on the front panel, two for each channel to indicate Transmit and Receive, one to indicate AC power and one to indicate anti-streaming (fault).

The primary port, DB25 wired as DCE, is located on the rear of the FO512 and provides electrical interface to any RS-232 port. An external cable is required to complete the interface to the host unit.

A secondary RJ45 port is also available on the rear panel. This port may be used to couple two FO512s together providing 4 channel communications to any host at a single location.

The FO512 is available with a rechargeable NiCad or alkaline battery. This optional battery provides temporary power when the electronic equipment is removed for servicing and during short electrical outages.

The FO512 is housed in an aluminum case, 5" W X 1.625"H X 8"L. The case is supplied with an aluminum panel mount plate

## OPERATION

The FO512 is operated in one of two modes - Master or Local - as chosen by a rear mounted switch. The FO512 is a full duplex device, whether operated in the Master or Local Modes.

Full duplex allows system testing with a bit error rate tester.

In the Master mode, the FO512 receives signals from the optical detectors (D1 and D2), converts data to electronic impulses, and passes it to the (Master) host. During transmissions, the FO512 receives data from the (Master) host, converts that electronic data into optical signals, and transmits them via emitters, (E1 and E2).

The Local mode of the FO512 is unique to fiber optic communication devices. When the FO512 is functioning as a Local, data is passed through a multi-drop of FO512's. At each local FO512, the signal is received and regenerated prior to transmission to the next FO512. This design provides distant FO512's with brilliant, clean signals, as if they were physically close to the master.

When a continuous "On" condition of 1-second duration occurs, of either receive channel, the output of that channel is turned off.

This is referred to as the anti streaming feature. The circuit will automatically reset if the "On" condition turns off for 10 milliseconds.

Anti streaming is indicated by a single LED indicator.



TRAFFIC FIBER SYSTEMS

[www.trafficfibersystems.com](http://www.trafficfibersystems.com)

TRUGGED IN



## SPECIFICATIONS

### Electrical Requirements:

Voltage: 12VDC  
Current: 24MA Continuous  
90Ma max.

### Battery Requirements: Optional - NiCad

Provides 10Hr. of backup  
Voltage: 8.42VDC NiCad  
Current: 12MA Continuous  
60MA max.

### Data Link Sensitivity

Max: 0 DBM  
Min.: -40 BDM

### Date Rate:

300-38.4K Baud

### Power Budget:

Multimode:		Single Mode:	
@0.3K	22.9dB	@0.3K	21.1dB
@1.2K	24.3dB	@1.2K	24.5dB
@9.6K	25.2dB	@9.6K	25.8dB
@19.2K	25.3dB	@19.2	26.3dB
@38.4K	25.3dB	@38.4	26.8dB

### Connectors:

ST Type Standard  
FC, or SC are available by special order

### Operating Temperature Range:

-35 C to +75 C

### Operating Range

MODEL	OPERATION	WAVE LENGTH	PEAK MA	RANGE
FO400MM	MULTI DROP	850nm	165	3km
FO400SM	MULTI DROP	1310nm	165	16km



TRAFFIC FIBER SYSTEMS

1495 NW Gilman Blvd. #4  
Issaquah, WA 98027  
Phone: 425.392-3902  
Fax: 425.392-3903  
[www.trafficfibersystems.com](http://www.trafficfibersystems.com)