

# FOI-DSE3

## FIBER OPTIC ISOLATOR



### Description

The FOI-DSE3 provides complete electrical isolation for E3 communications.

The unit can be used in areas of high electrical noise or in and out of RF shielded enclosures. The fiber optic cable is not susceptible to interference caused by impulse noise, cross-talk, or EMI. Privacy of communications is also enhanced because the fiber optic cable does not radiate any emissions.

In addition, fiber optic cable offers much longer transmission distances than copper wiring. Traditional E3 coax cabling is limited to a maximum distance of 1100ft (335m), but multimode optics on the unit can extend the distance to 2km, while singlemode optics can further extend the distance to 20km. A typical link consists of two FOI-DSE3, one at each end of the network, with a duplex fiber optic cable between them as shown under "TYPICAL APPLICATION".



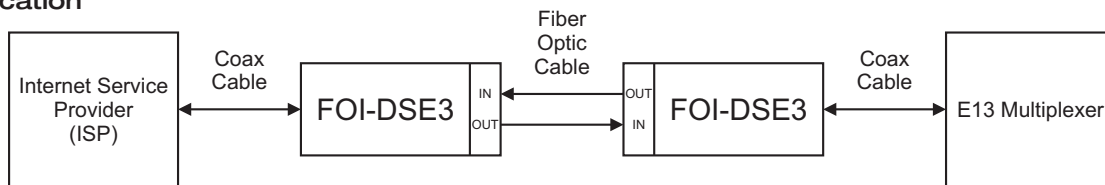
### T/E Carrier

#### E3

#### Features:

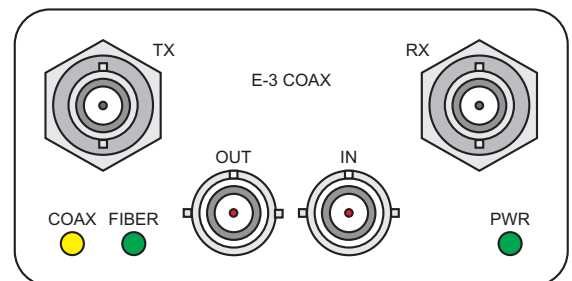
- Data Rate: 34.368 Mbps
- Compliant with:
  - ITU-T G.703
  - ITU-T G.823
  - ITU-T G.775 for loss of signal
- Applications include:
  - SONET Add/Drop Multiplexers (ADMs)
  - PDH Equipment
  - ATM WAN access routers and switches
- Satisfies K41 protection specifications for E3 systems.

### Typical Application



### LED Indicators

Label	Color	Description
PWR	Green	Power supply in FOI unit is operating properly.
	Off	No power from the PSQ power supply or open fuse inside the FOI unit. Check that the PSQ power supply is operating properly. If the PSQ power supply is good, separate the FOI unit from the PSQ power supply for 30 seconds and then reattach so that the fuse inside the FOI unit has time to reset. If the PWR led is still off or not constant, replace the FOI unit.
COAX	Amber	Coax receive data is being detected.
	Amber Flash	Line code violation detected. More than three consecutive zeros were detected in the coax receive data or the previous line code violation is the same polarity as the current one.
	Off	No coax receive data detected or threshold level is below $175 \pm 75$ periods. <b>The receive range on the RX BNC has been set to 104-1200 mVpk, but can be changed to 25-80 mVpk to compensate for low amplitude E3 signals. Also, if a longer length coax cable is required for the TX BNC, the line build-out can be increased to distances of 225ft or more. Please call FiberPlex to specify these conditions.</b>
FIBER	Green	Optical signal in detected.
	Off	No optical signal in or optical level too low. Check that the opposite unit has power and that the fiber optic cables are properly connected. The transmit OUT optic from one end of the network connects to the receive IN optic at the opposite end as shown under "TYPICAL APPLICATION".



FOI-DSE3-ST Front View

**Specifications**

		minimum	typical	maximum	unit
<b>Power Requirement</b>	Voltage Range	7	9	12	V
	Supply Current	-	300	-	mA
<b>Environmental</b>	Storage Temperature	-40	-	85	°C
	Operating Temperature	0	-	50	°C
<b>Data Rate</b>	34.368 Mbps				
<b>Line Encoding</b>	AMI (Alternate Mark Inversion) / HDB3 (High Density Bipolar 3)				
<b>Interface Connector</b>	BNC				
<b>Case Dimensions</b>	Size 4	<b>length</b>	<b>width</b>	<b>height</b>	<b>weight</b>
		4.5 in (114 mm)	1.453 in (37 mm)	2.562 in (65 mm)	2 lb (0.9 kg)

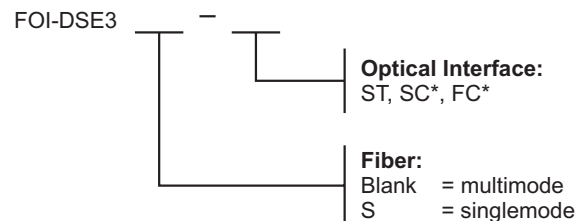
**Optical Characteristics**

Fiber	Size	Max Distance	Wavelength	Output Power	Receiver Sensitivity	Loss Budget
<b>Multimode</b>	62.5 / 125 μm	2 km	1300 nm	-16 dBm	-33 dBm	17 dB
<b>Singlemode</b>	9 / 125 μm	20 km	1300 nm	-17 dBm	-35 dBm	18 dB

**Accessories**

Model	Description
<b>CMA-2001</b>	Chassis Mounting Adapter for RMC-2101
<b>CMA-3002</b>	Chassis Mounting Adapter for RMC-3101, RMC-3102
<b>PSQ-4910</b>	Power Supply for FOI-4xxx series
<b>RMC-2101</b>	Rack Mount Chassis 3-1/2" H x 19" W, rear access
<b>RMC-3101</b>	Rack Mount Chassis 5-1/4" H x 19" W, front access
<b>RMC-3102</b>	Rack Mount Chassis 5-1/4" H x 19" W, front access with optical patch panel
<b>WMA-2001</b>	Wall Mount Adapter with optical patch
<b>WMA-3002</b>	Wall Mount Adapter

**Ordering Information**



\* Indicates Custom Catalog Item

**Standard Options:**

FOI-DSE3-ST  
FOI-DSE3S-ST

**For special applications that require custom units, please call FiberPlex for more information.**