FOI-DST3
FIBER OPTIC ISOLATOR

fiberplex TECHNOLOGIES, LLC

Description

The FOI-DST3 provides complete electrical isolation for T3 or DS3 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, crosstalk, 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 T3 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-DST3, one at each end of the network, with a duplex fiber optic cable between them as shown under "TYPICAL APPLICATION".
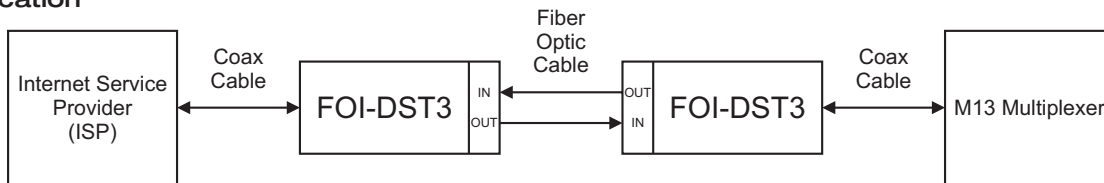
## T/E Carrier

T3 or DS3

Features:
- Data Rate: 44.736 Mbps
- Compliant with:
  - ANSI T1.102-1993
  - Telcordia GR-499-COR
  - 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 T3 systems.

Typical Application

	Coax Cable		Fiber Optic Cable		Coax Cable	
Internet Service Provider (ISP)	↔	FOI-DST3 (IN / OUT)	← OUT / → IN	FOI-DST3 (OUT / IN)	↔	M13 Multiplexer

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 ± 75 periods. The receive range on the RX BNC has been set to 90-850 mVpk, but can be changed to 25-80 mVpk to compensate for low amplitude T3 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.
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-DST3-ST Front View

FOI-DST3
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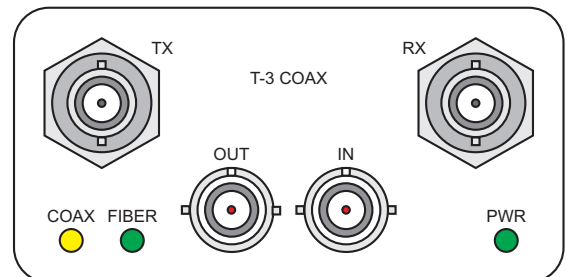
Specifications

		minimum	typical	maximum	unit
Power Requirement	Voltage Range	7	9	12	V
	Supply Current	-	300	-	mA
Environmental	Storage Temperature	-40	-	85	°C
	OperatingTemperature	0	-	50	°C
Data Rate	44.736 Mbps				
Line Encoding	AMI (Alternate Mark Inversion) / B3ZS (Binary 3 Zero Substitution)				
Interface Connector	BNC				
Case Dimensions	Size 4	length	width	height	weight
		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
Multimode	62.5 / 125 μm	2 km	1300 nm	-16 dBm	-33 dBm	17 dB
Singlemode	9 /125 μm	20 km	1300 nm	-17 dBm	-35 dBm	18 dB

Accessories

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

Ordering Information

FOI-DST3 ___ — ___

Optical Interface:
ST, SC*, FC*

Fiber:
Blank = multimode
S = singlemode
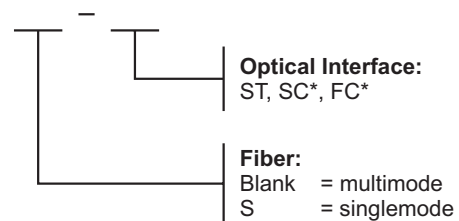
* Indicates Custom Catalog Item

Standard Options:

FOI-DST3-ST
FOI-DST3S-ST

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