

Combination WDM & Fiber Optic Mode Converter/Repeater

Model
TC3007

- Doubles Existing Fiber Cable Capacity
- Converts Multimode to Single Mode (and vice versa)
- Data Rates up to 200 Mbps
- Local Dry Contact Alarm Relay
- Test Signal Generator & 8 Indicators
- Local & Remote Loopback
- Built-In Audible Alarm Buzzer
- Built-In Redundant Power Supply
- Standalone or Rackmount (Interchangeable)



The TC3007 Multimode-to-Single Mode Fiber Optic Converter converts multimode formats to single mode formats, or vice versa, for data transmission up to 200 Mbps.

The TC3007 functions both as a Fiber Optic Mode Converter/Repeater and a 2-Channel Wave Division Multiplexer. This benefits users by effectively doubling existing fiber cable capacity in addition to its mode conversion/repeater functions.

The TC3007 will convert or repeat all popular wavelengths including 850nm, 1300nm or 1550nm. It is compatible with most communication technologies including Ethernet, Fast Ethernet, Token Ring, TAXI, OC1/OC3, ATM, FDDI and SONET. It is completely transparent to incoming data and protocols.

The TC3007 provides users with several key features including Local/Remote Loopback, Test Signal Generator, Dry Contact Alarm, Audible Alarm Buzzer, Power Redundancy, and Standalone or Rack Mount modularity.

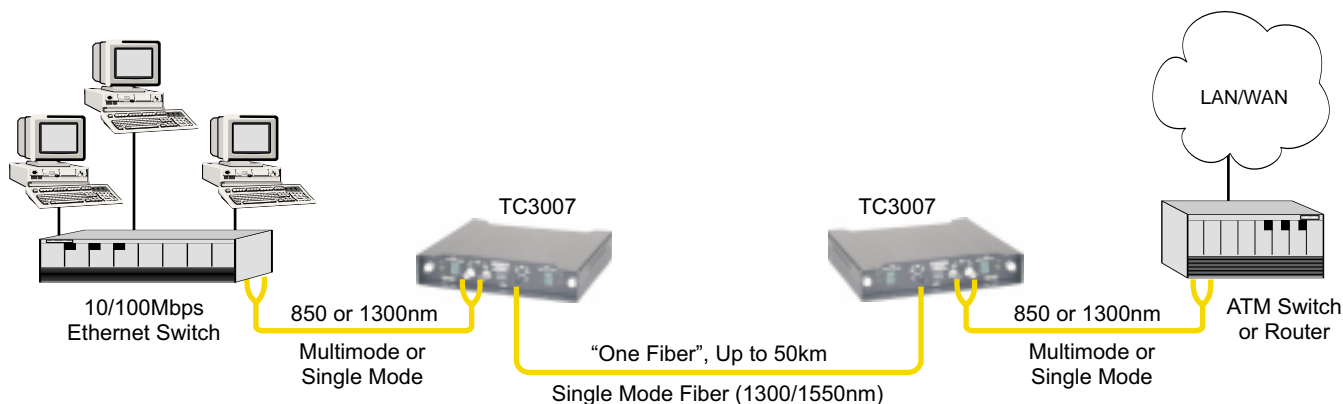
The Test Signal Generator and Dry Contact Alarm are particularly beneficial. The Signal Generator (160Mbps) helps technicians conduct various installation tests including fiber link verifications. The Dry Contact Alarm, which includes an audible alarm buzzer, identifies Optical Signal Loss on either the multimode or single mode ends.

Power redundancy is load sharing and switches over automatically in the event of a failure. Power can be either 12VDC, 24VDC, -48VDC, or 115/230VAC with an external power cube. Standalone versions are modular, i.e. used either in a standalone case or in a rack mount assembly. Standard connectors are ST or FC type. A hardened temperature version (-20° to 70°C), Model TC3007T, is also available.



Applications

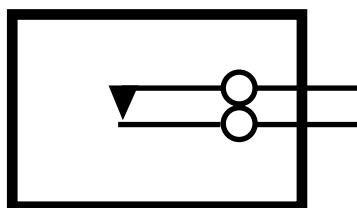
Because of its multiplexing capability, the TC3007 is often used to increase existing fiber optic cable capacity in LAN or Telephony environments that require connecting different fiber types or wavelengths, regenerating optical signals and/or extending transmission distances. Typical environments include PABX, Ethernet, Fast Ethernet, Token Ring, FDDI, ATM and SONET (OC1 & OC3)



Typical application using TC3007 "Single Fiber" Fiber Optic Mode Converters

Reply Switch Specifications:

Maximum Switch Voltage: 100VDC
Switch Current: 0.5 Amp
Maximum Carry Current: 1.2 Amp
Contact Resistance: 0.2 Ohm



to
Remote
Alarm Status
Indicator

Dry Contact Alarm Relay Switch

A terminal block connector on the TC3007 rear panel provides for the dry contact relay alarm. Normally in the OPEN position, any loss of optical signal will trigger an alarm condition and force the switch to the CLOSED position. This relay can be used in conjunction with an external device to monitor the condition of the link.

Data Rates

.....up to 200 Mbps

Optical - Single Fiber Side

TransmitterLASER

ReceiverPIN Diode

Wavelength*

.....1300/1550nm Single Mode

Fiber Optic Connectors

.....ST, Optional FC

Loss Budgets - 1300/1550nm

LASER20dB SM @9/125μm

Optical - Dual Fiber Side

TransmitterLED/ELED

ReceiverPIN Diode

Wavelength

.....850/1300nm Multimode

.....1300/1550nm Single Mode

Fiber Optic Connectors

.....ST, Optional FC

Loss Budgets - 850/1300/1550nm

Multimode @62.5/125μm15dB

Single Mode @9/125μm15dB

*Any two wavelengths are available on each unit

**Contact factory for higher requirements

System

Bit Error Rate1 in 10¹⁰ or better

Visual Indicators

.....PWRA, PWRB, VCCA, VCCB,

..MM RX, MM TX, SM RX, SM TX,

.....LOCLB, RMTLB, SM LB,

.....SIG GEN, LK TST

Alarm

Dry ContactNormal OPEN

Power

Standard12VDC @500mA (max)

Optional24VDC, -48VDC, or

.....115/230VAC with power cube

.....125VDC with power cube

Temperature

Operating-10°C to 50°C

Hi-Temp (optional)-20°C to 70°C

Storage-40°C to 90°C

Humidity95% non-condensing

Physical (Standalone Unit)

Height(3.53 cm) 1.39"

Width(18.13 cm) 7.14"

Depth(16.59 cm) 6.53"

Weight(796.5 gm) 1.76 lb

