Fiber Optic Mode Converter/Repeater

TC3024

- **Data Rates from 30 bps to 10 Mbps**
- **Supports Burst Data**
- **Distances up to 60km***
- **850nm Multimode & 1310nm/1550nm Single Mode**
- **Multiple Diagnostic LED Indicators**
- **Built-In Loopback Functions**
- **Local Dry Contact Alarm Relay**
- **Must Be Used in Pairs**
- **Stand Alone or Rackmount Chassis Available**

TC3024S Standalone Unit

2 X TC3024R
(Housed in TCRM196 1U High Rackmount Card Cage)

Supporting data rates from 30 bps to 10 Mbps, the TC3024 Mode Converter Series convert, regenerate or extend 850nm wavelengths optical signals to distances up to 60 km*.

TC3024 provides users with several key features including Dry Contact Relay Alarm, Audible Alarm Buzzer, Power Redundancy, and standalone or rackmount modularity. The Dry Contact Alarm Relay, 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 (standard), 24VDC, -48VDC, 125VDC, or 115/230VAC with an external power cube. Standalone versions are modular, i.e. used either in a standalone case or in a rackmount assembly. Standard connectors are ST.

Four DIP switches and eight LED indicators are provided to help installation and troubleshooting. High Temp (-20°C to +70°C) and Extreme Temp (-40°C to +80°C) Optional, Model TC3024T, is also available.

TC COMMUNICATIONS®
FIBER OPTIC CONNECTIVITY

Applications

The TC3024 Mode Converter Series is frequently used to convert multimode fiber optic cable to single mode, to connect various devices in Telephony or LAN communication environments. This conversion is done to crossconnect different fiber types, regenerate optical signals and/or extend transmission distances. It is also used for Burst Data applications.

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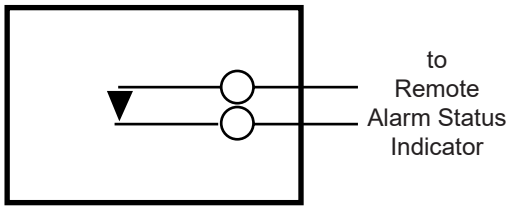
Typical Application Using TC3024 Fiber Optic Mode Converter

Reply Switch Specifications:

Maximum Switch Voltage: 60VDC
Switch Current: 1.0 Amp
Maximum Carry Current: 2.0 Amp
Contact Resistance: 0.1 Ohm



A terminal block connector on the TC3024 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.

Dry Contact Alarm Relay Switch

Data Rates
TC3024.....30bps to10Mbps

Optical
Transmitter.....LED/ELED
Receiver .....PIN Diode
Wavelength*.....850nm MM
.....1310/1550nm SM
Fiber Optic Connectors
.....ST, Optional SC
Loss Budget** - 850/1310/1550nm
Multimode @62.5/125µm.....15dB
Single Mode @9/125µm.....20dB

**850nm on the Multimode side.*

1310nm/1550nm on the Single mode side.

System
Bit Error Rate.....1 in 10^{10} or better

Visual Indicators
MM RX, MM TX, MM LB, SM RX, SM TX, SM LB, S-H, ALARM, PWRA, PWRB, Vcc

Diagnostic Functions
.....SM & MM Loopback, ...High/Low Speed, Disable Alarm

Alarm
Dry Contact.....Normal OPEN

Power
Standard.....12VDC @200mA
Optional.....24VDC, -48VDC, or .....115/230VAC (with external cube)

Temperature
Operating .....-10°C to 50°C
Hi-Temp (optional).....-20°C to 70°C
Storage .....-40°C to 90°C
Humidity.....95% non-condensing

Physical (Standalone Unit)
Height .....(3.53 cm) 1.39"
Width.....(18.13 cm) 7.14"
Depth.....(16.59 cm) 6.53"
Weight.....(512 gm) 1.5 lbs

**Contact factory for higher requirements

TC COMMUNICATIONS®
FIBER OPTIC CONNECTIVITY

Certified System™
SAI GLOBAL
ISO 9001
Quality

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Note: Information contained in this data sheet is subject to change without prior notice.

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