Fiber Optic Mode Converter/Repeater for C37.94

TC3025

- **Designed for C37.94 Teleprotection Relays**
- **Converts Multimode to Single Mode (and vice versa)**
- **Distances up to 120km***
- **8 Diagnostic LED Indicators**
- **Test Signal Generator**
- **Built-in Loopback Functions**
- **Local Dry Contact Alarm Relay**
- **Stand Alone or Rackmount**

TC3025 Standalone/Wallmount Unit

Supporting C37.94 teleprotection relays, the TC3025 Mode Converter converts, regenerates or extends 850nm, 1300nm or 1550nm wavelengths optical signals to distances up to 120 km.*

TC3025 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, SC*, or FC* type.

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 TC3025T, is also available.

TC COMMUNICATIONS®
FIBER OPTIC CONNECTIVITY

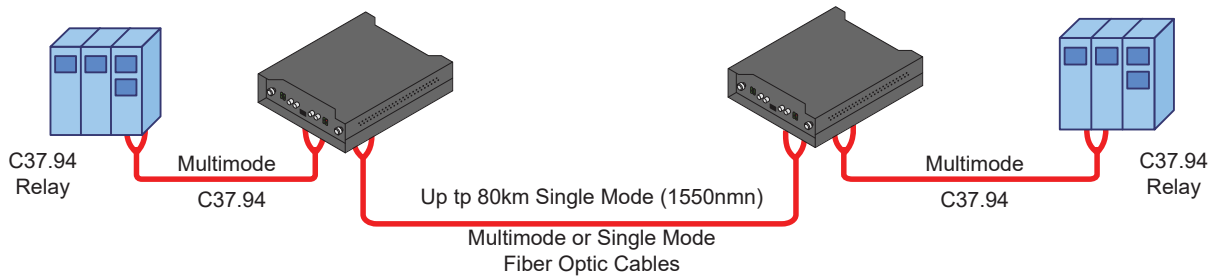
Applications

The TC3025 Mode Converter is used to convert multimode to single mode, or vice versa, for C37.94 teleprotection relays. This conversion is done to cross-connect different fiber types, regenerate optical signals and/or extend transmission distances.

Contact factory for availability

TC Communications, Inc.
17881 Cartwright Rd. Irvine, CA 92614 U.S.A.
Tel: (949) 852-1972, Fax: (949) 852-1948

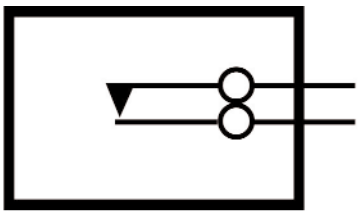
Web Site: tccomm.com
E-mail: sales@tccomm.com



Typical application using TC3025

Reply Switch Specifications:

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



Dry Contact Alarm Relay Switch

A terminal block connector on the TC3025 rear panel provides for the dry contact relay alarm.
Normally in the OPEN position, any loss of optical signal will trigger an alarm condition andforce the switch to the CLOSED position.
This relay can be used in conjunction with an external device to monitor the condition of the link.

Optical

Transmitter .....LASER (FP, DFB)
Receiver.....PIN Diode
Wavelength
Multimode..... 850nm/1300nm
Connector .....ST, SC*
Single Mode.....1310/1550nm
Connector .....ST,SC*,FC*
Loss Budget**
LASER (FP) Multimode 850nm
.....13dB @62.5/125µm
.....9dB @50/125µm
LASER (FP).....up to 28dB 1310nm*
Single Mode @9/125µm
LASER (DFB) .....up to 36dB 1550nm*
Single Mode @9/125µm

***Any two wavelengths are available on each unit*

System

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

Visual Indicators

.....PWRA, PWRB, Vcc, ALM,
..... MM RX, MM TX, SM RX, SM TX
..... MM LB, SM LB, SIGG

Alarm

Dry Contact.....Normal OPEN

Power

Standard ..... 12VDC @800mA (max)
Optional.....24VDC, -48VDC, 125VDC
.....115/230VAC with power cube

Temperature

Operating ..... –10°C to 50°C
Hi-Temp (opt.) ..... –20°C to 70°C
Extreme Temp (opt.) .... –40°C to 80°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 availability*

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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.

DTS-30250-01-03
Date: 020719