Fiber Optic Mode Converter/Repeater for C37.94

- Designed for C37.94 Teleprotection Relays
- Converts Multimode to Single Mode (and vice versa)
- Distances up to 80km*
- 8 Diagnostic LED Indicators
- Test Signal Generator
- Built-in Loopback Functions
- Local Dry Contact Alarm Relay
- Stand Alone or Rackmount

Supporting C37.94 teleprotection relays, the TC3025 Mode Converter converts, regenerates or extends 850nm, 1300nm or 1550nm wavelengths optical signals to distances up to 80 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, 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 SC, ST or FC type.

Four DIP switches and eight LED indicators are provided to help installation and troubleshooting. A hardened temperature version (-20°C to 70°C), Model TC3025T, is also available.

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.
Typical application using TC3025

Optical
Transmitter...............ELED/LASER
Receiver.......................PIN Diode
Wavelength
  Multimode................850nm
  Connector....................ST, SC
  Single Mode..............1310/1550nm
  Connector..................ST, SC, FC
Loss Budget*
  ELED........................16dB 850nm Multimode or Single Mode Fiber Optic Cables
  LASER........................26dB 1310nm
  Single Mode..............33dB 1550nm
  HI-PWR LASER...........33dB 1550nm
  Single Mode..............33dB 1550nm
*Any two wavelengths are available on each unit

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

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 higher requirements

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