

Low Speed Fiber Optic Mode Converter/Repeater

Model TC3020 Series

- Data Rates from 30 bps to 10 Mbps
- Supports Burst Data
- Distances up to 30km*
- Multimode & Single Mode (850/1300/1550nm)
- Multiple Diagnostic LED Indicators
- Test Signal Generator
- Built-In Loopback Functions
- Local Dry Contact Alarm Relay
- Stand Alone or Rackmount



TC3021S Standalone Unit



2 X TC3021R (Housed in TCRM196 19" Wide, 1U High Rackmount Card Cage)

Supporting data rates from 30 mbps to 10 mbps, the TC3020 Mode Converter Series convert, regenerate or extend 850nm, 1300nm or 1550nm wavelengths optical signals to distances up to 30 km*.

Two models currently comprise the TC3020 Series. Both support Burst Data applications.

The TC3021 supports data rates from 30 mbps to 1 Mbps. It requires units at both ends and converts multimode to single mode, then back to multimode. (It will not convert single mode to multimode, then back to single mode).

The TC3022 supports data rates from 1 Mbps to 10 Mbps. It is a standalone converter (requires only one unit), and can convert from multimode to single mode or vice versa.

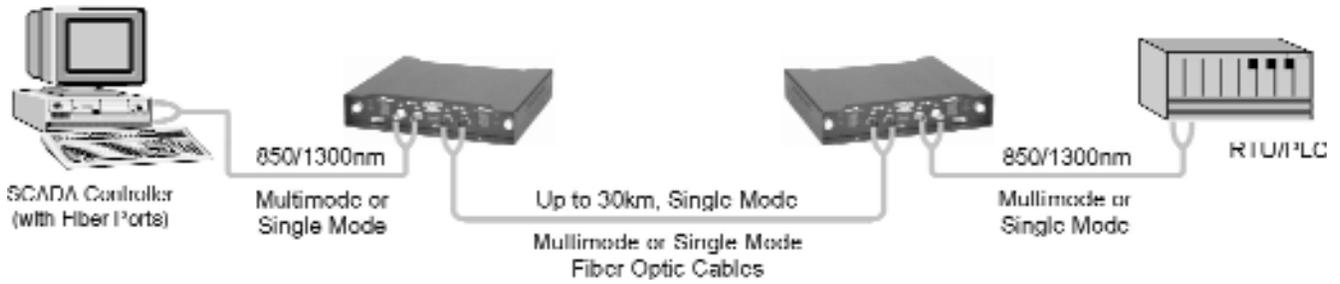
Eleven LEDs are provided for diagnostics, monitoring optic signals in both directions and indicating system status. A Test Signal Generator is available to help technicians conduct various installation tests including fiber link verifications. A Dry Contact Relay Alarm is also provided as a standard feature.

The TC3020 Series work with all popular types and sizes of fiber optic cable. Fiber optic connectors are ST or FC type. Power is 12VDC, optional 24VDC, -48VDC or 115/230VAC with an external power cube. Hardened temperature versions (-20^o to 70^oC) are also available.

Applications

The TC3020 Mode Converter Series is frequently used to convert multimode fiber optic cable to single mode, or vice versa, to connect various devices in Telephony or LAN communication environments.

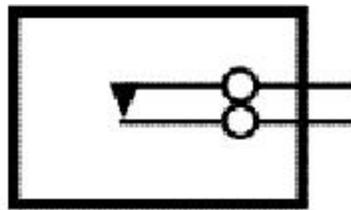
This conversion is done to cross-connect different fiber types, regenerate optical signals and/or extend transmission distances. It is also used for Burst Data applications.



Typical application using TC3022 Low Speed Fiber Optic Mode Converter/Repeater

Relay 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

A terminal block connector on the TC3021/22 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

TC3021 30 bps to 1 Mbps
 TC3022 1Mbps to 10 Mbps

Optical

Transmitter LED/ELED
 Receiver PIN Diode
 Wavelength*
 850/1300nm Multimode
 1300/1550nm Single Mode

Fiber Optic Connectors
 ST, Optional FC

Loss Budget** - 850/1300/1550nm
 Multimode @62.5/125mm 15dB
 Single Mode @9/125mm 15dB

*Any two wavelengths are available on each unit

System

Bit Error Rate 1 in 10¹⁰ or better

Visual Indicators

..... MM RX, MM TX, MM LB,
 SM RX, SM TX, SM LB, SIGGEN,

ALARM, PWRA, PWRB, Vcc

Diagnostic Functions

..... SM & MM Loopback, Signal Generator, Disable Alarm

Alarm

Dry Contac 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) 1.4"
 Width (18.14 cm) 7.1"
 Depth (16.57 cm) 6.5"
 Weight (544 gm) 1.2 lbs