**OVERVIEW**

The IFS TT/TR3000 Series Touch-Tone Telephone Digital Interface provides extended transmission to be used with analog systems over one or two optical fibers using the latest in digital transmission technology. The modules also support many enhanced telephone services offered by telephone providers, such as Call-Waiting, and 3-Way Calling. Models within this series are available for use with multi-mode or singlemode optical fiber. Plug-and-play design ensures ease of installation. The module incorporates power and carrier detect status indicating LED’s to monitor proper system operation. The module is available in either stand-alone or rack mount versions.

**APPLICATION EXAMPLES**

- Extend The Distance Of Remote Telephone Extensions
- Intercom Systems That Utilize A Touch-Tone Interface
- Use for Controlling Remote Equipment That Utilizes Touch-Tone Signaling For Control.
- Screen-Room Applications Where Non-Metallic Cables Are Required

**SYSTEM DESIGN**

**STANDARD FEATURES**

- Digital Fiber Transmission
- Supports both 48-Volt and 24-Volt Systems, to be used with Analog Systems
- Supports 90-Volt Ringer Voltage
- Plug and Play Design Ensures Ease of Installation
- Industry Standard RJ-11C Connector
- Power and Carrier Detect Status Indicating LED’s to Monitor System Performance
- Automatic Resettable Fuses on All Power Lines
- Compatible with Talk-A-Phone™, Code Blue™ and Trigon™
- Hot-Swappable Rack Modules
- Distances up to 41 Miles (66 Km) without Repeaters
- Comprehensive Lifetime Warranty
TT/TR3000 Series
IFS Touch-Tone Telephone Interface

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Fibers Required</th>
<th>Optical Pwr. Budget</th>
<th>Max. Distance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>TT3020WDM</td>
<td>Touchtone Telephone Interface (1310/1550 nm)</td>
<td>1</td>
<td>13 dB</td>
<td>2 miles (3.5 km)</td>
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<td>1</td>
<td>23 dB</td>
<td>41 miles (66 km)</td>
</tr>
</tbody>
</table>

Accessories || PS12VDC1.5A-U 12VDC, 1.5A Plug-in Power supply (110/220VAC) with Universal power plug adapter kit (Included)

Options || Add ‘-R3’ to Model Number for R3 Rack Mount - No Charge (Requires R3 Rack purchased separately)

Add ‘-T’ for Talk-A-Phone™ (Call IFS for compatible models)

*Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels. Distance can also be limited by fiber bandwidth. **For 50/125 Fiber, subtract 4 dB from Optical Power Budget.

** All accessories are third party manufactured.

Specifications

Audio

- Audio Input/Output: Standard Touchtone Telephone
- Bandwidth: 150 Hz - 5 kHz
- Signal-to-Noise: >60 dB
- I/O Impedance: 600 ohms balanced

Wavelength

- TT/TR3020WDM: 1310/1550 nm, Multimode
- TT/TR3030WDM: 1310/1550 nm, Singlemode, Laser

Number Of Fibers

- TT/TR3020WDM: 1
- TT/TR3030WDM: 1

Connectors

- Optical: ST
- Power: Terminal Block with Screw Clamps
- Data: RJ-11

Electrical & Mechanical

- Power:
  - Surface Mount: TT: 12 VDC @ 200 mA
  - TR: 12 VDC @ 500 mA
  - Rack: From Rack
  - Number of Rack Slots: 2
  - Current Protection: Automatic Resettable Solid-State Current Limiters
  - Circuit Board: Meets IPC Standard
  - Size (in/cm.) (LxWxH): 7.0 x 4.9 x 1.0 in., 17.8 x 12.5 x 2.5 cm
  - Rack Mount: 7.7 x 5.5 x 1.0 in., 19.6 x 12.7 x 2.5 cm
  - Shipping Weight: < 2 lbs./0.9 kg

Environmental

- MTBF: > 100,000 hours
- Operating Temp: -40° C to +74° C
- Storage Temp: -40° C to +85° C
- Relative Humidity: 0% to 95% (non-condensing)

Agency Compliance

Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J

Made in the USA

Complies with Code of Federal Regulations, Subchapter J

Specifications subject to change without notice.

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TT/TR3000 Series