



FEATURES

- Fiber optic phone adapter providing secure transmission of telephone conversation over fiber optic link for up to 50 km (31 miles)
- Supports single mode and multimode fibers
- Available with laser diode option for extended ranges
- Supports both DTMF and pulse dialing
- Receives power from AC, DC power supply or on-board nickel-cadmium rechargeable battery
- Available in two versions:
 - Subscriber unit compatible with any standard telephone set
 - PBX unit for direct connection to PBX

DESCRIPTION

- F-TEL, fiber optic telephone adapter, provides direct, secure fiber optic connection between any telephone set and a PBX, or between two telephone sets.
- F-TEL converts the electrical signals into optical signals. Two in-line units are required to complete a fiber link: a PBX unit (F-TEL/CO) for the PBX side and a subscriber unit (F-TEL/SUB) for the subscriber telephone set.
- F-TEL operates in two typical configurations:
 - Telephone-to-PBX optical connection (subscriber to PBX)
 - Telephone-to-telephone optical connection (subscriber to subscriber).
- F-TEL is designed to operate with several grades and sizes of fiber optic cable. Use of fiber optic cabling provides immunity to electrical interference such as EMI and RFI.
- Three optical interfaces are available:
 - 850 nm wavelength for multimode fiber
 - 1300 nm wavelength for single mode fiber
 - Laser diode (1300 nm) for single mode fiber with extended operating range.

- The laser diode has an internal temperature control circuit to compensate for ambient temperature changes.
- F-TEL/SUB supports 20 Hz or 25 Hz ringing, as well as DTMF and pulse dialing to meet requirements of national carriers.
- As a backup to the standard AC or DC power supply, F-TEL can be powered via an external 9–12 VDC power supply or by an on-board nickel-cadmium rechargeable battery.
- LED status indicators are available on the front panel of both units for indicating the system status.

Fiber Optic Phone Adapter

SPECIFICATIONS

ELECTRICAL INTERFACE

- **Transmission Line**
2-wire telephone line
- **Ringer**
Output voltage:
60 VAC nominal measured on a
3 k Ω resistor
Ring rate:
Standard (1 second ringing,
2 seconds break)
Frequency:
20 Hz or 25 Hz (see *Ordering*)
- **End-to-End Performance**
Overall loss: less than 4 dB
Total harmonic distortion: -36 dB
- **Connector**
RJ-45

OPTICAL INTERFACE

- **Transmission Line**
Dual fiber optic cable
- **Operating Wavelength**
850 nm or 1300 nm
(see *Ordering*)
- **Power Ranges**
Typical output power:
-18 dBm into 62.5/125 fiber for
850 nm
-24 dBm into 9/125 fiber for
1300 nm
-12 dBm into 9/125 fiber for
1300 nm laser
- **Receiver Sensitivity**
-38 dBm at 850 nm
-40 dBm at 1300 nm
- **Optical Connectors**
ST or FC (see *Ordering*)

GENERAL

- **Indicators**
F-TEL/CO:
RING (yellow): A call (ring) from
PBX is detected
REMOTE OFF HOOK (yellow): A
remote off-hook on the
subscriber unit is detected
F-TEL/SUB:
REMOTE CALL (yellow): A remote
call (ring) from the other unit is
detected
LOCAL OFF HOOK (yellow): A
local off-hook is detected
General:
POWER (green): The unit is
powered
SIGNAL LOSS (red): Loss of
optical signal is detected
LOW BAT (red): Low battery
voltage is detected or when the
external DC power is low
- **Power**
AC source:
115 VAC or 230 VAC,
47 to 63 Hz, 2.8W
DC source:
-48 VDC
External DC:
9 to 12 VDC via separate rear
panel DC jack (12V, 150 mA)
On-board battery (continuous
operation):
■ On-hook: 6 hours
■ Off-hook: 3 hours
■ Continuous ringing: 0.5 hours
- **Physical**
Height: 4.6 cm / 1.8 in
Width: 19.5 cm / 7.6 in
Depth: 25.5 cm / 10.0 in
Weight: 1.5 kg / 3.3 lb
Battery: 0.5 kg / 1.1 lb
- **Environment**
Temperature: 0–50°C/32–122°F
Humidity: Up to 90%,
non-condensing

ORDERING

F-TEL/CO/*/#/&/+

Fiber optic phone adapter, PBX unit

F-TEL/SUB/*/#/&/+

Fiber optic phone adapter, subscriber
unit

* Specify power supply:

115 for 115 VAC

230 for 230 VAC

48 for -48 VDC

Specify fiber optic interface type:

ST85 for 850 nm multimode,

ST connector,

ST13 for 1300 nm single mode,

ST connector,

ST13L for 1300 nm single mode

laser diode ST type connector,

FC85 for 850nm multimode,

FC connector

FC13 for 1300 nm single mode,

FC connector

FC13L for 1300 nm single mode

laser diode, FC connector

& Specify ringer frequency:

20 for 20 Hz

25 for 25 Hz

+ Specify **BAT** for on-board
nickel-cadmium battery

RM-9

Special hardware for mounting one or
two F-TEL units in a 19-inch rack

APPLICATIONS

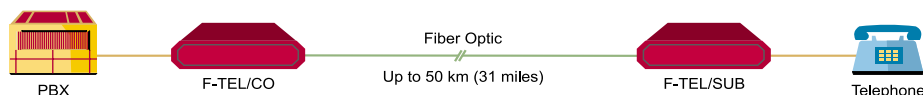


Figure 1. Connecting Subscriber to PBX

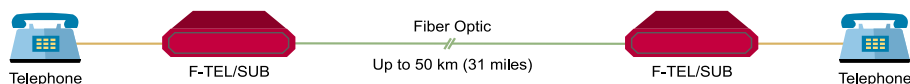


Figure 2. Connecting Subscriber to Subscriber

RAD

data communications

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