

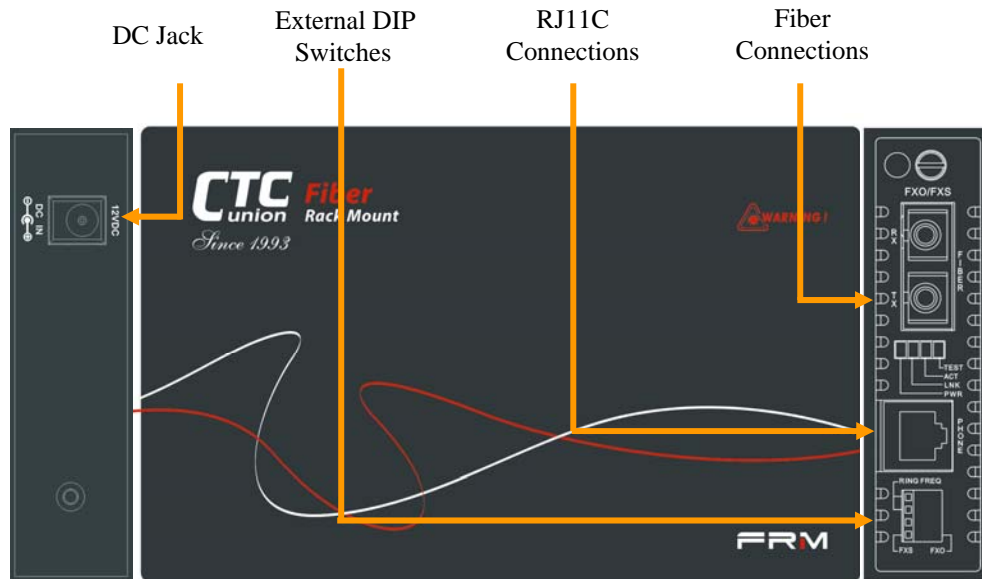
Installation Instructions for FRM220-FXO/FXS FXO/FXS POTS Over Fiber Optic Slide-in-Module Media Converter

Description

CTC Union's FRM220-FXO/FXS POTS over fiber media converter connects central-office voice grade signal to distant POTS (Plain Old Telephone Service) equipment using standard telephone signaling. It can extend, over fiber, the distance between two voice path communication devices by up to 120km using single mode fiber.

The FRM220-FXO/FXS provides audio transmission, caller ID, ringing at the distant end and automatic ring down. Two units are required to implement an end to end system. The RJ-11 connector provides the electrical interface between the media converter and the telephone device.

The FRM220-FXO/FXS is designed to be installed in FRM220-CH20 (20 slots Chassis) for CO side or installed in FRM220-CH01(1 slot Chassis) for CPE stand-alone.



General Specifications

Environment

- Operating Temperature : 0 - 50 °C
- Storage Temperature : -10 ~ 60 °C
- Humidity : 5 ~ 90% non condensing

Power

- DC +12V / 800mA input
- Power Consumption : 5 W

Dimension & Weight

- 88mm x 154mm x 24mm
(W x D x H)
- Weight : 450g

Technical Specifications

Copper Connector

FXO/FXS : Selectable
Phone Connector : RJ-11C

FXO Mode

Impedance : 600 ohm
Coding : 16 bits linear
Loop Current : 10 ~ 100mA
Ring Frequency : Acceptable 15 ~ 30Hz
Insertion Loss : 0.0± 1.0dB at 1000Hz

FXS Mode

Impedance : 600 ohm
Coding : 16 bits linear
Dial : DTMF and Pulse Dial
Battery Source : 48VDC ± 4V
Ringing Waveform : Sine wave
Ringing Supply : 60Vrms± 10%
Ring Frequency : 20/25/30 Hz selectable
Ring Cadence : FXS to FXS : On / 1 second, Off / 2 second
FXO to FXS : Reproduces the cadence detected by FXO
Insertion Loss : 0.0± 1.0 dB at 1000Hz
REN: 4.0B (Ring Equivalence Number)

Fiber Optic Connectors

Two connectors are provided for fiber optic cable connection. One is labeled "TX" for transmission of optical data, the other is labeled "RX" for reception of optical data.

DIP Switch Setting

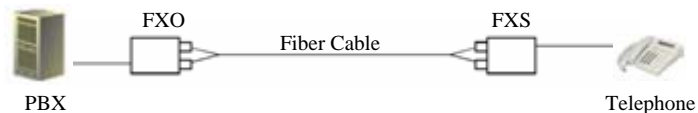
| DIP | Function | State | Status |
|---------|--------------------|---------|-----------|
| Pin 1 | FXO/FXS Mode | On | FXO mode. |
| | | Off | FXS mode. |
| Pin 2 | Reserved | On | Reserve |
| | | Off | Reserve |
| Pin 3/4 | FXS Ring Frequency | Off/Off | 20Hz. |
| | | On/Off | 25Hz. |
| | | Off/On | 30Hz |

Installation

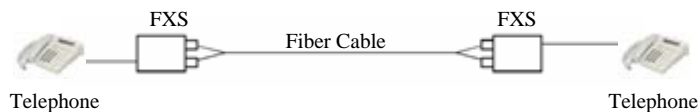
Connect the RJ-11 cable to the FRM220-FXO/FXS. The converter should be setup to operate in FXO or FXS mode and the fiber link will be indicated on the LED. Follow the connection examples below. Install the fiber converter with the DC power adapter provided (+12VDC, 800mA) and connect the adapter to an AC outlet.

Connections

The following example illustrates the connection scheme when connecting PBX to telephone through the fiber converter.



The following example illustrates the Automatic Ring-Down connection scheme when connecting telephone to telephone through the fiber converter.



LED Indicators

| LED | Function | State | Status |
|------|-----------------|-------|------------------------------------|
| PWR | Power Indicator | Green | Converter has power. |
| | | Off | Converter has no power. |
| LNK | Fiber Link | Green | The fiber link is ok. |
| | | Off | No link or the link is faulty. |
| ACT | Phone Status | Green | Activity. |
| | | Off | Idle. |
| | | Flash | Ringing. |
| TEST | Test Status | Red | When loop is in any loop back mode |

Memo Note

Large empty box for memo notes.