



1 Overview, Checklist

Bridge Media Converter 10/100Base-TX to 100Base-FX TP-to-ST/SC/VF-45/MT-RJ User's Manual

1. Overview

IEEE802.3/u Ethernet supports two types media for network connection such as 10/100Base-TX and 100Base-FX. The bridge media converter is designed with a switch controller and buffer memory that connects two types segments operation smoothly. This converter can be used as a standalone unit or as a slide-in module to the 19" converter rack (up to 10 units) for use at a central wiring closet.

2. Model Description

Model	Connector Type
TP↔ST/SC	RJ-45 10/100TX ↔ ST/SC 1300nm
**TP↔VF-45	RJ-45 10/100TX ↔ VF/45 1300nm
**TP↔MT-RJ	RJ-45 10/100TX ↔ MT-RJ 1300nm

The 100Mbps 1300nm Fiber Transceivers:	
ST/SC multi-mode 2Km	Default
*S20/S40/S60Km single-mode	Optional
**VF-45 multi-mode 2Km	**
**MT-RJ multi-mode, single-mode 15Km	**

*: SC single-mode S20/S40/S60Km are optional

**: VF-45, MT-RJ models are available on request only

3. Checklist

Before you start installing the Converter, verify that the package contains the following:

The TP-Fiber Converter

AC-DC Power Adapter (only external power supply)

This User's Manual

Please notify your sales representative immediately if any of the aforementioned items is missing or damaged.

2 Installation

4. Installing the Converter

For as a standalone unit:

- ⇒ Verify the AC-DC adapter conforms to your country AC power requirement and insert the power plug
- ⇒ Connect the media cable for network connection

For as a slide-in unit:

- ⇒ The slide-in Media Converter and Converter Rack should be supplied only from the same source, both Media Converter and Rack are built to match each other at dimensions, DC jack, DC receptacle and power safety
- ⇒ Turn off the 19" converter rack power
- ⇒ Ensure that there is no activity in the network
- ⇒ Locate +5VDC power jack on converter back, carefully slide in and plug to 19" rack +5VDC power receptacle
- ⇒ Connect the media cable for network connection
- ⇒ Turn on the converter rack power, the Power LED will light up

Fiber Port	Attach the fiber cable. The Tx,Rx fiber cable must be paired at both ends. Select the duplex mode to match the remote fiber partner mode. Default: Full duplex mode
TP Port	Attach TP Cat.5 cable to TP port

Note for TP port cable connection:

- a. Use the straight-through cable.
Cable pin -outs for RJ-45 jack 1, 2, 3, 6 to 1, 2, 3, 6
- b. Be sure the proper wiring and the Link LED status

3 Wire Connection, Front and Side Panel

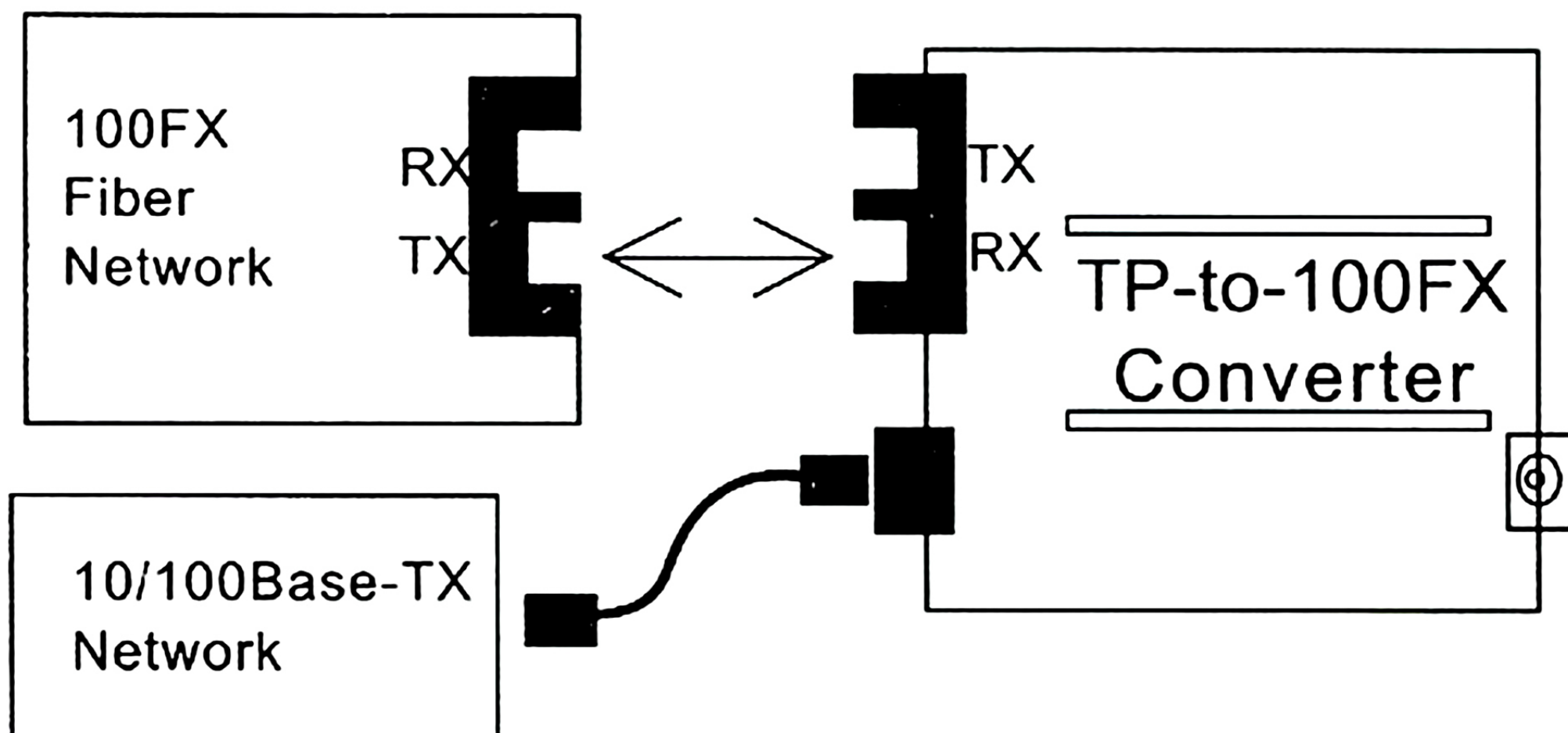


Fig. 1 Basic Network Connection

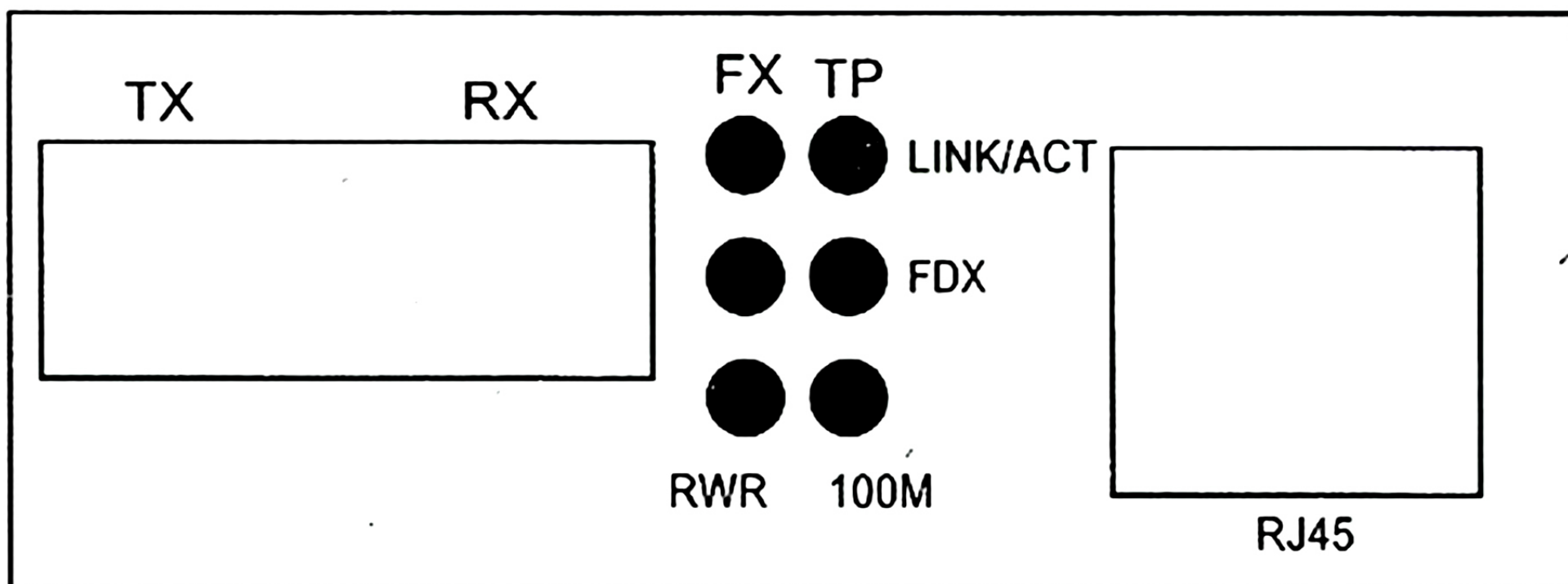


Fig. 2 Converter Front Panel for external power

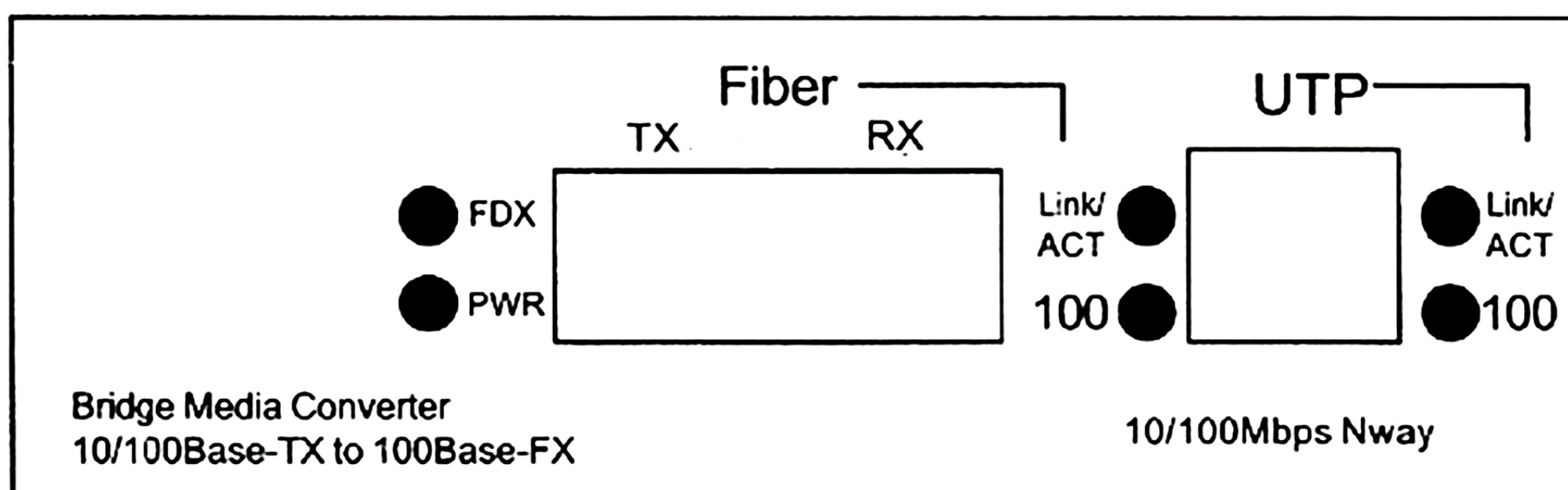


Fig. 3 Converter Front Panel for internal power



4 LED Description, Connecting to TP/Fiber Device

5. LED Description

LED	Color	Function
FX LINK/ACT	Green	Lit when fiber connection is good Blinks when fiber data is present
FX 100	Green	Lit for fiber100Mbps operation
FX FDX/COL	Green	Lit when full-duplex mode is active Off when half-duplex mode is active Blinks when collision is present
TP LINK/ACT	Green	Lit when TP connection is good Blinks when TP data is present
100M	Green	Lit when TP speed is 100Mbps Off when TP speed is 10Mbps
Power	Green	Lit when power is coming up

6. Connecting to TP,Fiber Device

Converter TP Port 10/100TX	Default:10/100Mbps Nway a. Auto-negotiation for Nway TP partner b. Half-duplex for non-Nway TP partner, Class II hub,or 10Base-T device
Converter Fiber Port 100FX	100Mbps with duplex mode selectable: a. Full-duplex for 100Fdx fiber link partner b. Half-duplex for 100Hdx fiber link partner FX duplex mode slide switch locates on the rear panel.see Fig.4

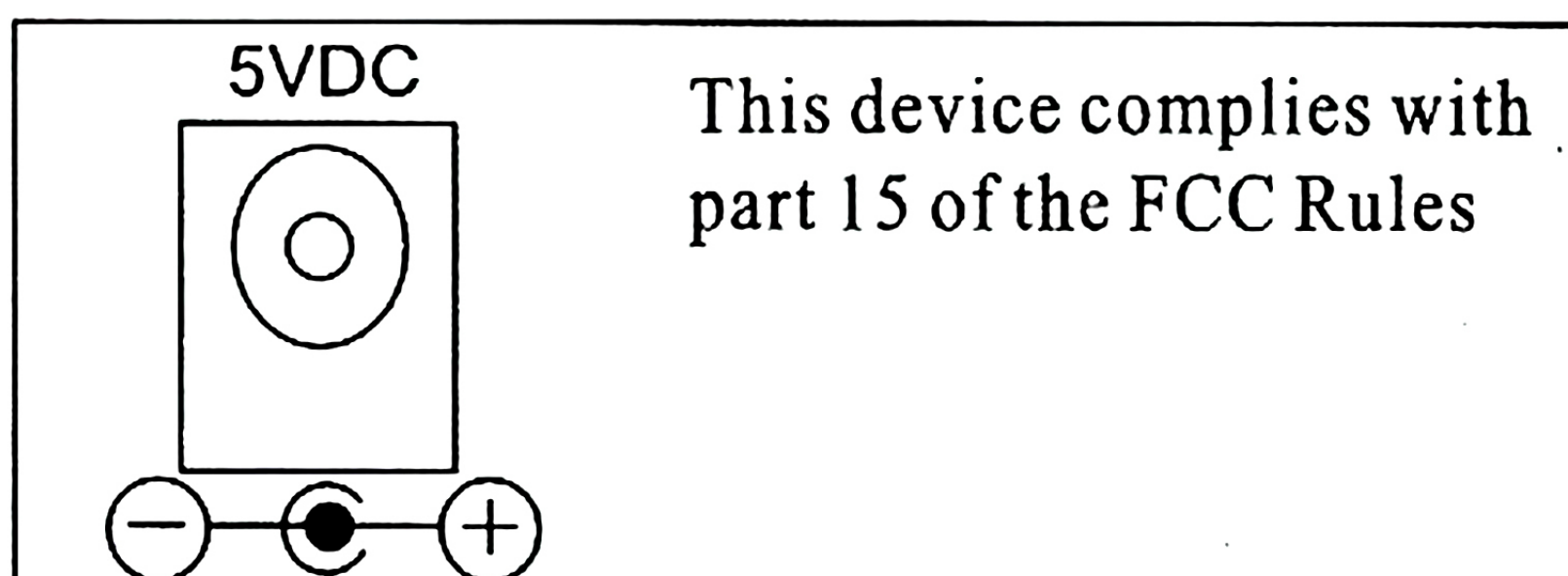


Fig. 4 Converter Back Panel for external power

Fiber Link Partners should be set at the same duplex mode.
FX Mode Select **Default: FDX (full - duplex)**



7. Cable Connection Parameter

100Base-X network allows 512-bit time delay between any two node stations in a collision domain. The overall bit-time of TP/Fiber wires and devices must be within 512 bit in a segment. You may use a switch to break up collision domain and extend the cabling distance.

- **TP Cable Limitations: Cat.5 100m**
- **Multi-mode Converter Fiber Cable Limitations:**

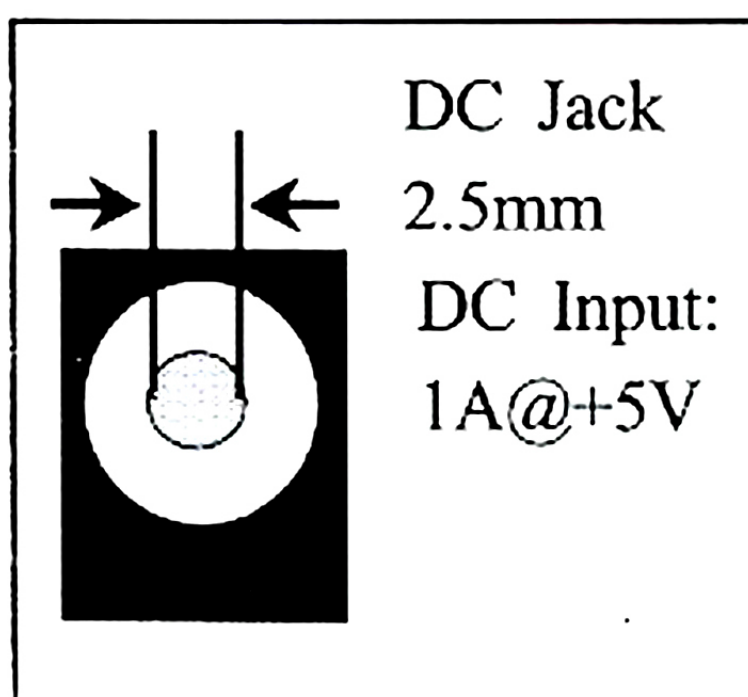
SC/ST/VF/MT Multi-Mode Converter Models:			
Multi-mode	Node to Node	:	412m
	Node to Switch	:	412m
Half-duplex	Node to Node	:	2Km
	Node to Switch	:	2Km

- **Single-mode Converter Fiber Cable Limitations:**

SC Single-Mode Converter Optional models:			
S20	Node to Node		20Km
	Node to Switch		20Km
S40	Node to Node		40Km
	Node to Switch		40Km
S60	Node to Node		60Km
	Node to Switch		60Km

8. DC Jack and AC-DC Power Adapter

The DC jacks central post is 2.5mm wide, it conforms to the DC receptacle(2.5mm) on the 19-inch Converter Rack slot.



Keep the AC-DC adapter as spare parts when Media Converter is installed in a 19-inch Media Converter Rack.

6 TP-Fiber Technical Specifications

9. TP-Fiber Technical Specifications

- **Standards** : IEE802.3u 100Base-TX/FX
- **Models** :

Model	Connector Type
TP↔ST/SC	RJ-45 10/100TX ↔ ST/SC 1300nm
**TP↔VF-45	RJ-45 10/100TX ↔ VF-45 1300nm
**TP↔MT-RJ	RJ-45 10/100TX ↔ MT-RJ 1300nm

The 100Mbps 1300nm Fiber Transceivers:	
ST/SC multi-mode 2Km	Default
* S20/S40/S60Km single-mode	Optional
** VF-45 multi-mode 2Km	**
** MT-RJ multi-mode,single-mode 15Km	**

- *. SC single-mode S20/S40/S60Km are optional
- **. VF-45, MT-RJ models are available on request only
- **UTP Cable** : Cat. 5 cable upto 100m
- **Fiber Cable:**
 - 50/125, 62.5/125,or 100/140um multi-mode
 - 8.3/125,8.7/125,9/125 or 10/125um single-mode
- **LED Indicators:**
POWER,FXLINK/ACT,100,TPLINK/ACT, FDX/COL
- **Data Transfer Rate:**

Speed	Forwarding Rate
100Mbps	148,800PPS
10Mbps	14,880PPS

- **Flow Control:** IEEE802.3x compliant for full-duplex
Back pressure flow control for half-duplex
- **Power Requirement** : 1A@+5VDC or 220VAC
- **Ambient Temperature** : 0°C to 50%
- **Humidity** : 5% to 90%
- **Dimensions** : 26(H)×70(W)×94(D)mm

Note: Connecting to Router,Bridge, or Switch,
please refer to the device's Technical Manual.