

Troubleshooting:

- Is the power LED on the media converter lit?
NO
 - Refer to the previous section, "Power Supply Requirements" to verify the proper voltage and hertz. Is the power adapter the proper type of voltage and hertz for your AC outlet?
 - Is the power adapter properly inserted into the media converter and outlet?
 - Call the TE Technical Support at (800) 260-1312.
 YES
 - Proceed to step 2.
- Are both the fiber Link LED and 10BaseT Link LED lit?
NO
 - Check fiber and/or UTP cables for proper connection and pin assignment. Refer to "RJ-45 Pin Specifications" in this guide to verify that the proper twisted pair cable (straight through or crossover) is being used.
 - If correct, call TE Technical Support at (800) 260-1312.
 YES
 - Call the TE Technical Support at (800) 260-1312.

Technical Support:

For more information about this product or other Transition Engineering products, call your local Transition Engineering distributor.

Direct numbers are listed below:

TE Main Phone Numbers: (800) 325-2725 or (612) 941-7600
 TE Technical Support Number: (800) 260-1312
 TE Fax Number: (612) 941-2322

FCC Regulations:

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own cost.

Canadian Regulations:

Note: This digital apparatus does not exceed the Class A limits for radio noise for digital apparatus set out on the radio interference regulations of the Canadian Department of Communications.

Trademarks:

Ethernet is a registered trademark of the Xerox Corporation, Inc. Rev 11/94
 Transition Engineering is a trademark of Transition Engineering, Inc. P/N 7353.A

Media Converter Specifications:

Standards:	Ethernet IEEE 802.3 FDE TP (twisted pair) to 10BaseFL (FOIRL)
Fiber Connection:	ST type connectors (SMA type available upon request)
Fiber Optic Cable Maximum Distance:	2,000 meters (6,600 feet)
Fiber Optic Cable Recommended:	62.5 / 125 μ m multimode fiber
Optional:	100 / 140 μ m multimode fiber 85 / 125 μ m multimode fiber 50 / 125 μ m multimode fiber
Twisted Pair Specifications:	22, 24, or 26 gauge cable, type 3 or better
Twisted Pair Maximum Distance:	100 meters (330 feet)
Power Supply:	External AC/DC Class 2 wall mount unit, reg. 9 VDC at 0.5 A.
Environment:	0–50 degrees C, 5%–90% humidity non-condensing, 0–10,000 foot altitude
Warranty:	Two years

Monitoring the Media Converter's LEDs:

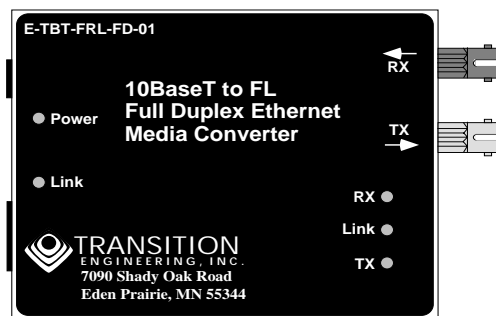
Main Indicator	
Power:	Lit green LED indicates normal operation
Fiber Optic & FDE TP (twisted pair) Ports	
TP (Twisted Pair) Link:	Lit green LED indicates the unit is receiving Link pulses from a compliant device
Fiber Link:	Lit green LED indicates the unit is receiving Link pulses from a compliant device
Fiber XMIT (TX):	Flashing or lit green LED indicates packet(s) are being transmitted
Fiber RECV (RX):	Flashing or lit green LED indicates packet(s) are being received

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Full Duplex Ethernet (FDE) Fiber Optic (10BaseFL) to TP (Twisted Pair) Media Converter Installation Guide P/N E-TBT-FRL-FD-01

About the Media Converter:

The Transition Engineering, P/N E-TBT-FRL-FD-01, is an Ethernet Media Converter that provides conversion from fiber optic cable (10BaseFL) to TP (twisted pair) for Full-Duplex Ethernet (FDE) links. The Media Converter has an RJ-45 connection and two Receive/Transmit ST type fiber optic connectors. The twisted pair side allows a device to be located up to 100 meters (185 feet) away. The fiber optic ST connections extend the transmission distance up to 2000 meters (6,600 feet). An SMA type fiber connection is also available, Transition Engineering P/N E-TBT-FRL-FD-01(SMA).



Measurements: 3.55" x 2.80" x 0.800" (90 mm x 71 mm x 20 mm)

Power Supply Requirements:

Connect the power supply cable to the Media Converter before connecting to the network. Replace power supply with only the equivalent input rating (refer to the table below) output rating (regulated 9VDC at 0.5 A).

TE PN	Requirement	Location
3345	240 volts, 50 hertz	United Kingdom
3503	230 volts, 50 hertz	Europe
3504	120 volts, 60 hertz	USA/Canada/Mexico
3509	100 volts, 50–60 hertz	Japan
3512	240 volts, 50 hertz	Australia

RJ-45 Pin Specifications:

Individual wires that make up a **straight through** twisted pair modular cable are shown below. Each pair has designated pin connections on an RJ-45 modular connector. There are only two active pairs in a FDE TP (twisted pair) network, pins 1 & 2 and 3 & 6. Use only dedicated wire pairs (such as blue/white, white/blue, orange/white, white/orange, etc.).

Hub to Fiber to TP Adapter

RJ-45 Male		RJ-45 Male
1 [RX +]	-----	[TX +] 1
2 [RX -]	-----	[TX -] 2
3 [TX +]	-----	[RX +] 3
6 [TX -]	-----	[RX -] 6

The following are the pins for a **crossover cable** to cascade from a FDE TP (twisted pair) Terminal to a Media Converter.

Fiber to TP Adapter to Transceiver or Terminal Port

RJ-45 Male		RJ-45 Male
1 [TX +]	-----	[RX +] 3
2 [TX -]	-----	[RX -] 6
3 [RX +]	-----	[TX +] 1
6 [RX -]	-----	[TX -] 2

