

TC1000

RS-232 Async Fiber Optic Modem

User's Manual

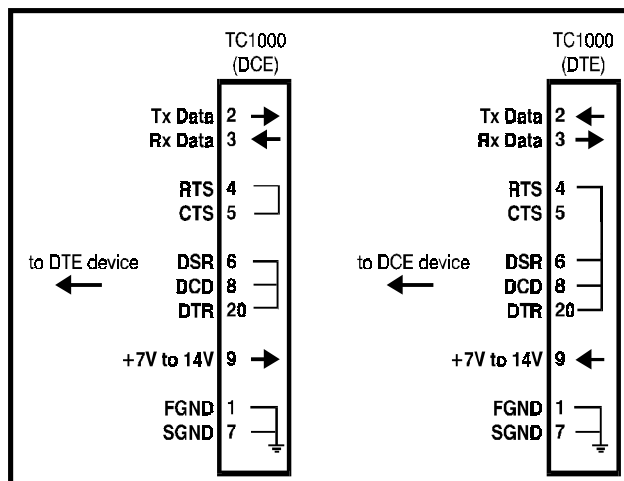
1. Description

Using a pair of fiber optic cables, the TC1000 can communicate at distances up to 2 km/18 km. The unit can be powered by either an external power adapter or by the incoming RS-232 signal (from the DB25 connector). The TC1000 allows the user to plug directly into a personal computer's COM port and, using popular software such as PC ANYWHERE, link two computers together.

2. Electrical Specifications

Interface: RS-232
Data Rate: Asynchronous DC to 19.2Kbps
Data Flow Control: XON/XOFF only
Connector: DB25 Female (DCE or DTE)
Pinouts:

2	Tx Data:	Transmit Data
3	Rx Data:	Receive Data
4	RTS:	Request To Send
5	CTS:	Clear To Send
6	DSR:	Data Set Ready
8	DCD:	Data Carrier Detect (Optic Signal Detect)
20	DTR:	Data Terminal Ready
9	+7V to +14V:	External Power supplied by User's Equipment
1	FGND:	Frame Ground
7	SGND:	Signal Ground



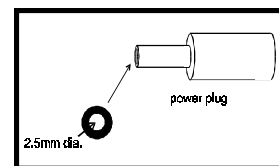
3. Optical Specifications

Transmitter:	LED/ELED; typical Launch Power:	-28dBm* (850/1310nm Multimode, @62.5/125µm) -28dBm* (1310nm Single Mode, @9/125µm)
Receiver:	PIN Diode; typical Sensitivity:	-40dBm* (850/1310nm Multimode, @62.5/125µm) -40dBm* (1310nm Single Mode, @9/125µm)
Loss Budget:	850/1310nm MM, @62.5/125µm: 1310nm SM, @9/125µm:	12dB 12dB
Distance:	850nm Multimode, @62.5/125µm: 1310nm Multimode, @62.5/125µm: 1310nm Single Mode, @9/125µm:	up to 2km distance* up to 3km distance* up to 18km distance*
Wavelength:	850nm Multimode 1310nm Multimode 1310nm Single Mode	(Model TC1000-01-XX-25F) (Model TC1000-03-XX-25F) (Model TC1000-05-XX-25F)
Connector:	ST FC SMA	(Model TC1000-XX-ST-25F) (Model TC1000-XX-FC-25F) (Model TC1000-XX-SM-25F)

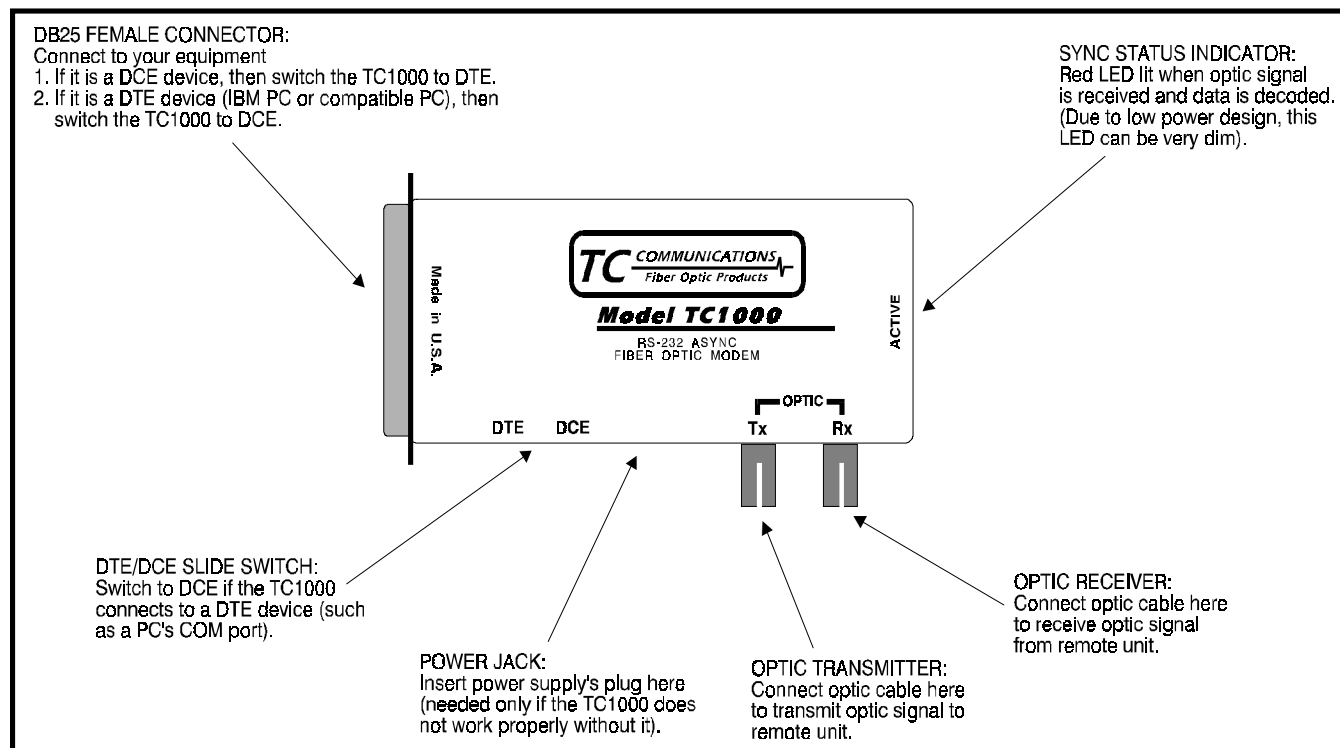
**Launch power, sensitivity and distance are listed for reference only. These numbers may vary.*

4. Power Requirements

- A. The TC1000 is designed to draw power from signal pins 4, 5, 9 and 20. For most applications, it can operate without an external power supply. (Make sure your equipment has the DB25's connector pins 4, 5, 9 and 20 connected).
- B. The TC1000 consumes very low power. The input DC voltage is from 6V to 14V and current is 12mA to 15mA for the Multimode 850nm version; 19mA for the MM/SM 1310nm version. Should an external power adapter be required, use one with the following specifications: 12VDC @800mA with positive polarity at the center (2.5mm diameter). You may order it from TC Communications.



5. Connectors, Indicator & Switch



6. Physical Characteristics

Height: 0.75" (1.91 cm)
Width: 4.0" (10.16 cm)

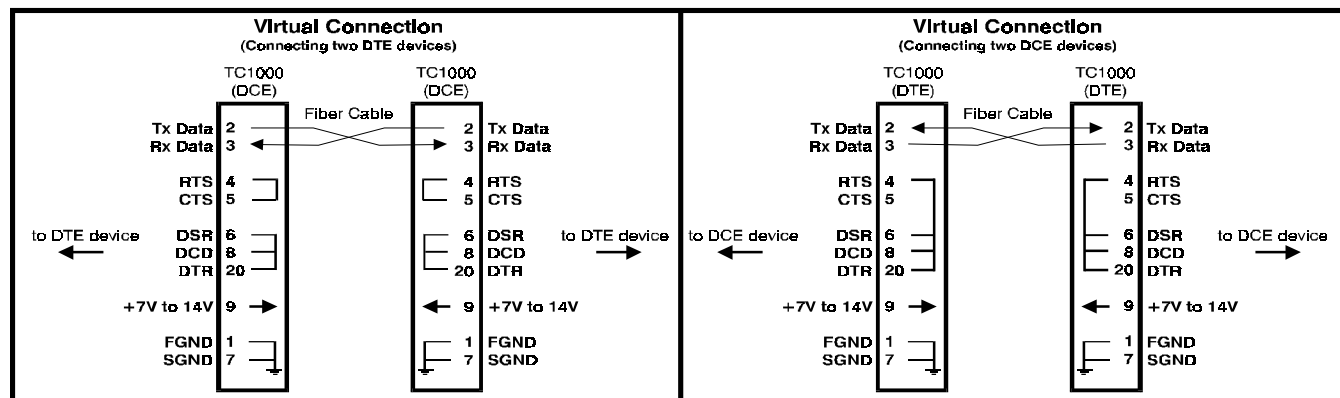
Depth: 2.4" (6.10 cm)
Weight: 7 oz. (137 gm)

7. Temperature

Operating: -10 to 50 degree C
Storage: -40 to 90 degree C

Hi-Temp(optional): -20 to 70 degree C
Humidity: 95% non-condensing

8. Connection



8. Warranty & Return Policy

All products manufactured by TC Communications, Inc. come with a two-year warranty. TC Communications, Inc. warrants to the Buyer that all goods sold will perform in accordance with the applicable data sheets, drawings or written specifications. It also warrants that, -cat the time of sale, the goods will be free from defects in material or workmanship. This warranty shall apply for a period of two years from the date of shipment, unless goods have been subject to misuse, neglect, accident, damage, improper installation or maintenance, or alteration or repair by anyone other than Seller or its authorized representative.

Buyer should notify TC Communications, Inc. promptly in writing of any claim based upon warranty, and TC Communications, Inc., at its option, may first inspect such goods at the premises of the Buyer, or may give written authorization to Buyer to return the goods to TC Communications, Inc., transportation charges prepaid, for examination by TC Communications, Inc. Buyer shall bear the risk of loss until all goods authorized to be returned are delivered to TC Communications, Inc. TC Communications, Inc. shall not be liable for any inspection, packing or labor costs in connection with the return of goods.

In the event that TC Communications, Inc. breaches its obligation of warranty, the sole and exclusive remedy of the Buyer is limited to replacement, repair or credit of the purchase price, at TC Communications, Inc.'s option.

To return a product, you must first obtain a Return Material Authorization number from the Customer Service Department. If the product's warranty has expired, you will need to provide a purchase order to authorize the repair. When returning a product for a suspected failure, please provide a description of the problem and any results of diagnostic tests that have been conducted. The shipping expense to TC Communications should be prepaid. The product should be properly packaged and insured. After product is repaired, TC Communications will ship the product back to the Buyer at Seller's expense.