

SECTION 685-40

FIBER OPTIC MODEM SPECIFICATION

The unit shall be a stand-alone fiber optic drop and insert modem. These modems shall be field replaceable without optical or electrical adjustments. These units shall also be delivered with a 110VAC 60Hz power adapter , a 48" cable for connection from modem (db25) to the 170 controller (C2), and have connections permitting the unit to operate from an external, rechargeable 6V battery for at least 3 hours of emergency operation. The unit shall be capable of providing a trickle charge to the external battery.

These units shall be compatible with single-mode optical fibers terminated with FC style connectors with a FC/PC polish The units shall be fully compatible (physical, optical, and electrical) with all existing Tallahassee Advanced Transportation Management System (TATMS) fiber optic equipment. That unit is an Optelecom Model 9525A-LD-FC.

The following technical requirements shall apply:

Min. coupled power into:-15 dBm.
Min. receiver input :-38 dBm.
Max. receiver input:-14 dBm.
Operating Temperature:-40 to +70 C
Storage Temperature:-40 to +85 C
Humidity:0 to 95% R.H, non-condensing
Connector:DB25S
Data Rates:150 to 57.6 K baud
Re-timing accuracy:within 0.01% pulse width
Power Consumption:190 ma. @ +9 to +14VDC
Dimensions:1.4" H x 3.17" W x 5.0" L
Weight:14 oz.

These modems shall have Anti-Streaming / Anti-Babbling on both Optical and Electrical ports. These units shall have an Expansion port for unlimited tree and branch or multiplexing networking. There shall be 8 LEDs on the front panel to indicate 15 separate status conditions. These units shall have automatic selection of first arriving optical signal.

These modems shall mount to any flat surface or in a 19" rack installation. The units shall conform to the provisions of US 21 CFR 1040.10 and 1040.11 and with the requirements in part 15 of FCC rules for a class A computing device.

The units shall be switchable to be used in a Daisy chain or a Self-healing ring and also be configurable for use either at the Master or at a Slave station. The unit shall contain the necessary logic to sense the loss of optical input and automatically execute the functions needed for self-healing communications. These modems shall have 18 switches to configure operation.

The unit shall have a conformable coating on the electrical circuit card assembly to protect from corrosion, moisture, and fungus. The units shall have a 1 year warranty on material and workmanship.

The cable configuration shall be as follows:

Type 170 Traffic Controller via RS232
Amp #201360-2 C2 Connector

Fiber Optic Modem
DB-25- Connector

PIN---K = DI
PIN---L = DO
PIN---H = CD
PIN---J = RTS
PIN---M = CTS
PIN---N = DC GROUND

PIN---2 = DI
PIN---3 = DO
PIN---4 = RTS
PIN---5 = CTS
PIN---7 = DC GROUND
PIN---8 = CD