



# ME6110A-M/F

## SPECIFICATIONS:

**Transmission Mode:** Synchronous, full-duplex

**Transmission Line:** 2-wire telephone line (single twisted-pair).

**Data Rates:** From 900 bps to 19,200 bps, selectable by a rotary switch.

**Transmission Level:** 0 dBm

**Transmission Controls:** DCD turn on immediately after the recognizing the receive signal from the line; CTS turns on 7 or 53 msec. after the terminal raises RTS.

**Transmission Range:** Up to .8 miles (1.3 km) on 22 AWG wire.

**Terminal Interface:** EIA RS-232C/CCITT V.24, integral 25-pin connector, choice of male or female.

**Telephone Line Interface:** 2-screw terminal block (2-wire and ground).

**Power:** None required, uses ultra-low power from the EIA RS-232C/CCITT V.24 data and control signals.

## INTRODUCTION:

The Sync SHM-NPR is used for local data distribution, connecting full duplex synchronous terminals to computers. A pair of modems ensures integrity of data transmission over 2-wire telephone lines, for distances of up to .8 miles (1.3 km), depending on wire gauge and data rate. (See table below) Transmit timing can be provided by an internal, external, or loopback clock derived from the receive signal.

Innovative circuitry allows the SHM-NPR to operate without connection to the mains supply, by using ultra-low power from the data and control signals. For optimum operation, devices connected to the SHM-NPR should provide RTS and DTR signals.

The low transmit level minimizes crosstalk onto adjacent circuits within the same cable. Data is transmitted and received using a balanced signal, ensuring high immunity to circuit noise. Coupling to the telephone line is through isolation transformers, which, in conjunction with other circuitry, protect against AC or DC overvoltages. The transformers are rated at over 1,500 V RMS, enabling connection of the modems to local circuits, provided by most national telephone administrations.

The line interface for the Sync SHM-NPR is a three-screw terminal block.

## INSTALLATION:

Installation of the Sync SHM-NPR is simple and straightforward. Just follow these instructions.

1. To access the strap settings: Separate the two parts of the plastic cover by pressing the places marked on the sides, starting at the cable end.
2. Connect the two-wire line to the terminal block (two LINE screws). The shielding of the line may be connected to the G screw where Ground is required.
3. Strap the modem according to the strapping diagram to the right.
4. To close the unit, press the two parts of the cover together.
5. Plug the modem directly into the 25-pin connector of the terminal or computer port, and fasten with the screws on each side of the modem connector.

DATA RATE (bps)	Distance in Miles (km)	
	WIRE GAUGE	
	22 AWG	24 AWG
19,200	.6 mi. (.9 km)	.4 mi. (.7 km)
14,400	.6 mi. (.9 km)	.4 mi. (.7 km)
9,600	.7 mi. (1.1 km)	.6 mi. (.9 km)
7,200	.7 mi. (1.1 km)	.6 mi. (.9 km)
.9 to 4,800	.8 mi. (1.3 km)	.7 mi. (1 km)

