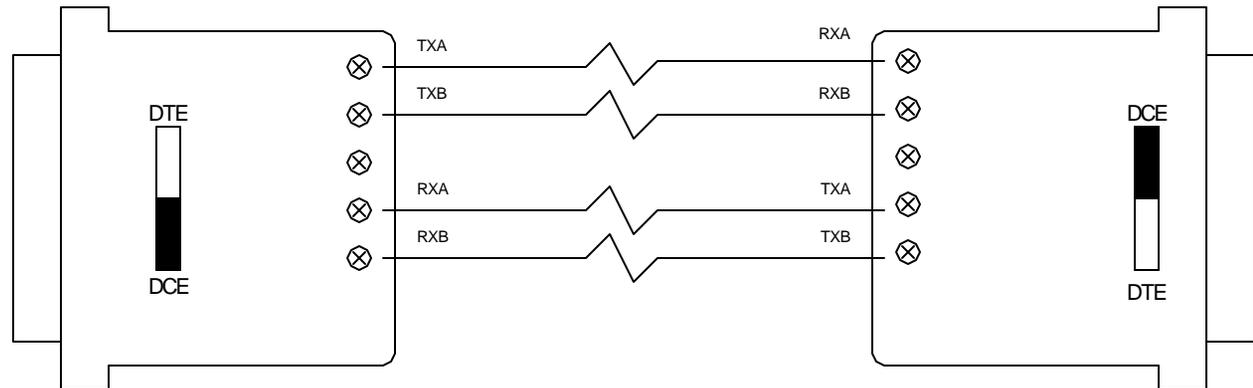
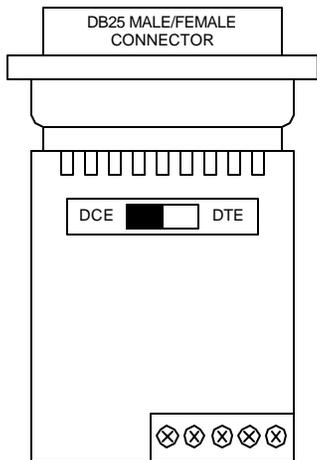


# ME721A-M/F



## SPECIFICATIONS:

Cable Required: 4-Wire unloaded customer-owner twisted pair with DC Continuity.

Interface: Device side: Serial EIA RS-232-C, DTE or DCE (user-selectable, default DCE);  
Line side: Proprietary balanced 4-Wire

Protocol: Asynchronous

Data Format: Transparent to data format

Flow Control: **Does not support hardware flow control** (uses RS-232 control leads as power sources); transparent to software flow control.

Operation: 4-Wire full duplex

Data Rate: Up to 19,200 bps

Maximum Distance: Up to 17 miles (27.3 km) depending on cable gauge and data rate.

User Controls: (1) Top-mounted DCE/DTE slide switch

Connectors: (1) Front-mounted DB25 male/female (depending on the model selected)  
(1) Internal 5-screw terminal block with strain relief.

Power: +/- 12 VDC, 6.3 ma from the RS-232 interface; from pins 2,4, 9 and/or 20 if the attached device is DTE; From pins 3,5,8 and/or 9 if the attached device is DCE.

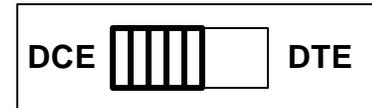
## INTRODUCTION:

The SHM-NPR operates in full-duplex at data rates up to 19.2 Kbps over two twisted pairs(four wires). They require no AC power or batteries, but can support distances up to 17 miles (27.3 km).

The SHM-NPR have an external DCE/DTE switch, so you can connect them to any type of RS-232 device without opening their chassis. And you can terminate the line between pairs of these units to either of two ways: The SHM-NPR model has a five-screw terminal block for hard-wired lines. The specially designed strain relief prevents thin twisted pairs from breaking or pulling loose.

## CONFIGURATION and INSTALLATION:

You can configure your SHM-NPR as either a DTE or DCE device. Just slide the DCE/DTE switch on the top of the unit to "DCE" (if you are connecting the unit to a DTE such as a PC, terminal, serial printer, etc) or "DTE" (if you are connecting the unit to a DCE such as a modem). You don't need to open the unit's cover to do this.



### THE INSTALLATION PROCEDURE:

- A. On it's device side, your SHM-NPR is designed to be plugged directly into one of the RS-232 serial ports on a terminal, computer, serial printer, modem, etc. For most applications, this eliminates the need for an RS-232 data cable. (If you do need to use a cable for whatever reason, we recommend a shielded cable-- our EDN25C, for example--that carries all of the pins from which the SHM-NPR draws power; just make sure to keep this cable as short as possible). No power is required from a dedicated AC or DC source, because the unit is powered entirely by the attached device's control and data signals.  
On it's line side, your SHM-NPR has a proprietary balanced 4-wire twisted-pair communications-line interface. To install a pair of these units, refer to drawing above.
- B. Making sure that they are not connected to any other device or any power source, gently pry the units open using a small screwdriver or similar tool wedged into one of the indentations on either side of the units cases. This will reveal a 5-screw terminal block mounted inside each unit. Run your preowned 4-wire twisted-pair cable from one block to the other as shown above. When you are finished, lay the cable in the semicircle where it will emerge from the unit so that the strain-relief prongs can pierce the cable jacket, then close the unit back up.

## CAUTION:

**Under no circumstances should you attach the cable shield to the ground screws on both ends; this could cause damaging electrical "ground loops".**  
**Neither should you ever connect these units to the public switched telephone system in any way. This could also severely damage your equipment.**