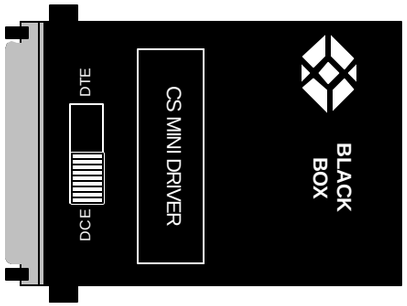
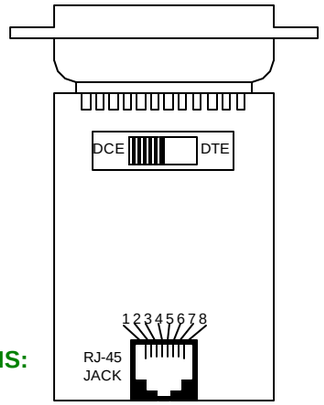
# ME733A-M/F or with(Surge Protection)




## SPECIFICATIONS:

Protocol: Asynchronous

Speed: Up to 19,200 bps (no strapping)

Distance: See table below.

Surge Protection (SP models only): 600W power dissipation at 1 ms and response time of 1.0 picoseconds.

Control Signals: ***DCE Mode;*** CTS (pin 5) turns ON immediately after terminal raises RTS (pin 4); DSR (pin 6) turns on when powered-up; DCD (pin 8) turns ON after detecting the receive signal from the line.
***DTE Mode;*** RTS (pin 4) turns ON immediately after modem raises CTS (pin 5); DTR (pin 20) turns ON after recognizing the receive signal from the line.

Operation: 4-wire unconditioned line (2 twisted-pair wires), full-duplex.

Transmit Level: 0 dBm

Connectors: (1) DB25 male or female (depending on model chosen).

Line Connection: RJ-45 modular jack

Power: No power required; uses ultra-low power (+5VDC) from EIA data and control signals ---- Pins 3,5,6,8, and 9 in DCE mode; Pins 2,4,9 and 20 in DTE mode.

| Distance Table in miles (km) | | | |
|---|---|---|---|
| Speed (bps) | Wire Gauge | | |
| | 19 AWG | 24 AWG | 26 AWG |
| 19,200 | 6.2 (10 km) | 3.7 (6 km) | 1.2 (1.9 km) |
| 9600 | 7.5 (12.1 km) | 4.9 (7.9 km) | 2.5 (4 km) |
| 4800 | 8.7 (14 km) | 5.6 (9 km) | 3.7 (6 km) |
| 2400 | 11.8 (19 km) | 8 (12.9 km) | 4.9 (7.9 km) |
| 1200 | 17 (27.4 km) | 11.8 (19 km) | 8 (12.9 km) |

## DESCRIPTION:

The CS Mini Driver-A let's you put 17 miles (27.4 km) between your RS-232 UNIX systems. The Driver uses unconditioned twisted-pair cabling, supports speeds of up to 19.2 Kbps, and requires no AC power or batteries.

A carrier sense feature automatically detects the presence of a carrier on the line, making the Driver ideal for UNIX environments where the host must see a carrier before it sends a log-on screen to a terminal. The carrier sense feature also plays an important role in troubleshooting, where the presence or absence of a carrier indicates positive or negative line integrity.

Small and sturdy, the Driver comes housed in an ABS plastic case. It includes a male or female DB25 connector and RJ-45 modular jack. The "SP" models incorporate Silicon Avalanche Diodes which give you 600 watts per wire of protection against harmful transient surges.

## CONFIGURATION:

Easy to use, the Driver has no internal jumpers or configuration switches to set. The only thing you must do is set the external DCE/DTE switch. The figure to the left, show the location of the DCE/DTE switch on the PC board, as well as the location of the RJ-45 modular jack.

***SETTING THE DTE/DCE SWITCH:***

The Driver includes an external DCE/DTE switch. If a modem or multiplexor is connected to the Driver (or if the connected device is wired like a modem or mux), set the switch to DTE. On this setting, the Driver will act like a DTE and transmit data on Pin2.

If a PC, terminal, or host computer is connected to the Driver (or if the connected device is wired like a PC, terminal, or host computer), se the switch to DCE. On this setting, the Driver will act like a DCE and transmit data on Pin 3.

## INSTALLATION:

Once you configure the DTE/DCE switch, you're ready to connect the Driver to your network. The Driver supports data-only communication between two RS-232 devices at distances up to 17 miles (27.4 km) and speeds up to 19.2 Kbps. There are two essential requirements for installation:

1. These units work in pairs. You must have one Driver at each end of a two-twisted-pair interface.
2. To function properly, the Driver needs two twisted-pairs of metallic wire, between 19 and 26 AWG (higher-number gauges may limit distance; see the distance table for specific distance and AWG recommendations). Do not use standard dial-up telephone circuits or leased circuits that run through signal-equalization equipment.

***TWISTED-PAIR CONNECTION USING RJ-45:***

The RJ-45 connector on the Driver's twisted-pair interface are prewired for a standard AT&T wiring environment.

| RJ-45 | SIGNAL |
|---|---|
| 1 | N/C |
| 2 | GND |
| 3 | RCV- |
| 4 | XMT+ |
| 5 | XMT- |
| 6 | RCV+ |
| 7 | GND |
| 8 | N/C |

When you connect two CS Mini Driver-A units, you must use a crossover cable. The diagram below shows how you should construct a crossover cable for an environment where both Drivers use a 4-wire RJ-45 connector.

| SIGNAL | PIN | PIN | SIGNAL |
|---|---|---|---|
| GND | 2 | 7 | GND |
| RCV- | 3 | 5 | XMT- |
| XMT+ | 4 | 6 | RCV+ |
| XMT- | 5 | 3 | RCV- |
| RCV+ | 6 | 4 | XMT+ |
| GND | 7 | 2 | GND |