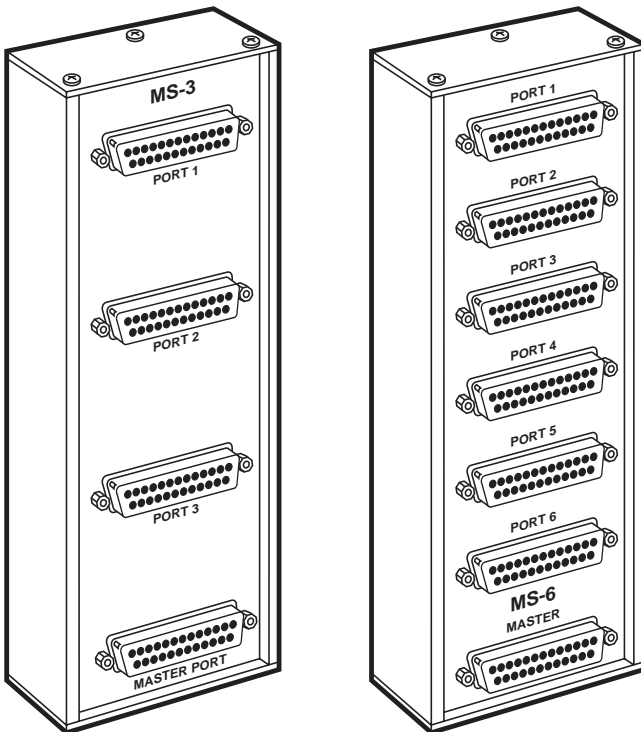




## Modem Splitters



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**TRADEMARKS USED IN THIS MANUAL**

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**FEDERAL COMMUNICATIONS COMMISSION  
AND  
CANADIAN DEPARTMENT OF COMMUNICATIONS  
RADIO FREQUENCY INTERFERENCE STATEMENTS**

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

*This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.*

*Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par Industrie Canada.*

## NORMAS OFICIALES MEXICANAS (NOM) ELECTRICAL SAFETY STATEMENT

### INSTRUCCIONES DE SEGURIDAD

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc..
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.

12. Precaución debe ser tomada de tal manera que la tierra física y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energía.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos líquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
  - A: El cable de poder o el contacto ha sido dañado; u
  - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
  - C: El aparato ha sido expuesto a la lluvia; o
  - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
  - E: El aparato ha sido tirado o su cubierta ha sido dañada.

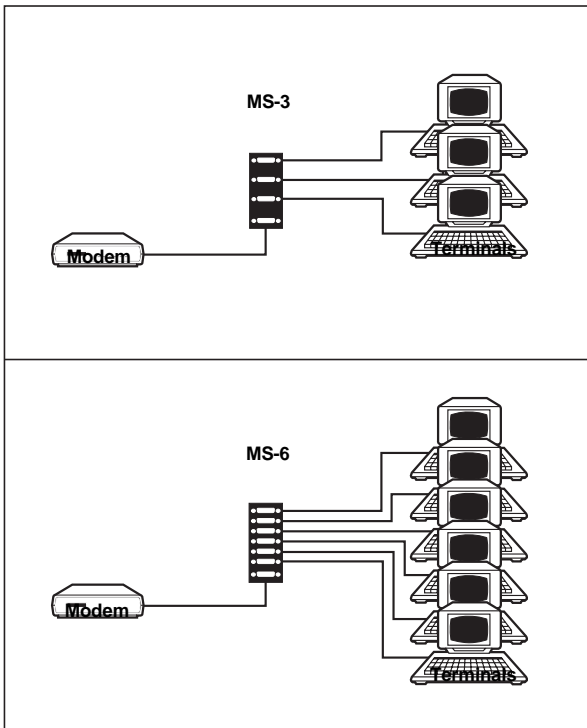
# 1. Specifications

<b>Interface</b> —	RS-232-C
<b>Configuration</b> —	MASTER Connector is DTE; PORT Connectors are DCE
<b>Pins Supported</b> —	1 (FG), 2 (TD), 3 (RD), 4 (RTS), 5 (CTS), 6 (DSR), 7 (SG), 8 (DCD), 15 (TC), 17 (RC), 20 (DTR)
<b>Connectors</b> —	DB25s (female)
<b>Temperature</b> —	32 to 122°F (0 to 50°C)
<b>Humidity</b> —	Up to 95% noncondensing
<b>Size</b> —	7.5"H x 2.5"W x 1.3"D (19.1 x 6.4 x 3.3 cm)
<b>Weight</b> —	2 lb. (0.9 kg)

## 2. Introduction

The Modem Splitter allows an RS-232-C DCE device, such as a modem, to interface with up to six RS-232-C DTE devices, such as terminals. The MS-3 will support up to three additional units. The MS-6 will support up to six additional units. The MASTER port is configured DTE and PORTS 1-6 are configured DCE. No jumpers and/or switches are located on the Modem Splitter. See Figure 1 for typical applications.

A 6-ft. DB25 male/DB25 female extension cable and a serial AT adapter (DB9 female/DB25 male) are included with the TL073A-R3 and TL074A-R3 Modem Splitters. *If you ordered the TL073A-R2 or TL074A-R2 Modem Splitters, you will not receive the cable or the adapter.*



**Figure 1. Typical Applications.**

## 3. Theory of Operation

Signals present on the MASTER connector at pins 1, 3, 5, 6, 7, 8, 15, and 17 are sent to the corresponding pins on each of the PORT connectors. Signals present on the PORT connectors at pins 2, 4, and 20 are passively stored and sent to the corresponding pins on the MASTER connector.



## 4. Installation

The Modem Splitter is a passive device. The total length of cable connected to the unit should be less than 50 feet (15.2 m). All connectors on the Modem Splitter are DB25s (female).

The Modem Splitter is easily installed into a system by plugging the terminals into the Modem Splitter connectors labeled PORT 1 through PORT 3 or through PORT 6. The cable from the modem connects to the connector labeled MASTER. To ensure proper operation, the following guidelines should be followed:

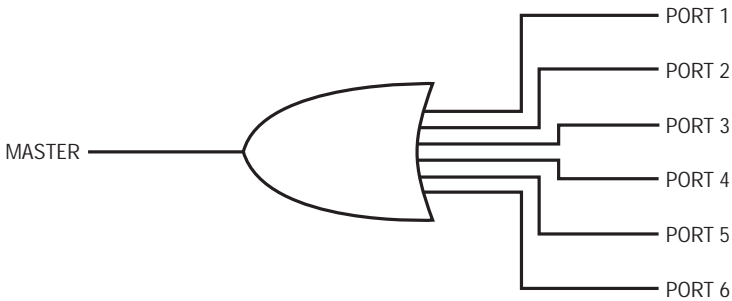
1. The terminal devices connected to the Modem Splitter must be configured as DTE (Data Terminal Equipment) devices. The modem device they will share must be configured as DCE (Data Communication Equipment). Refer to your terminal or modem installation manual if you are unsure of this requirement. Generally speaking, terminals are DTE devices and modems are DCE devices.
2. Data coming onto the MASTER port on pin 3 of the Modem Splitter goes to all three or six terminal ports since they are all tied common. However, only one terminal may transmit data to the modem at any one time. The transmit leads (pin 2) are not tied common and all terminals are isolated from each other by an OR gate.

## 5. Wiring Configuration

Three lines are isolated from each other in the Modem Splitter by OR gates. They are as follows:

- Pin 2, Transmitted Data
- Pin 4, Request to Send
- Pin 20, Data Terminal Ready

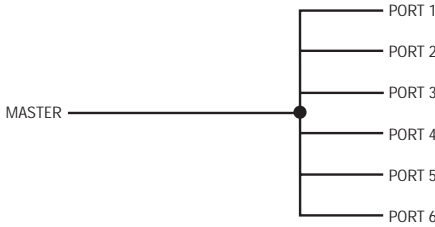
Figure 2 illustrates the wiring configuration for these leads.



**Figure 2. OR Gate Wiring for Pins 2, 4, and 20.**

Eight other leads are tied straight through and are illustrated in Figure 3. They are as follows:

- Pin 1, Protective Ground
- Pin 3, Received Data
- Pin 5, Clear To Send
- Pin 6, Data Set Ready
- Pin 7, Signal Ground
- Pin 8, Received Line Signal Detector
- Pin 15, Transmitter Signal Element Timing (DCE)
- Pin 17, Received Element Signal Timing (DCE)

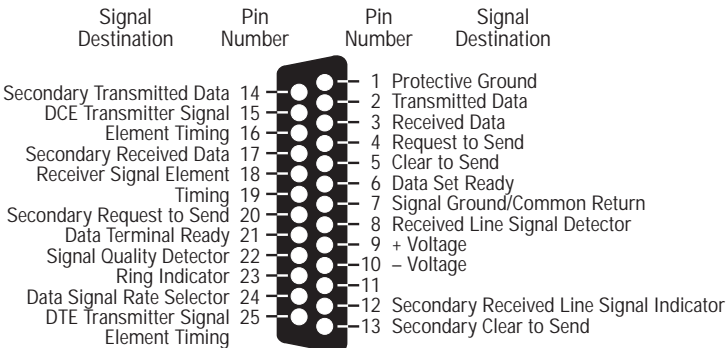


**Figure 3. Configuration for Pins 1, 3, 5, 6, 7, 8, 15, and 17.**

**Table 1. Modem Splitter Pinout**

Pin	EIA Circuit	Description	Signal to DCE	Direction from DCE
1	1AA	Protective Ground	—	—
2	BA	Transmitted Data	X	
3	BB	Received Data		X
4	CA	Request To Send	X	
5	CB	Clear To Send		X
6	CC	Data Set Ready		X
7	AB	Signal Ground	—	—
8	CF	Received Line Signal Detector		X
15	DB	Transmitter Signal Element Timing (DCE)		X
17	DD	Receiver Signal Element Timing (DCE)		X
20	CD	Data Terminal Ready	X	

**Figure 4. Standard RS-232 Interface.**





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