146B SINGLE-CIRCUIT MOUNTING
DESCRIPTION AND INSTALLATION
"OMNIPORT*" NETWORK CHANNEL TERMINATING EQUIPMENT

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1. GENERAL

1.01 This practice provides description, application, and installation information for the OMNIPORT Network Channel Terminating Equipment (NCTE) 146B single-circuit mounting. Specifications for this mounting are listed in Table A. A general description of OMNIPORT NCTE is given in AT&T Practice 332-620-100.

1.02 When this practice is reissued, the reason(s) for reissue will be listed in this paragraph.

1.03 The 146B mounting is part of the OMNIPORT NCTE family of customer premises equipment (both mountings and circuit packs) for voice-frequency special services, maintenance, analog data, and digital services.

2. APPLICATION

2.01 The 146B mounting is designed specifically for analog data, digital, and maintenance applications. However, this mounting can be used to house circuit packs for some voice-frequency special services applications. The mounting can be powered by −48 volts, ±12 volts, or ±12 and +5 volts dc power.

2.02 This mounting, when used with an OMNIPORT NCTE data interface unit, is a replacement for the 829-type data auxiliary sets.

2.03 Some combinations of mounting, circuit pack, and power supply can be ordered as kits. The

kits currently available are listed in AT&T Practice 332-620-100.

3. DESCRIPTION

A. 146B Mounting

3.01 The 146B mounting shown in Fig. 1 consists of a formed metal base and a molded plastic cover. The mounting is 2-3/8 inches high, 6 inches wide, 10-1/4 inches long, and weighs 1-1/4 pounds. Keyhole slots are provided on the unit base for wall mounting, or the unit can be mounted on a desk or shelf.

Base

3.02 The base of the 146B mounting supports one OMNIPORT NCTE circuit pack and provides a means for connecting the network facility, customer equipment, and power supply to the circuit pack.

Connections

3.03 The connection facilities for the 146B mounting are shown in Fig. 2 and consist of a 56-pin card-edge connector, a 16-position terminal strip, a 50-position miniature ribbon plug, an 8-pin modular jack, and four wire wrap pins. The card-edge connector accepts an OMNIPORT NCTE or other 400-type circuit pack. The terminal strip terminates network, power supply, and customer equipment leads. The 50-position plug and 8-pin jack provide alternate methods of connecting customer equipment leads. Access to the circuit pack simplex and manual loopback leads is provided by four wire wrap pins.

3.04 Some of the unit interface leads have dual functions or appear on two or more connectors; therefore, Table B provides a list of the interface leads, their designations, functions, and appearances on the different connectors.

3.05 A removable plastic cover on the bottom of the base provides access to the 56 wire wrap pins on the card-edge connector. These wire wrap pins can be used to connect circuit pack interface leads that do not match the OMNIPORT NCTE lead plan to the connectors on the 146B mounting.

Cover

3.06 The cover of the 146B mounting is molded from almond-colored plastic and is designed to support a telephone set and modem when the unit is desk or shelf mounted. Two captive screws secure the cover to the base.

3.07 A gray plastic window on the front of the cover allows the circuit pack BUSY indicator to be checked. An opening at the rear of the cover provides cabling access to the connectors on the base.

B. Power Supply

3.08 A power supply kit is required for use with this mounting. A power supply kit consists of a KS-22696 receptacle-mounted power supply and a 6-foot power cord. Power supply kits currently available for use with this mounting are listed in AT&T Practice 332-620-100.

4. INSTALLATION

A. Location Selection

4.01 The mounting location for the unit must be selected to provide access to a 3-pronged, 60-Hz, 117-volt ac receptacle. The power supply kits used with this unit include a 6-foot, 4-conductor power cord with spade lugs on each end. If necessary, this cord can be replaced with a locally made power cord made from 22- or 24-gauge inside telephone wire. This locally made power cord must not exceed 15 feet in length. Spade lugs are not required.

Table Mounting

4.02 To mount this unit on a horizontal surface, such as a desk or table, simply place the mounting in the desired location, remove cover, and provide the necessary network, customer, and power connections to the unit (see paragraphs 4.05 through 4.15).

Wall Mounting

4.03 Keyhole slots are provided for wall mounting this unit. Use the keyhole slots at the front of the base to mount the unit vertically, or use the keyhole slots along the length of the base to mount the unit lengthwise.

4.04 To mount this unit on a wall:

- Remove cover.
- Use base as a template to locate the required screw holes.
- Drill pilot holes for mounting screws.
- Install screws (wood screws are provided). Leave screws extended from wall far enough to engage keyhole slots in unit base.
- Slip keyhole slots over screws and tighten screws until snug.
- Make necessary network, customer, and power connections.

B. Network Connections

4.05 Connect the network interface leads to the unit using the appropriate terminals of the terminal strip and wire wrap pins shown in Fig. 2. Refer to Table B for interface lead functions, designations, and connector appearances.

C. Customer Connections

4.06 Connections to customer equipment can be made using the 16-position terminal strip, the 50-position miniature ribbon plug, or the 8-pin modular jack. Figure 3 shows the pin assignments used in the 8-pin jack and 50-position plug. Refer to Table B for interface lead functions, designations, and connector appearances.

4.07 If the 50-position plug is used for customer connections, the strain relief bracket provided in the parts packet should be installed before connecting the 50-position jack to the plug. Figure 4 shows the installation of the strain relief bracket and 50-position plug. Mount bracket to the left of the 50-position plug using the 4-40 x 5/8 inch screw provided. (When installed, the bracket will cover the opening to the 8-pin modular jack.) Connect 50-position jack to plug and tighten screw on end of jack until snug and tie cable to the strain relief bracket with a cable tie.

D. Power Connections

4.08 Use the power cord provided with the power supply kit to connect the power supply to the mounting, or use a locally made cord as discussed in paragraph 4.01.

4.09 Connect the power supply to the mounting as indicated in Table C. ***Do not*** plug in power supply at this time.

4.10 The power supply COM and ACGND terminals are to be strapped together. The provided power cord includes a strap between the white and green conductors for this purpose. If a locally made power cord is used, ensure that the COM and ACGND terminals are strapped together.

E. Final Steps

4.11 Restrain the leads to the terminal strip and wire wrap pins with a cable tie as shown in Fig. 5.

4.12 Plug power supply into a 3-pronged, 60-Hz, 117-volt ac receptacle.

4.13 Provision circuit pack per local instructions and insert circuit pack in mounting.

4.14 Mark type of service on label at rear of cover.

4.15 Install cover.

TABLE A

146B SINGLE-CIRCUIT MOUNTING SPECIFICATIONS

GENERAL	
CLEI CODE	NCMA060A
DIMENSIONS (H, W, D in Inches)	2-3/8 × 6 × 10-1/4
WEIGHT	1-1/4 Pounds
TEMPERATURE	
Operating	0° C to 50° C
Storage	−40° C to 66° C
HUMIDITY	5 Percent to 95 Percent Relative
POWER INPUTS REQUIRED	
VOLTAGE	
Analog	−48 V dc
Analog Data	−48 V dc or ±12 V dc
Maintenance	−48 V dc or ±12 V dc
Digital	±12 V dc and +5 V dc
INPUT/OUTPUT CONNECTIONS	
Network and Power Leads	10 Screw-Down Terminals
Customer Equipment Leads	6 Screw-Down Terminals, 8-Pin Modular Jack, or 50-Position Miniature Ribbon Plug
Simplex and Manual Loopback Leads	4 Wire Wrap Pins

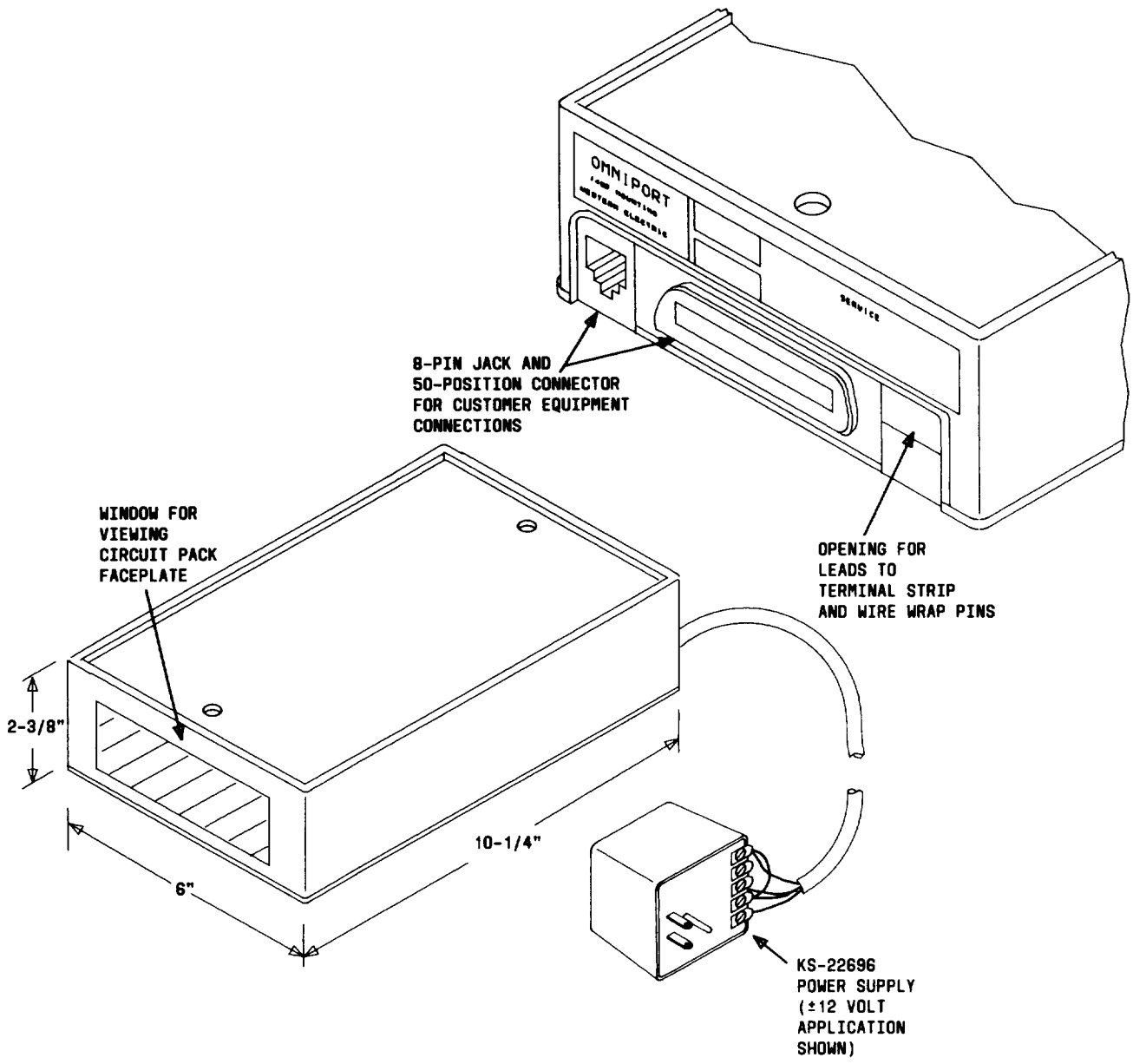

Fig. 1—146B Mounting and KS-22696 Power Supply (±12 Volt Application Shown)

TABLE B

146B INTERFACE LEAD ASSIGNMENTS

LEAD DESIGNATION	CARD-EDGE CONNECTOR PIN	50-POSITION CONNECTOR PIN	8-PIN JACK PIN	TERMINAL STRIP DESIG	WIRE-WRAP PINS DESIG	LEAD FUNCTIONS
CUSTOMER LEADS						
T/DT	55	29	2	DT		Tip lead toward the customer or Data tip lead toward the customer
R/DR	49	4	1	DR		Ring lead toward the customer or Data ring lead toward the customer (The T/DT and R/DR leads are the transmit and receive pair for 2-wire services or the transmit input pair for 4-wire services)
T1/DT1	5	30	7	DT1		Tip 1 lead toward the customer or Data tip 1 lead toward the customer
R1/DR1	15	5	8	DR1		Ring 1 lead toward the customer or Data ring 1 lead toward the customer (The T1/DT1 and R1/DR1 leads are the receive output pair for 4-wire services)
E/SI/TEK5	23, 34	28	3	TEK5		E signaling lead toward the customer or Status indicator toward the customer (TEK5) (The E/SI/TEK5 lead is strapped to pin 34 of the card-edge connector)
SG/SIR/TEK6	19, 21, 36	3	6	TEK6		Signal ground lead toward the customer or Status indicator return toward the customer (TEK6) (The SG/SIR/TEK6 lead is strapped to the M/VT lead [pin 21] and pin 36 of card-edge connector)

TABLE B (Contd)

146B INTERFACE LEAD ASSIGNMENTS

LEAD DESIGNATION	CARD-EDGE CONNECTOR PIN	50-POSITION CONNECTOR PIN	8-PIN JACK PIN	TERMINAL STRIP DESIG	WIRE-WRAP PINS DESIG	LEAD FUNCTIONS
CUSTOMER LEADS (Contd)						
M/VT	21, 19, 36	27	5			M-signaling lead toward the customer or Voice tip lead toward the customer for alternate voice data service (The M/VT lead is strapped to the SG/SIR/TEK6 lead [pin 19] and pin 36 of the card-edge connector)
SB/VR	1	2	4			Signal battery lead toward the customer or Voice ring lead toward the customer for alternate voice data service
NETWORK LEADS						
T1	41			T1		Tip 1 lead toward the network
R1	47			R1		Ring 1 lead toward the network (The T1 and R1 leads are the transmit and receive pair for 2-wire services or the transmit output pair for 4-wire services)
T	7			T		Tip lead toward the network
R	13			R		Ring lead toward the network (The T and R leads are the receive input pair for 4-wire services)
SXT/LA1T	43	31			SXT	Transmit simplex lead (network side) or Look-ahead sensing option tip lead of BPT10 circuit pack (circuit 1)
SXR/LA1R	9	6			SXR	Receive simplex lead (network side) or Look-ahead sensing option ring lead of BPT10 circuit pack (circuit 1)

TABLE B (Contd)

146B INTERFACE LEAD ASSIGNMENTS

LEAD DESIGNATION	CARD-EDGE CONNECTOR PIN	50-POSITION CONNECTOR PIN	8-PIN JACK PIN	TERMINAL STRIP DESIG	WIRE-WRAP PINS DESIG	LEAD FUNCTIONS
NETWORK LEADS (Contd)						
LA2T	45	32				Look-ahead sensing option tip lead of BPT10 circuit pack (circuit 2)
LA2R	11	7				Look-ahead sensing option ring lead of BPT10 circuit pack (circuit 2)
MLB	39	33			MLB	Manual loopback lead
MLBG	37	8			MLBG	Manual loopback return lead
ID1	2	1				Identification lead 1
ID2	4	26				Identification lead 2
	29	9				Pin 9 of 50-position plug connects to pin 29 of card-edge connector
	31	34				Pin 34 of 50-position plug connects to pin 31 of card-edge connector (Pins 9 and 34 of 50-position plug provide access to some circuit pack leads which do not match the OMNIPORT NCTE lead plan)
POWER LEADS						
−48V	35, 26			−48V		−48 Volt power supply input or +5 Volt power supply input
SPARE	18			SP		Spare terminal (provides access to pin 18 of card-edge connector)
+12V	10			+12V		+12 Volt power supply input
GRD	17, 28			GRD		Ground return for −48 volt, ±12 volt, or ±12 volt and +5 volt power supplies
−12V	48			−12V		−12 Volt power supply input
FGRD	52			FGRD		Frame ground

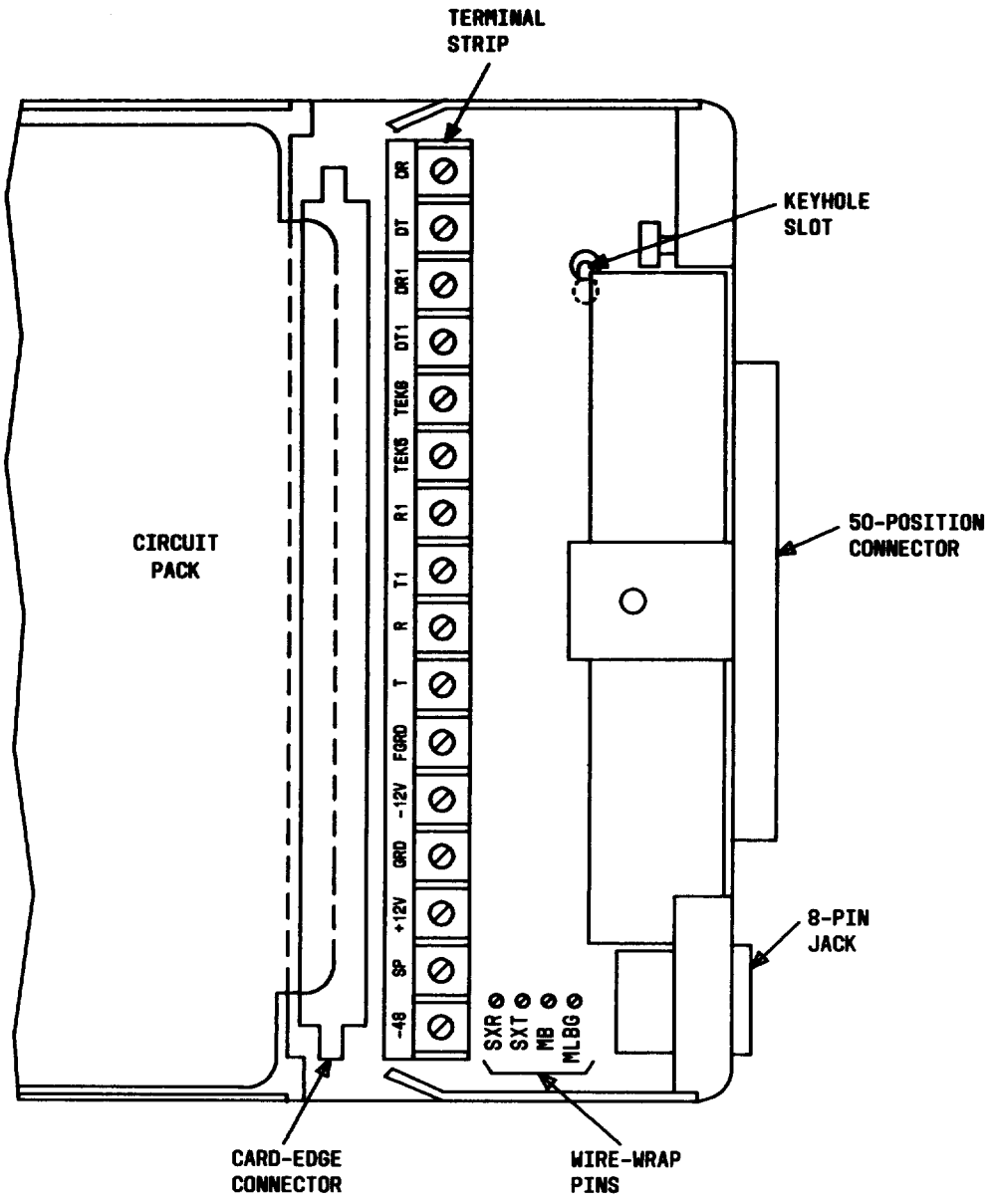

Fig. 2—146B Mounting Connectors

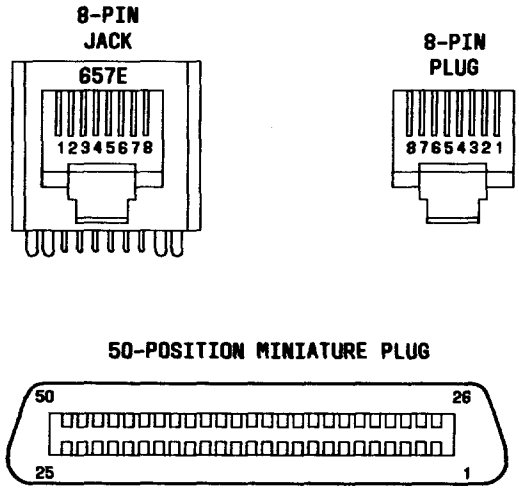

Fig. 3—Customer Connector Pin Numbers

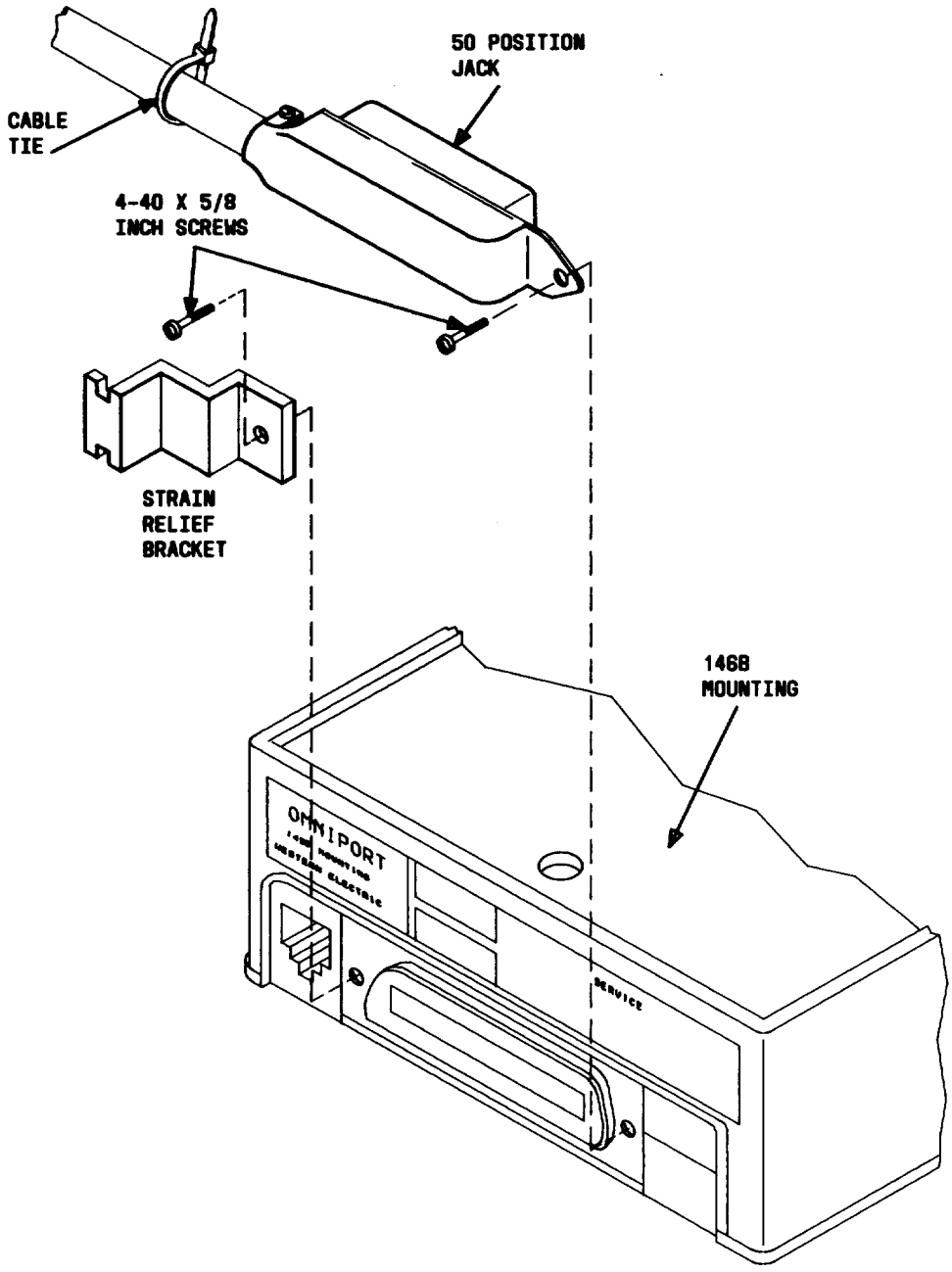

Fig. 4—Installation of Strain Relief Bracket

TABLE C

POWER CORD CONNECTIONS

POWER CORD LEAD COLOR	-48 VOLT APPLICATION		±12 VOLT APPLICATION	
	POWER SUPPLY TERMINAL	MOUNTING TERMINAL	POWER SUPPLY TERMINAL	MOUNTING TERMINAL
Red	-48V	-48V	+12V	+12V
Black	*	*	-12V	-12V
White	COM†	GRD	COM†	GRD
Green	ACGND†	FGRD	ACGND†	FGRD

* Cut off unused power lead at both ends of cord.

† Power supply COM and ACGND terminals are to be strapped together. The provided power cord includes a strap between the white and green conductors for this purpose. If a locally made power cord is used, ensure that the COM and ACGND terminals are strapped together.

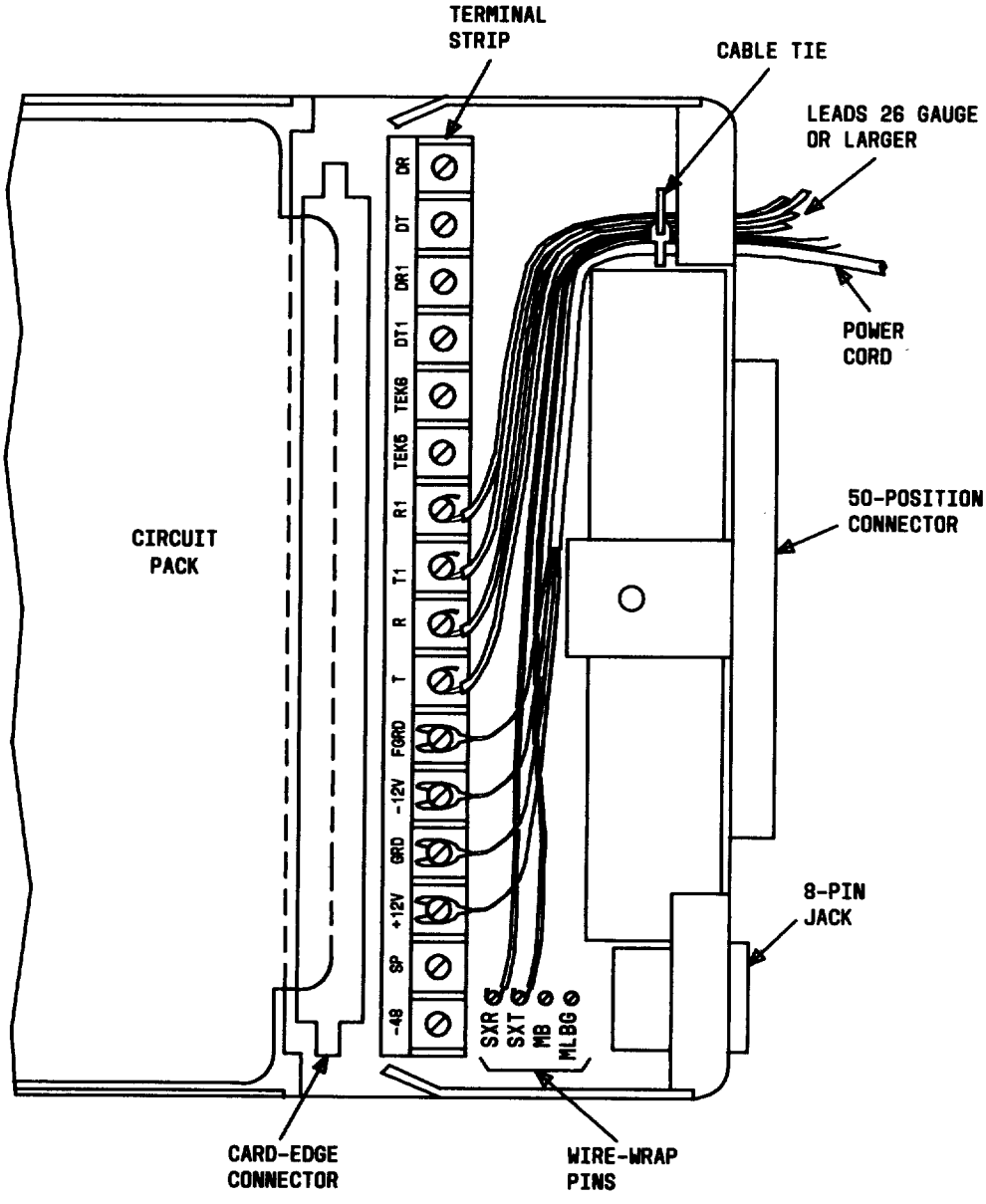

Fig. 5—Terminal Strip and Wire Wrap Connections (±12 Volt Power Shown)