

## J99400F HOUSING ASSEMBLY

### DESCRIPTION

#### PACKAGED METALLIC FACILITY TERMINAL ASSEMBLIES

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#### 1. GENERAL

**1.01** This section provides a physical description and discusses the basic functions of the J99400F packaged metallic facility terminal assembly (PMFTA). The associated 292A power supply/frequency generator, J99400AD battery charger, J99400AE battery drawer, and ED-7C223 installation data sheets also are discussed.

**1.02** When this section is reissued, the reason for reissue will be given in this paragraph.

**1.03** The PMFTA is a new line of circuit pack mounting assemblies designed for small groups of metallic facility terminal (MFT) plug-ins.

PMFTA can be located at the network interface on a customer's premises or in a central office. These assemblies are self-contained arrangements including an associated power supply, interface terminal connectors, and installation data sheets.

**1.04** The following paragraphs provide descriptive information on these assemblies and associated equipment. Section 332-610-205 provides installation information on the J99400F assembly.

#### 2. FUNCTIONAL DESCRIPTION

**2.01** This circuit pack arrangement consists of five basic components. The basic components are:

- J99400F housing assembly
- 292A power supply/frequency generator
- J99400AD battery charger
- J99400AE battery drawer
- ED-7C223-G5 installation data sheets.

#### A. J99400F Housing Assembly

**2.02** The J99400F assembly shown in Fig. 1 will accommodate up to six MFT circuits in a single module arrangement. The MFT mounting shelf is located behind the hinged smoked-gray plastic door on the top portion of the assembly. Also located behind this door is the J99400AD battery charger and the J99400AE battery drawer. Space is provided above the battery drawer for convenient storage of the installation data sheet assembly, ED-7C223-G5. Space is provided above the MFT shelf for storage of the J99400TA test extender. The plastic door is held in the closed position by magnetic strips located on each side of the door.

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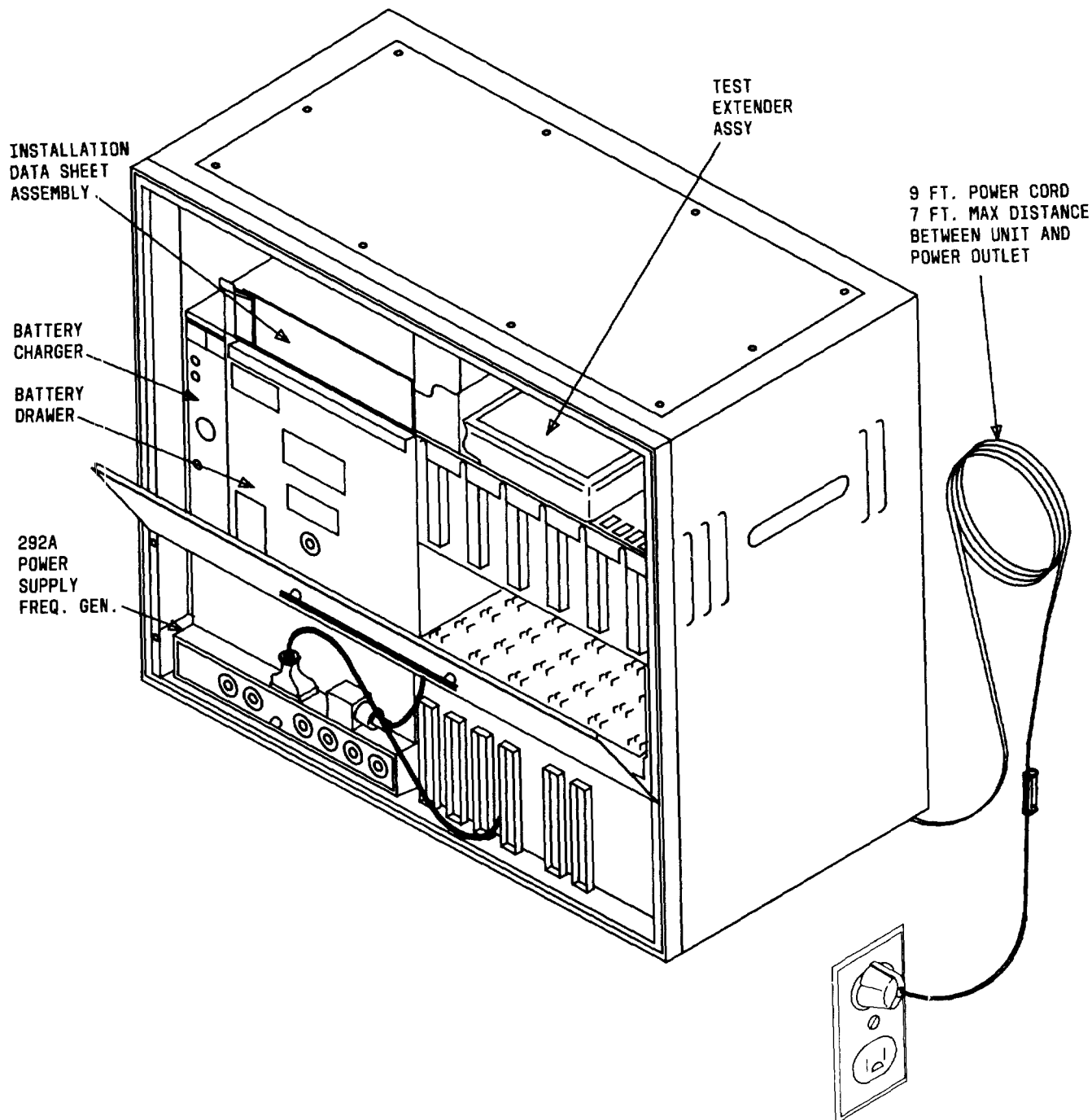


Fig. 1—J99400F Housing Assembly

**2.03** The J99400F housing assembly is 20.5 inches high, 26 inches wide, and 13 inches deep. It can be mounted on a table, floor, or wall. This assembly with MFT plug-ins weighs approximately 125 pounds. Padded metal legs are provided on the housing for table mounting. Screw-in receptacles have been included on the base of the housing to allow installation of the optional ED-7C225 caster/leveler assembly, if required for floor mounting. The casters

are to be installed at the rear of the housing, while the levelers go at the front. Keyholes are provided on the back cover of the housing to allow mounting on the optional ED-7C224 wall mounting plate. Both the caster/leveler and the wall mounting plate options must be ordered separately. When either the caster/leveler or the wall mounting plate option is used, the housing legs should be removed and stored along the front sides of the housing.

**2.04** If floor or table mounted, the J99400F housing assembly may be stacked with other J99400C, D, E, and F assemblies. Only one J99400C, D, or F housing assembly may be stacked on a J99400E assembly. Any combination of J99400C, D, or F assemblies may be stacked three high.

**2.05** Removable panels are provided on the lower front, top, and back of the housing for ease of installation and maintenance. These panels are held in place by quarter-turn captivated fasteners.

#### **B. 292A Power Supply/Frequency Generator**

**2.06** The 292A power supply/frequency generator will accept 117 Vac commercial power input and supplies four -48 Vdc outputs (-48 A, B, C, and D) and 20-Hz ringing to the MFT mounting shelf. The -48 Vdc outputs provide power to the mounting shelf as shown in Fig. 1. Each of the -48 Vdc outputs has a current capacity of 0.5 amperes for a total power supply current output of 2.0 amperes. Each of the four -48 Vdc outputs is protected by 1.75 ampere circuit breaker. The 20-Hz ringing output is capable of ringing up to nine phones simultaneously and is protected with a 1.0 ampere circuit breaker. The 117 Vac input is protected with a 1.75 ampere circuit breaker. The circuit breakers mentioned, as well as "power on" indicator, are visible with the housing front panel in position. If these circuit breakers should trip, the white center button will extend. The circuit breakers are reset by pushing this center button.

**2.07** In the event of the loss of the 117 Vac input or the tripping of the ac input circuit breaker, the 292A will transfer to an internal -48 volt battery and disconnect the battery charger. There is also a provision for an optional alarm circuit. One of the two access holes located at the battery rear, left-hand side of the housing is used for connection to the alarm circuit. The access holes are shown in Fig. 2. The cabling for this function is to be 14-gauge BX or thermoplastic cable. This cable connects to the terminal strip (TB5) as marked. The terminal strip is shown in Fig. 2.

#### **C. J99400AD Battery Charger**

**2.08** The J99400AD battery charger is intended for use with the J99400F housing assembly. It recharges the batteries in the J99400AE battery drawer to approximately 56 volts. The J99400AD is an MFT-type plug-in unit that plugs into the slot on the left side of the battery drawer as shown in Fig.

1. The J99400AD plug-in is shown in Fig. 3. The battery charger should only be installed in its slot when the 292A power supply/frequency generator is operating from the 117 Vac line. This is to prevent current surges into the power supply. The BATT CHRG (green) lamp should be on when the 292A dc output is present.

**2.09** The BATT DISC (red) lamp will come on when the batteries are discharged below approximately 38 volts. This lamp will go off when the batteries have been recharged to approximately 50 volts. Also when the batteries are recharged to 50 volts the BATT READY (green) lamp will be on. This lamp will stay on until the batteries are discharged to approximately 38 volts.

#### **D. J99400AE Battery Drawer**

**2.10** The J99400AE battery drawer is intended for use with the J99400F housing assembly. It provides approximately 4 hours of battery reserve power. The battery drawer is located in the MFT shelf to the left of the MFT plug-in slots as shown in Fig. 1.

**2.11** The J99400AE battery drawer contains four KS-21906, List 2 lead-acid batteries. The KS-21906, List 2 battery is a 12 volt, 5.0 ampere-hour, sealed battery. It has a float life expectancy of greater than 8 years. Each battery cell contains a safety plug to prevent excessive pressure buildup. The battery drawer base has four areas to hold the batteries in place. The batteries are inserted with the terminals up and connected as shown in Fig. 4. The battery retainer cover fits over the top of the batteries.

***Danger 1: The J99400F housing assembly shall not be shipped or transported with the batteries installed in the J99400AE battery drawer.***

***Danger 2: The J99400AE battery drawer, with batteries installed, is heavy and care should be taken in handling. The drawer has a safety release lever to prevent inadvertent removal of the drawer.***

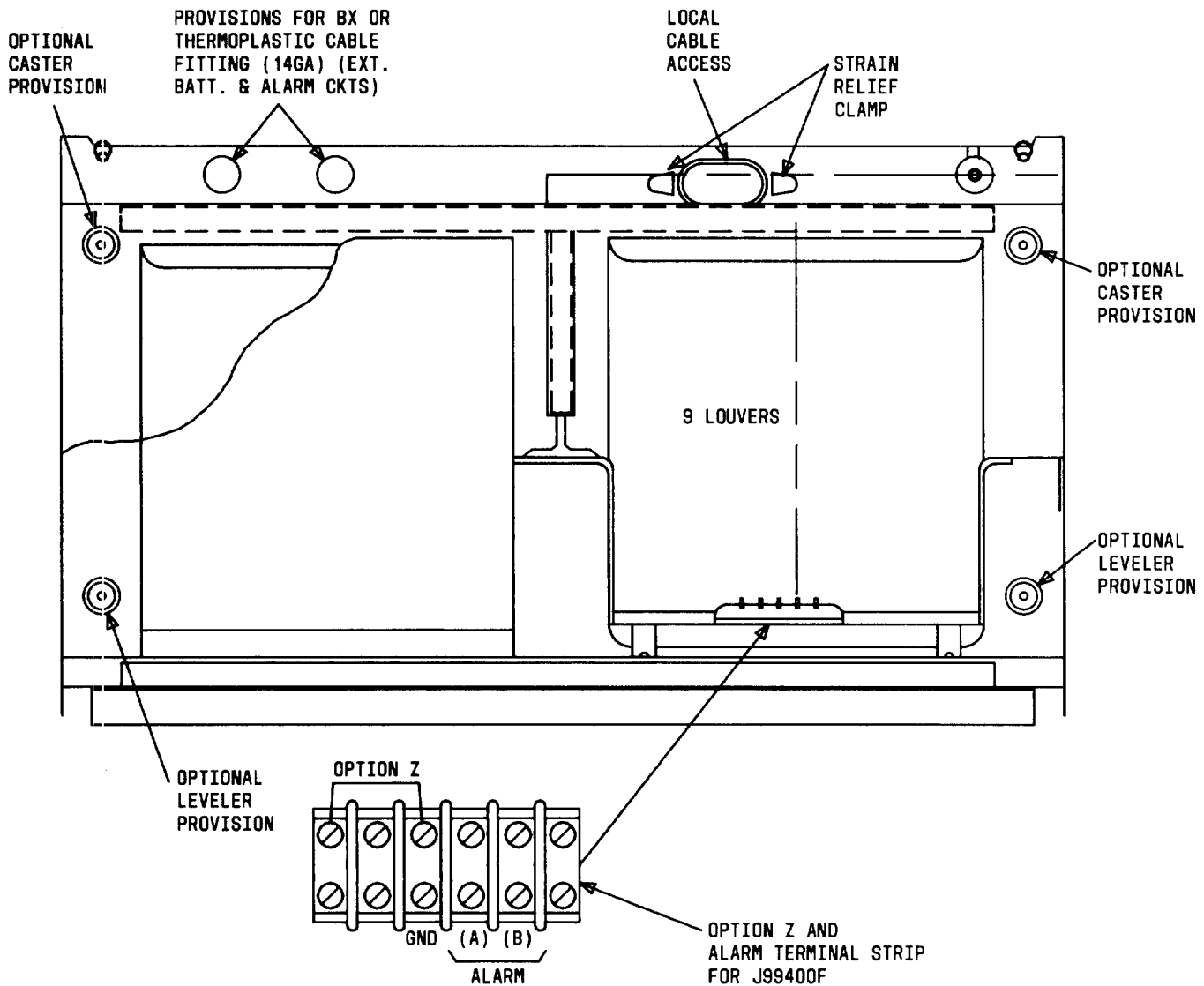


Fig. 2—Bottom View of J99400F Showing Cable Access Holes and TB5

#### E. ED-7C223-G5 Installation Data Sheets

**2.12** This assembly contains installation instructions for the J99400F housing assembly. The data sheets are packaged on an MFT circuit pack frame and may be stored above the mounting shelf as shown in Fig. 1 or in an empty plug-in slot. This assembly consists of an MFT card holder frame and shield with an attached 2-ring, loose-leaf binder. More detailed installation information can be found in Section 332-610-205.

#### 3. APPLICATION AND CONNECTIONS

**3.01** The J99400F housing assembly is used in applications where up to six circuits require transmission and/or signaling enhancement. This equipment can be located at the network interface on the customer's premises or in the central office.

**3.02** The six plug-in slots in this PMFTA housing are wired in a single-module arrangement to provide transmission and/or signaling enhancement for six circuits. Any MFT passive transmission unit,

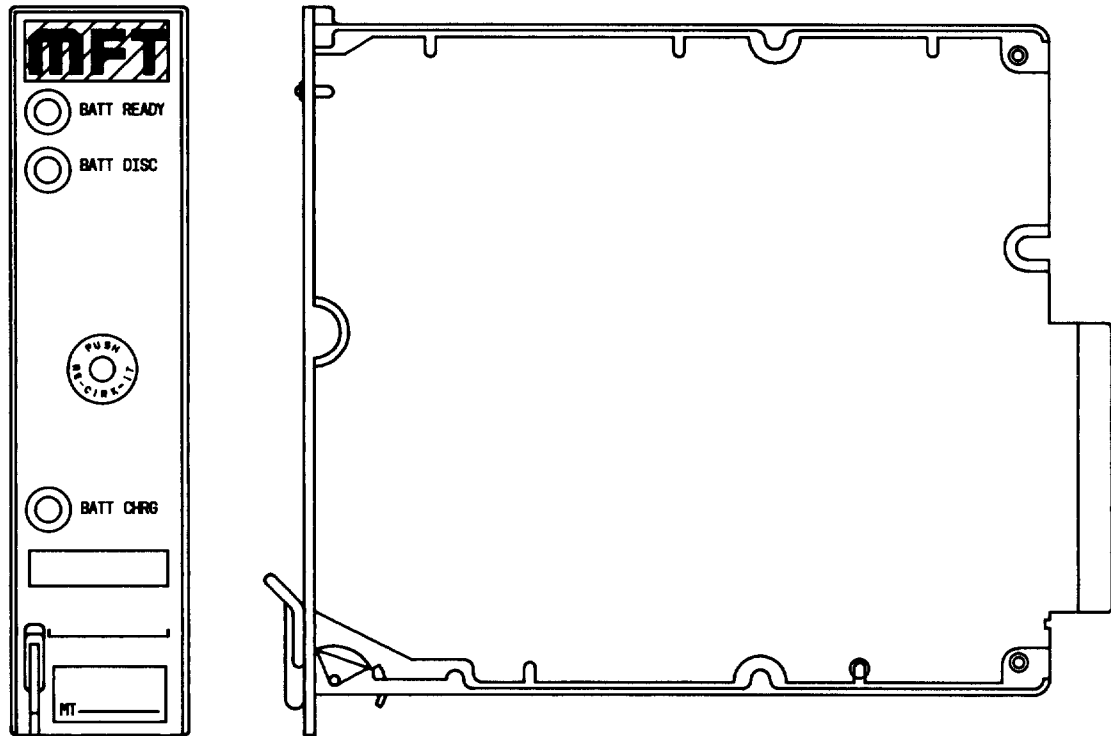
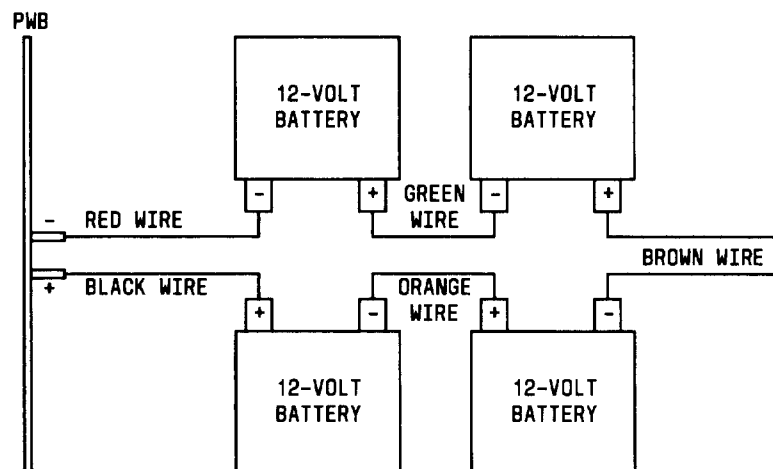


Fig. 3—J99400AD Battery Charger



NOTE:  
BATTERY INTERCONNECTION WIRES ARE DOUBLE  
CABLE TIED (CRISS-CROSSED) TO THE TOP  
COVER MOUNTING POST TO PREVENT THEM FROM  
BEING LOST.

Fig. 4—Battery Connections

repeater, and combined function unit can be used in the TU slots of the mounting shelf. The only type of signaling unit that can be used in this arrangement is the loop signaling extender (J99343CA, CB, CC, and CD) which provides dc boost to the circuit battery. The type of MFT unit to be used is determined by the circuit requirements. A decal on the door hinge support bar shows the TU slots color-coded for easy circuit identification at the 94-type interface connectors (TS1 through TS4).

**3.03** Cabling to the J99400F housing is made to the 94-type connectors (TS1 through TS4) through the oblong opening at the right rear of the housing as shown in Fig. 2. Typically, cabling from the network interface is routed to the connectors labeled TS1 and TS2 (A-side) and connected according to circuit and function as indicated on the decals beside the connectors and on the inside of the front panel. The cabling to the central office is typically connected to connectors TS3 and TS4 (B-side). Figure 5 shows the lead plan for the 94-type connector block. The 94-type connector can accommodate wire sizes of 22, 24, and 26 gauge.

**4. J99400TA TEST EXTENDER ASSEMBLY (SD-7C094)**

**4.01** This test extender has been designed for use with the J99400 family of housings but can be used on any MFT shelf. This test extender provides for full extension of a powered MFT module outside the housing. This permits total access to adjustments on the MFT module under test as well as the adjustments on the extender itself. The J99400TA test extender assembly is illustrated in Fig. 6. A functional schematic decal for the test extender jack field and switches is mounted on the wiring side of the printed wiring board as an aid to the user.

**4.02** The procedure for using the test extender is to insert the MFT module under test into the mounting rails and slide it forward until the MFT module connector mates with connector J1 on the test extender. The test extender is then inserted into the

appropriate housing mounting slot and pushed forward until it mates with the MFT mounting shelf connector. Additional information on the use of the J99400TA test extender is provided in Section 332-610-205.

**5. REFERENCES**

**5.01** The following list of references provides additional information on the J99400F housing assembly.

SECTION	TITLE
332-610-205	J99400F Housing Assembly—Installation and Maintenance

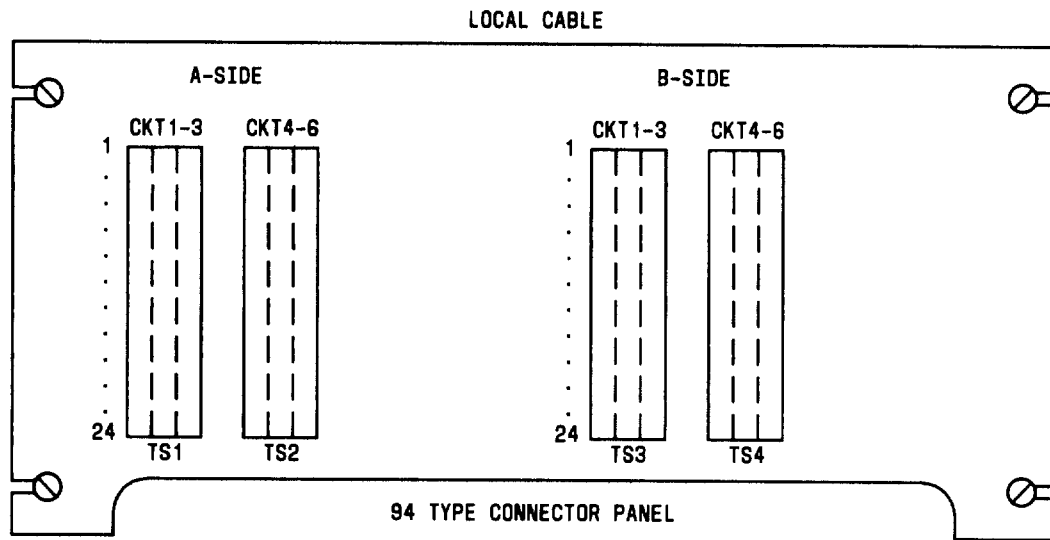
REFERENCE	TITLE
SD-7C092	PMFTA—J99400AD and J99400AE
SD-7C093	PMFTA—J99400F

**5.02** The following list of general documents provides information on equipment compatible with the J99400F housing assembly.

SECTION	TITLE
332-910-100	J99343—General Description

SECTION	TITLE
332-910-180	J99343—Applications

REFERENCE	TITLE
SD-7C094	J99400TA Test Extender
ED-7C224	Optional Wall Mounting Plate for the J99400F Housing Assembly
ED-7C225	Optional Caster/Leveler Assembly Package for J99400F Housing Assembly



A-SIDE				B-SIDE							
TS1			TS2			TS3			TS4		
TERM	FUNC		TERM	FUNC		TERM	FUNC		TERM	FUNC	
1	T	CKT 1 (CREAM)	1	T	CKT 4 (CREAM)	1	T1	CKT 1 (CREAM)	1	T1	CKT 4 (CREAM)
2	R		2	R		2	R1		2	R1	
3	T1/A		3	T1/A		3	T		3	T	
4	R1/B		4	R1/B		4	R		4	R	
5	AS1		5	AS1		5	BS1		5	BS1	
6	AS2		6	AS2		6	BS2		6	BS2	
7	1CT		7	1CT		7	2CT		7	2CT	
8	1CR		8	1CR		8	2CR		8	2CR	
9	T	CKT 2 (RED)	9	T	CKT 5 (RED)	9	T1	CKT 2 (RED)	9	T1	CKT 5 (RED)
10	R		10	R		10	R1		10	R1	
11	T1/A		11	T1/A		11	T		11	T	
12	R1/B		12	R1/B		12	R		12	R	
13	AS1		13	AS1		13	BS1		13	BS1	
14	AS2		14	AS2		14	BS2		14	BS2	
15	1CT		15	1CT		15	2CT		15	2CT	
16	1CR		16	1CR		16	2CR		16	2CR	
17	T	CKT 3 (GREEN)	17	T	CKT 6 (GREEN)	17	T1	CKT 3 (GREEN)	17	T1	CKT 6 (GREEN)
18	R		18	R		18	R1		18	R1	
19	T1/A		19	T1/A		19	T		19	T	
20	R1/B		20	R1/B		20	R		20	R	
21	AS1		21	AS1		21	BS1		21	BS1	
22	AS2		22	AS2		22	BS2		22	BS2	
23	1CT		23	1CT		23	2CT		23	2CT	
24	1CR		24	1CR		24	2CR		24	2CR	

**Fig. 5—Lead Plan**

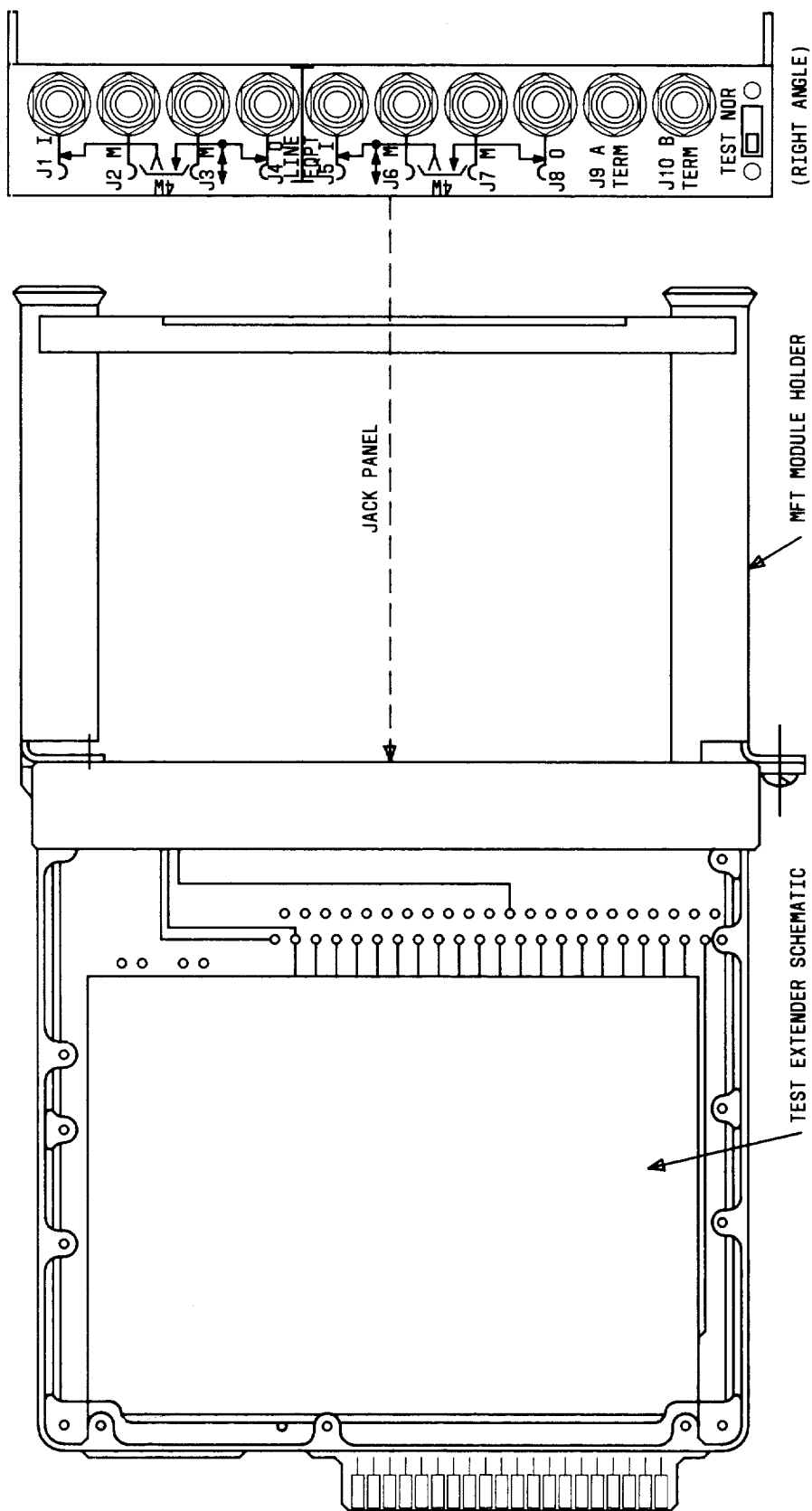


Fig. 6—J99400TA Test Extender