

## 24A-TYPE LINE STATUS INDICATOR IDENTIFICATION AND INSTALLATION

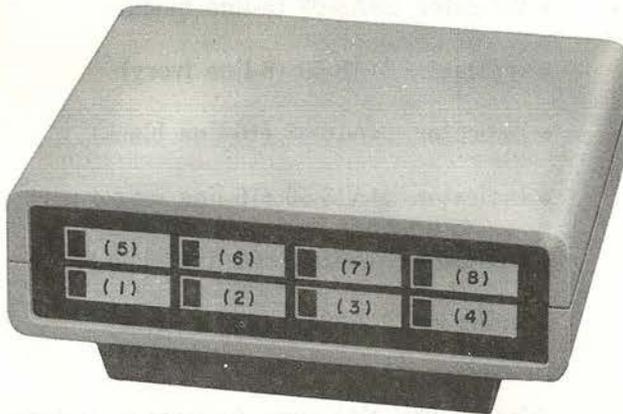
### 1. GENERAL

1.01 This section furnishes the identification, ordering, installation, and maintenance information for the 24A-type line status indicator.

1.02 This section is reissued to revise the Warning on the installation of KS-21239,L6 transformers in ac outlets with metal covers.

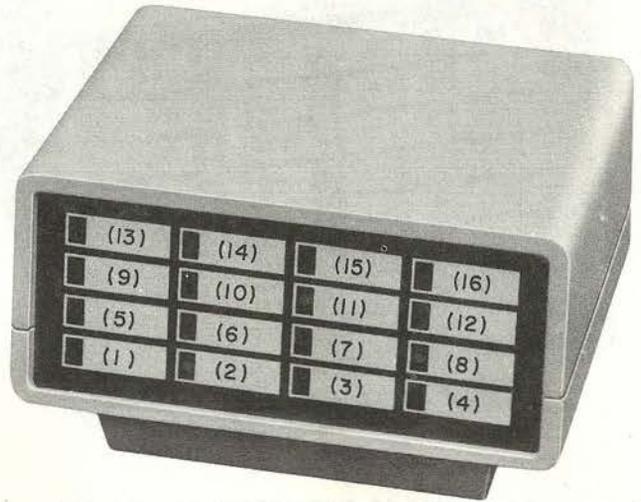
### 2. IDENTIFICATION

2.01 The 24A indicators are available with capacities for monitoring 8 lines on the 24A8 (Fig. 1), 16 lines on the 24A16 (Fig. 2), and 32 lines on the 24A32 (Fig. 3).



( ) INDICATES LINES AS THEY APPEAR ON INDICATOR.  
THESE BRACKETED NUMBERS DO NOT APPEAR  
ON INDICATOR.

Fig. 1—24A8 Line Status Indicator



( ) INDICATES LINES AS THEY APPEAR ON INDICATOR.  
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Fig. 2—24A16 Line Status Indicator

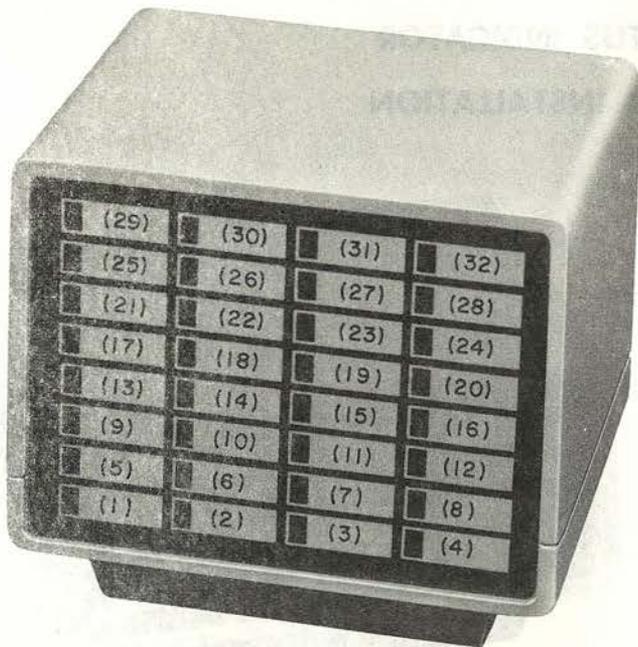
### Overall Dimensions

2.02 Approximate measurements of the three sizes of line status indicators are as follows:

- 24A8—6-1/2 inches wide by 5-1/4 inches deep by 3-1/8 inches high
- 24A16—6-1/2 inches wide by 5-1/4 inches deep by 4-1/8 inches high
- 24A32—6-1/2 inches wide by 5-1/4 inches deep by 6-1/8 inches high.

### NOTICE

Not for use or disclosure outside the  
Bell System except under written agreement



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Fig. 3—24A32 Line Status Indicator

#### Application

**2.03** The 24A is primarily intended for use with the No. 1 Electronic Switching System (ESS) and the DIMENSION® PBX (CSS 201). It can be used with features such as call pickup, call transfer, and call forwarding to provide an alternative to key equipment.

#### Power

**2.04** Power is furnished using a KS-21239,L6 transformer and a customer-provided 117V/60-Hz outlet *not* under control of a switch.

#### Operation

**2.05** The 24A indicator bridges across the T and R leads of lines to be monitored and indicates the status of these lines. There is an LED (light emitting diode) associated with each of the monitored lines. This LED is *off* when the line is idle, *on* when the line is off-hook, and flutters at a 20-Hz rate when the line is ringing. In addition, a tone ringer is sounded when any line being monitored

is ringing. The 20-Hz lamp rate and audible signal are activated only when ringing voltage is actually being applied; they are not activated during the silent intervals. Therefore, the 24A will provide the same distinctive ringing patterns provided to stations in the DIMENSION PBX (CSS 201).

**2.06** A typical application is shown in Fig. 4.

The answering location can monitor the status of up to 32 lines and determine which lines are off-hook or ringing. To answer a line being rung, the answering location dials a call pickup code and the call is redirected to the answering location. In the case where more than one phone is being rung, the determination of which call is answered is made by seeing which LED stops fluttering. Alternately, a directed call pickup code may be dialed.

#### Ordering Guide

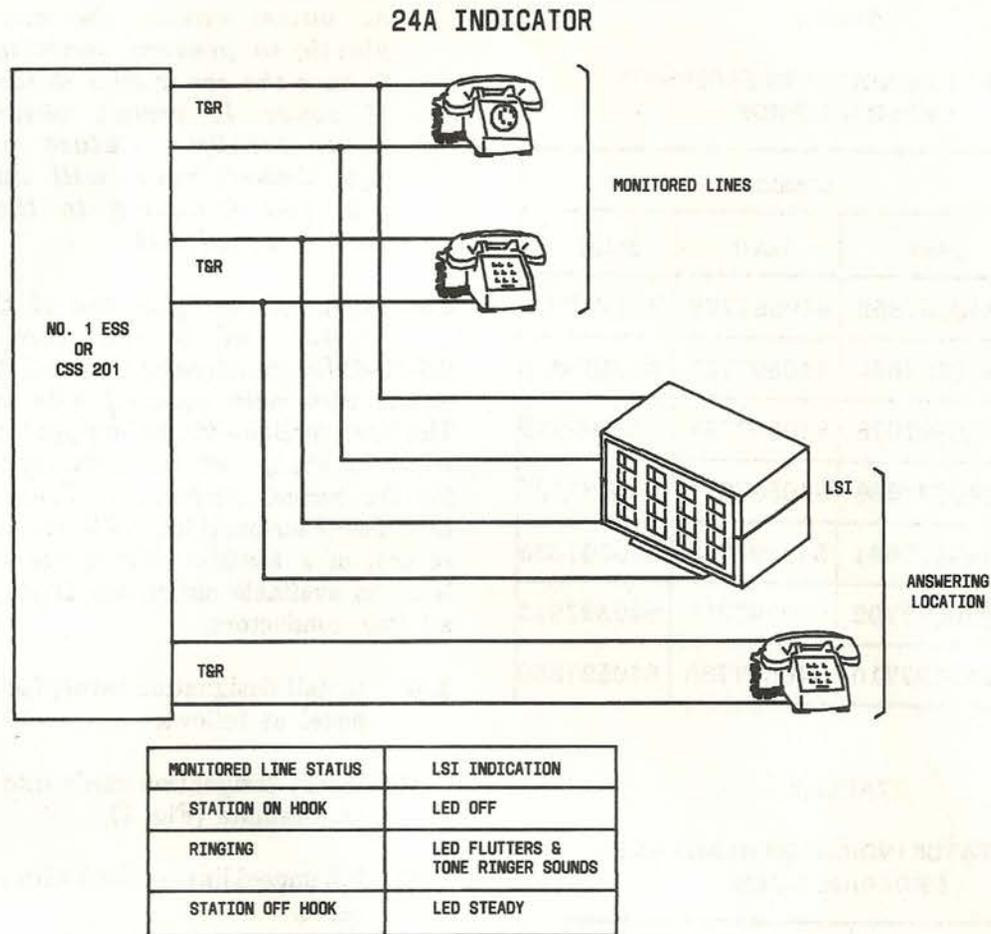
**2.07** Order associated apparatus as:

- Indicator, 24A8-03 (8-line black)
- Indicator, 24A8-50 (8-line ivory)
- Indicator, 24A16-03 (16-line black)
- Indicator, 24A16-50 (16-line ivory)
- Indicator, 24A32-03 (32-line black)
- Indicator, 24A32-50 (32-line ivory)

**Note:** The 24A-type indicators include a KS-21239,L6 transformer shipped loose with indicator.

- Plate, Face—order 1 per 24A-type indicator (see Table A)
- Panel, **◆Rear◆** —rear panel for 24A-type indicator; order 1 per indicator (see Table B)
- Bracket, 115A-03\* (black)
- Bracket, 115A-50\* (ivory)

\*Order 1 to match each 24A-type indicator to be wall mounted.



**Fig. 4—Block Diagram of LSI Operation**

**2.08** Order replaceable components for 24A-type line status indicator as follows:

- Plate, Face (see Table A)
- Panel, Rear (see Table B)
- Card, Designation, 840601421
- Transformer, KS-21239,L6, 401750641

### 3. INSTALLATION

**3.01** Avoid locating line status indicator in direct sunlight or areas of high illumination.

**3.02** When indicator is to be wall mounted, locate a wall stud and attach 115A bracket (Fig. 5) to wall using one No. 8 × 3/4-inch PH screw into the wall stud and one molly bolt into the wall surface where there is no stud. If indicator is to

be mounted on plastic, metal, or masonry surfaces, use proper size backboard and install in accordance with accepted procedures. Attach indicator to bracket using two 8-16 × 5/8-inch PH screws furnished with bracket and shipped loose.

**3.03** The 115A bracket (Fig. 5) may be mounted over a wall outlet box by positioning opening in backboard over wall receptacle opening and attaching bracket to backboard with No. 8 × 3/4-inch PH screws.

**3.04** Terminate A25B connector cable(s) to the incoming tips and rings of the lines being monitored and the two designated GRD leads (Fig. 8, 9, and 10) to an approved ground terminal.



**Tip and ring polarity must be maintained when terminating line status indicator leads to incoming CO tips and rings.**

TABLE A

LINE STATUS INDICATOR FACEPLATE  
ORDERING GUIDE

COLOR	COMCODE		
	24A8	24A16	24A32
Black	840597652	840597728	840597793
Avocado	840597660	840597736	840597801
Gold	840597678	840597744	840597819
Orange	840597686	840597751	840597827
Brown	840597694	840597769	840597835
Red	840597702	840597777	840597843
Blue	840597710	840597785	840597850

TABLE B

LINE STATUS INDICATOR REAR PANEL  
ORDERING GUIDE

COLOR	COMCODE
Avocado	840597579
Gold	840597587
Orange	840597595
Brown	840597603
Red	840597611
Blue	840597629
Teak	840597637
Walnut	840597645

3.05 Connect the mounting cord of the line status indicator to the A25B connector cable(s).

⚠ **Warning:** If the KS-21239,L6 transformer is equipped with a tab for fastening under the screw of the

ac outlet cover, the cover must be plastic to prevent shorting the prongs in case the cover slips during installation. If cover is metal, obtain a plastic cover locally. Future production of the transformer will not have the tab, and fastening to the outlet will not be required.⚡

3.06 Connect the spade tips of the 2-conductor power cord to the screw terminals of KS-21239,L6 transformer (Fig. 6). (Early versions of the cord were equipped with two spade tips. The later versions will be equipped with a stayband which serves as one conductor and one spade tip for the second conductor.) Connect transformer to a customer-provided 115V ac outlet not under control of a switch. Where necessary to extend leads to available outlet, use D station wire. Use all four conductors.

3.07 Install designation cards, faceplate, and rear panel as follows:

- (1) Insert designation cards into pocket on rear of faceplate (Fig. 7).
- (2) Fill unused line positions with blank designation cards.
- (3) Assemble faceplate by inserting bottom edge into groove at bottom of housing opening and pressing top of faceplate in to make magnetic contact.
- (4) Press rear panel into recess to make magnetic contact.

3.08 Adjust volume level of tone ringer to a suitable level as follows:

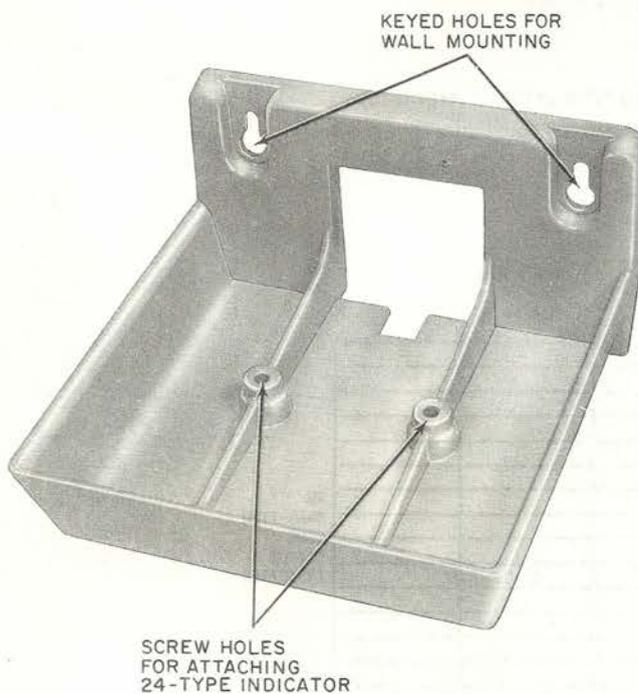
- (a) **To increase volume:** Turn the volume control knob under the right side overhang toward the front of the set.
- (b) **To decrease volume:** Turn the volume control knob under the right side overhang toward the rear of the set.
- (c) **To cut off tone ringer:** Turn the volume control knob under the right side overhang toward the rear of the set until tone ringer is silenced.

#### 4. MAINTENANCE

**4.01** Maintenance of the 24A-type line status indicator is limited to replacement of the faceplate, rear panel, and designation cards. See 2.07 and Tables A and B for ordering information.

**4.02** Remove faceplate and designation card as shown in Fig. 7. After replacing designation card, assemble faceplate as described in 3.07.

**4.03** Do not attempt any maintenance other than described in 4.01. If line status indicator becomes defective, replace it with one known to be working properly and return defective indicator to the Western Electric Service Center for repair.



**Fig. 5—115A Bracket**



**Fig. 6—KS-21239,L6 Transformer**

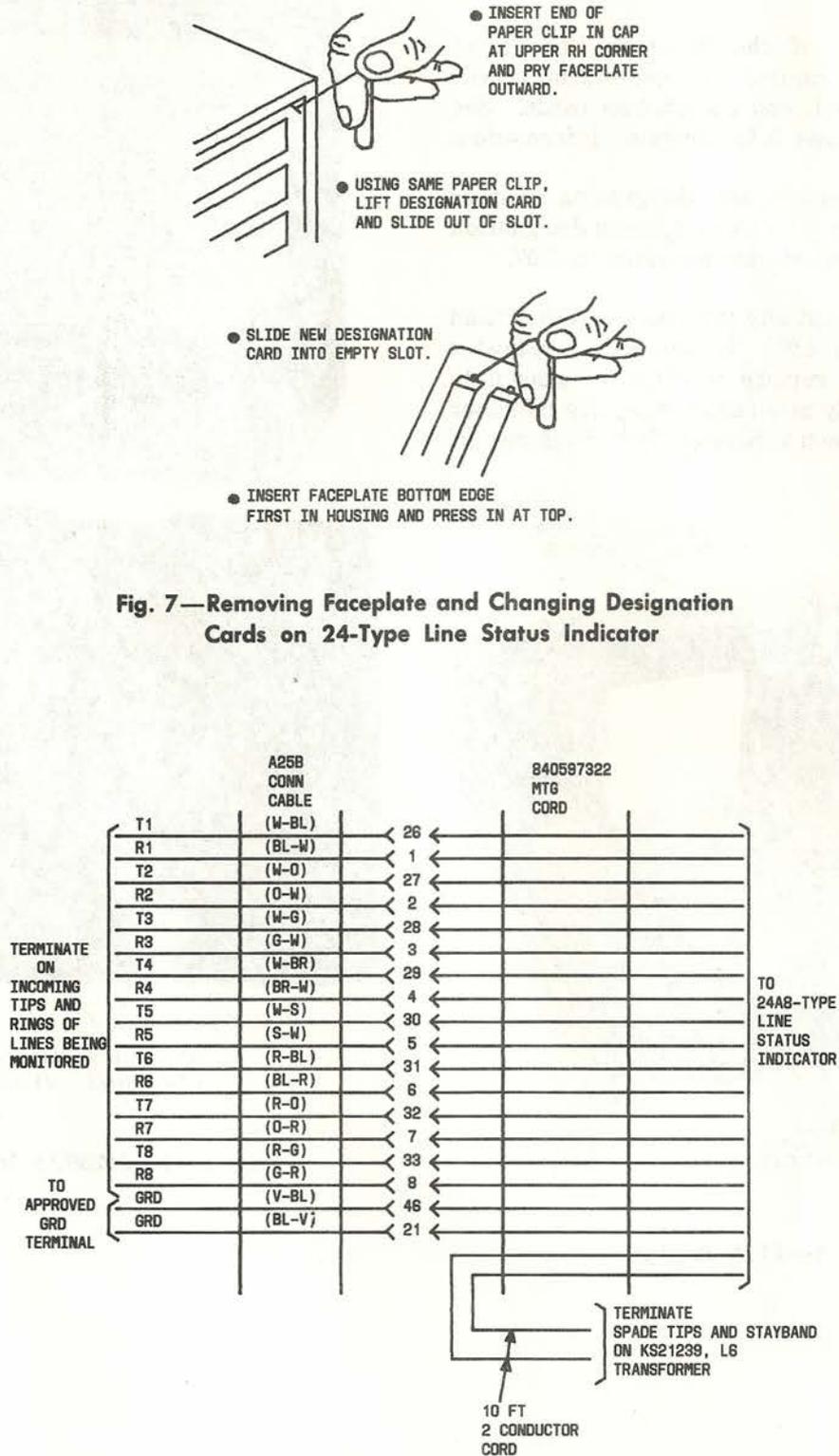


Fig. 7—Removing Faceplate and Changing Designation Cards on 24-Type Line Status Indicator

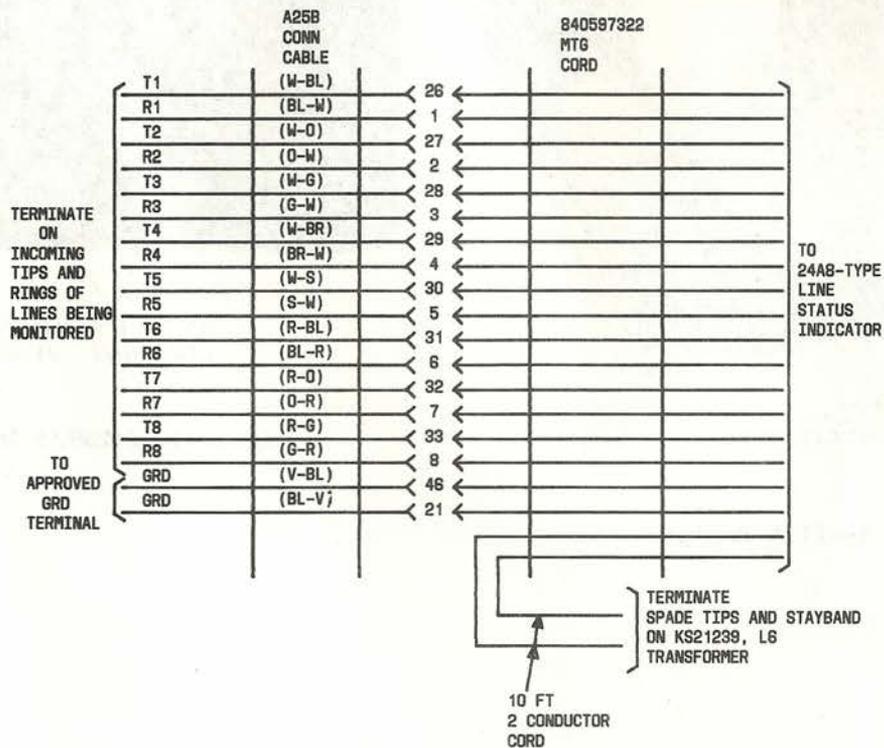


Fig. 8—Connections for 24A8 Line Status Indicator

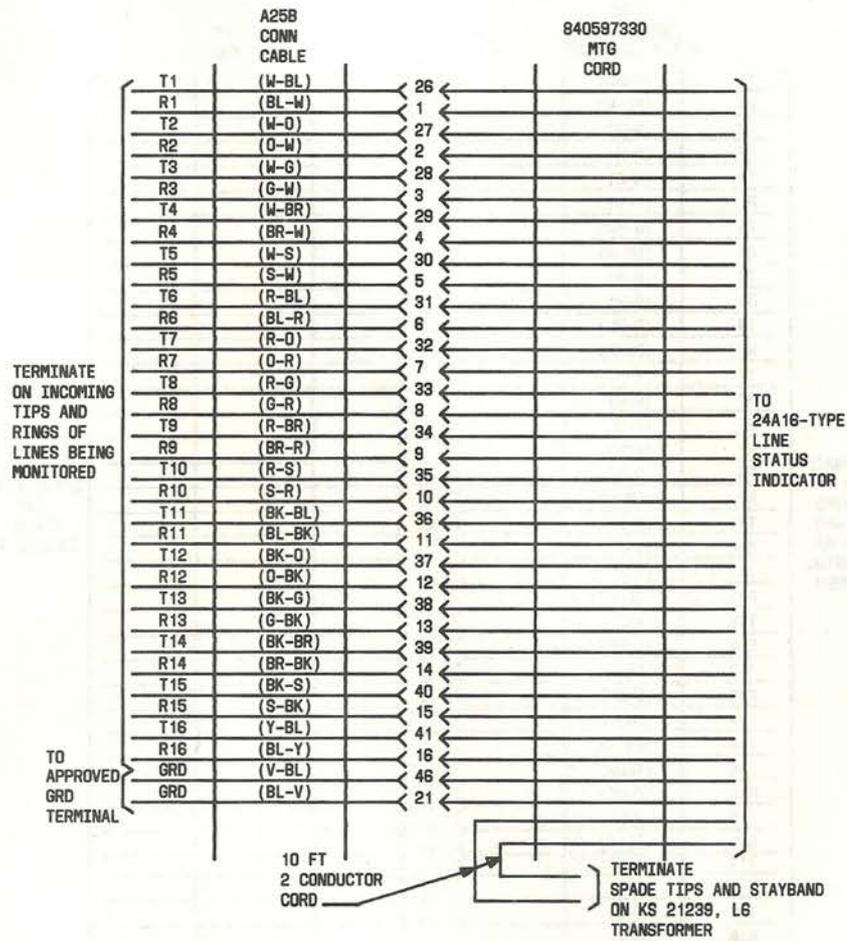


Fig. 9—Connections for 24A16 Line Status Indicator

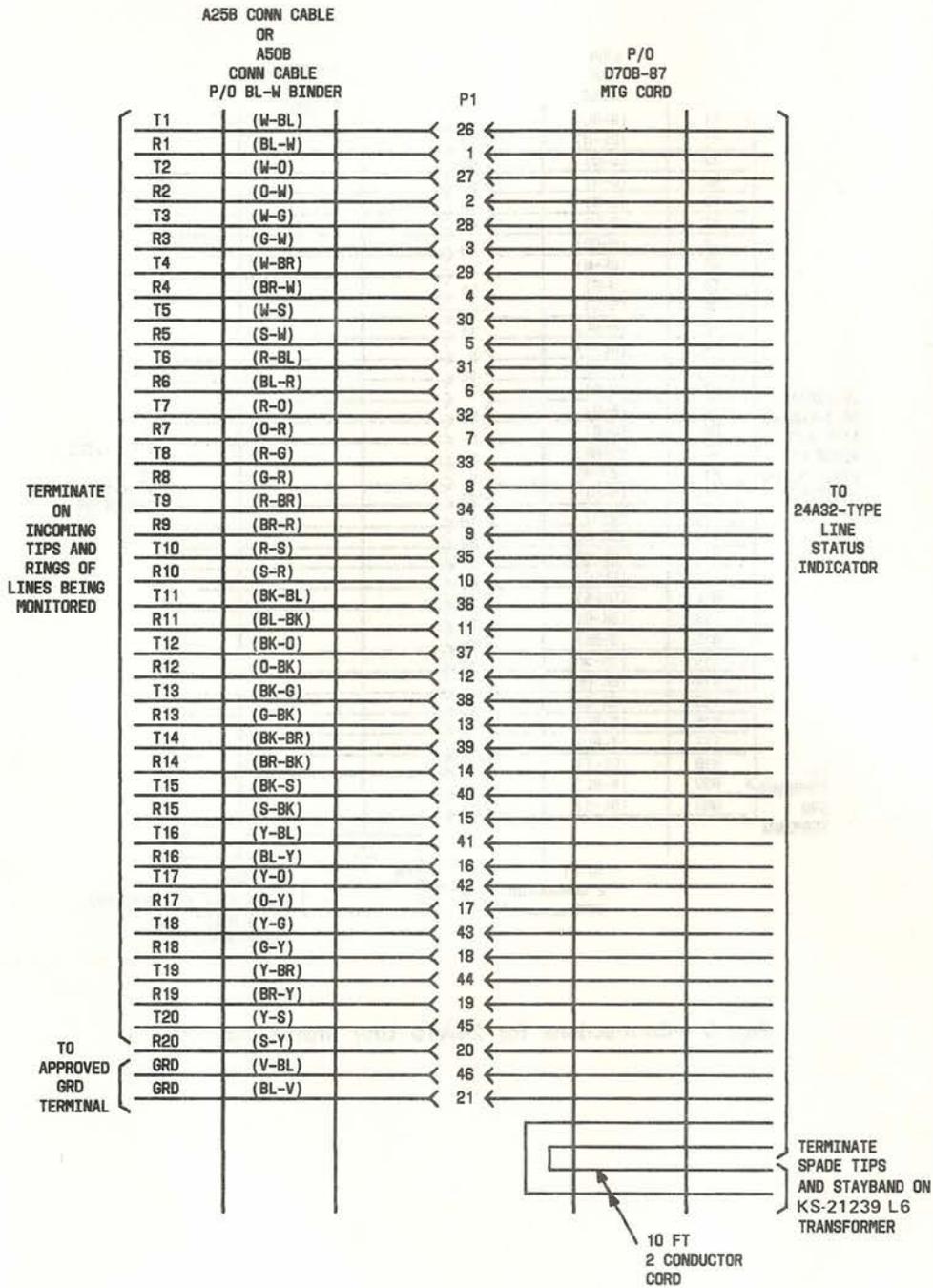


Fig. 10—Connections for 24A32 Line Status Indicator (Sheet 1 of 2)

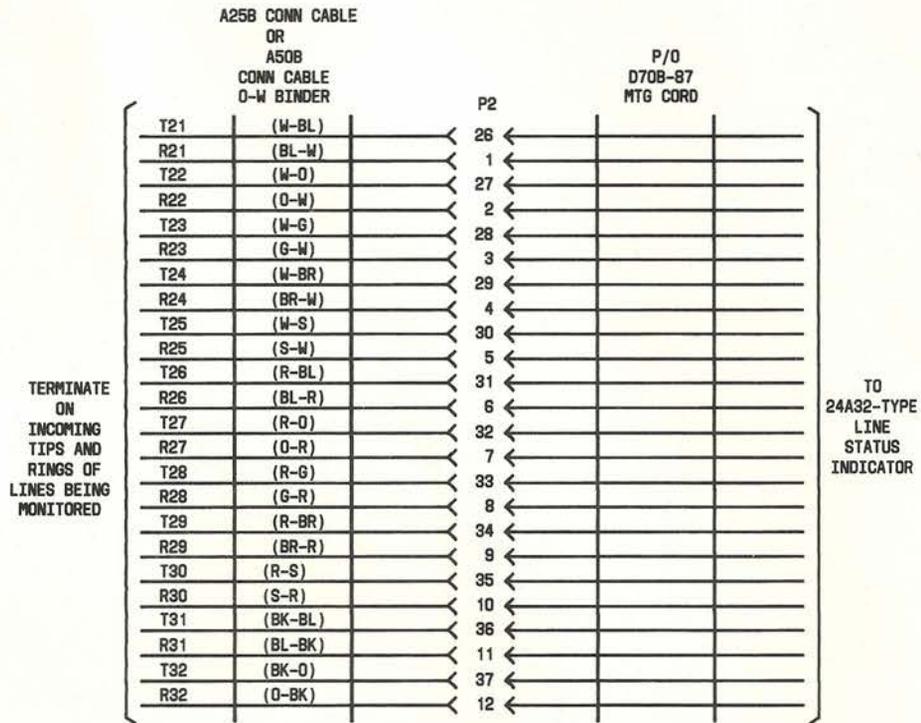


Fig. 10—Connections for 24A32 Line Status Indicator (Sheet 2 of 2)