

## THERMISTORS IN PBX SWITCHBOARD AND ORDER TURRET TRUNK CIRCUITS INSTALLATION

### 1. GENERAL

1.01 This section describes a method of installing thermistors in the trunk circuits of cord and cordless P.B.X.'s and order turrets.

1.02 The thermistor, which resembles a small cartridge-type automobile fuse, is a thermal resistance element having a comparatively high resistance at normal room temperatures and a comparatively low resistance at higher temperatures. It is designed to prevent false operation of ringup relays on surges due to dial pulses, disconnects and similar causes.

1.03 When ringing current is applied to a trunk circuit equipped with a thermistor, the temperature of the thermal resistance element is raised due to the current passing through it, thereby lowering the resistance and permitting the operation of the ringup relay. The momentary delay of the operation of the relay introduced by the action of the thermistor, however, prevents false operation of the relay on momentary surges.

1.04 The drawings for P.B.X. trunk circuits which are subject to false signals cover the modification necessary to correct this condition by the addition of thermistors. The ringing working limits of the particular circuit with and without the thermistors are also given. When the actual resistance of the trunk circuit is greater than the limit shown with the thermistor added, the thermistor should not be installed without making the additional modifications shown on the drawing to increase the ringing range.

### 2. APPARATUS

- 2.01 The tools required will be those ordinarily used in P.B.X. installation work.
- 2.02 1A and 1C Thermistors, as required.

### 3. INSTALLATION

3.01 Unsolder and remove the existing lead (between the ringup relay or drop and condenser as shown on the circuit drawing) from the condenser terminal.

3.02 Slip the metal sleeve (either end) of the thermistor approximately 1/8 inch over the terminal and securely solder them together.

3.03 Solder the wire (the wire removed or new wire as required by the particular circuit modification) to the other end of the thermistor. A typical modification is shown in Fig. 1.

3.04 Mark the existing circuit label as illustrated in Fig. 2 to show the addition of the thermistor in the circuit.

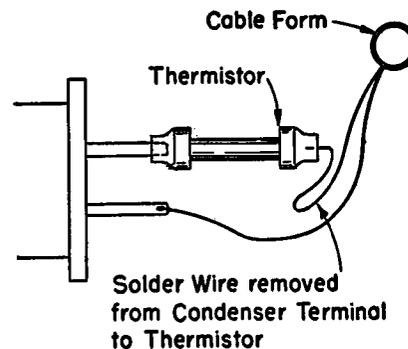


Fig. 1



Convention for showing addition of Thermistor on drawings

Fig. 2

### 4. TESTS

4.01 Test the trunk circuit in accordance with the Bell System Practice sections on Central Office Trunk Tests covering that particular type of equipment.