

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

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PRESSURE TESTING

CONTACTORS AND CONTACTOR-TERMINALS

DESCRIPTION

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1. GENERAL

1.01 This section replaces the information in Section G73.208, Issue 2, which is cancelled. It contains a description of the current standard contactors and contactor-terminals used on cables maintained under continuous pressure.

1.02 The superseded type contactors and contactor-terminals are covered in another section.

2. MATERIALS

2.01 The following is a listing of the contactors, contactor-terminals and auxiliary cable.

Cable, CA-1154 A two-pair 22-gauge cable for extending stubs of G Contactors and T Contactor-Terminals. Available with plain lead or lead with polyethylene jacket and tape armor protection.

Contactor, Pressure, G For use at contactor points on cables maintained under gas pressure. Equipped with 15-foot stub containing two conductors for bridging to alarm pair of cable. Available with plain lead or lead with polyethylene jacket and tape armor protection.

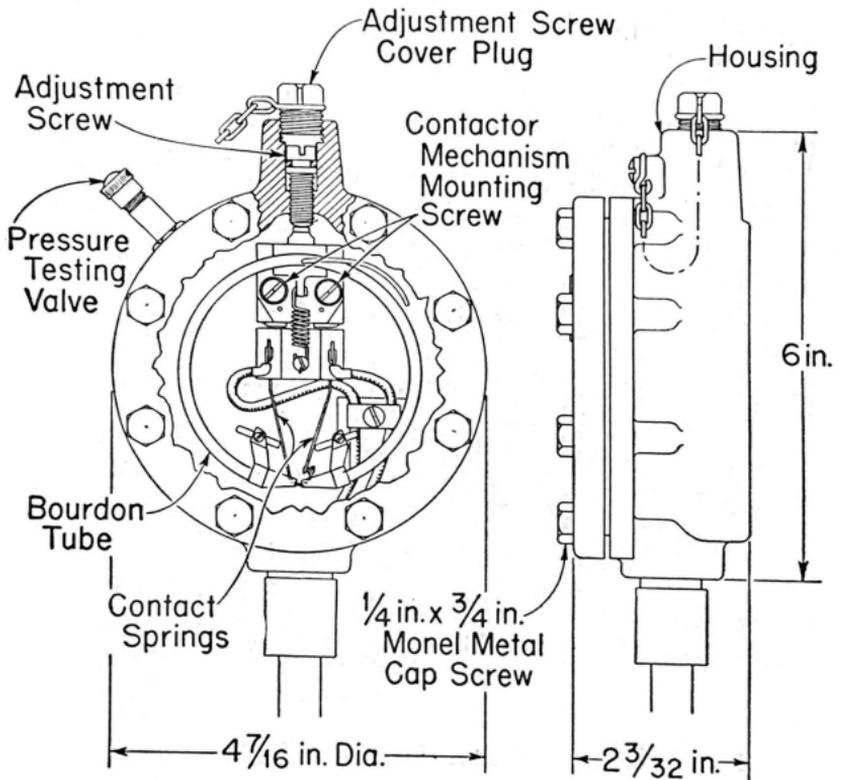
Contactor-Terminal, Pressure, E, For use on cables with supplementary reservoir, to operate alarm when supply of gas becomes low. Equipped with 2-pair 15-foot plain lead stub and 4-foot flexible capillary tubing and fitting.

Contactor-Terminal, Pressure, T, For use at contactor points on cables maintained under gas pressure where talking facilities are required. Equipped with 2-pair, 15-foot stub, available with plain lead or lead with polyethylene jacket protection.

3. C AND G CONTACTORS

3.01 The C and G Contactors are similar in design and appearance. The G Contactor which supersedes the C Contactor (Stub Type Contactor) embodies changes in the adjustment screw and other minor features that do not affect the operation. These contactors consist of a brass casting which houses a Bourdon tube and contact spring assembly. They have an externally operated screw for adjusting the contactor mechanism to the desired operating pressure. The contactors have a stub cable 15 feet long containing two conductors for connection to the alarm pair in the main cable. Either plain lead or lead with polyethylene jacket and tape armor protection is available. The following illustration shows the main parts of the G Pressure-Contactor.

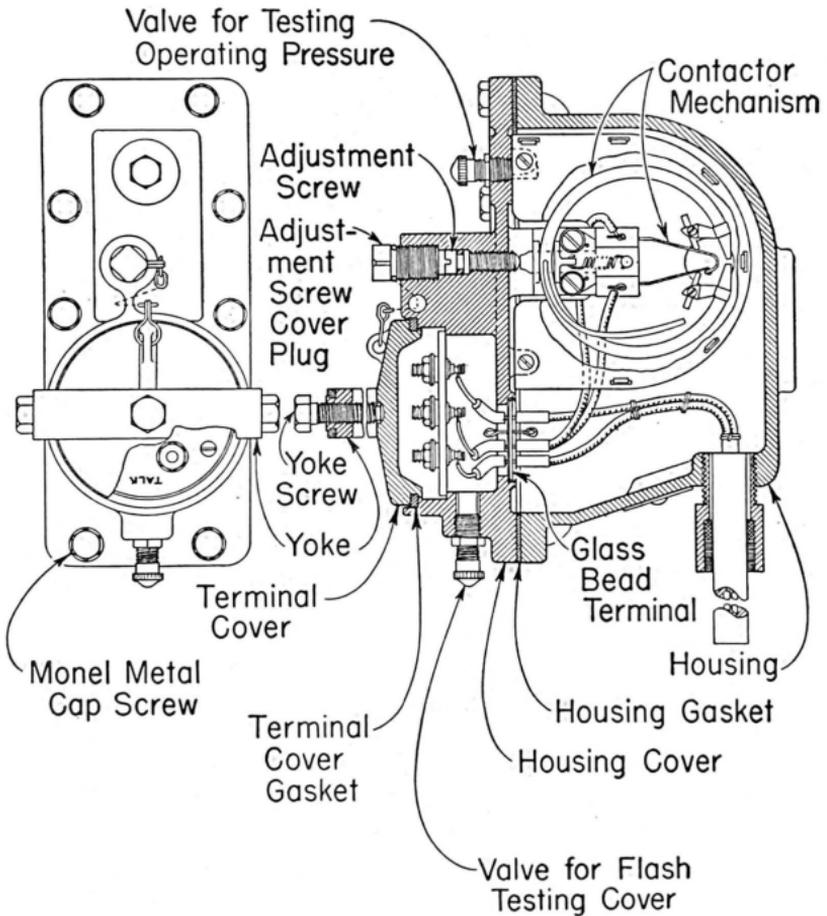
G PRESSURE-CONTACTOR



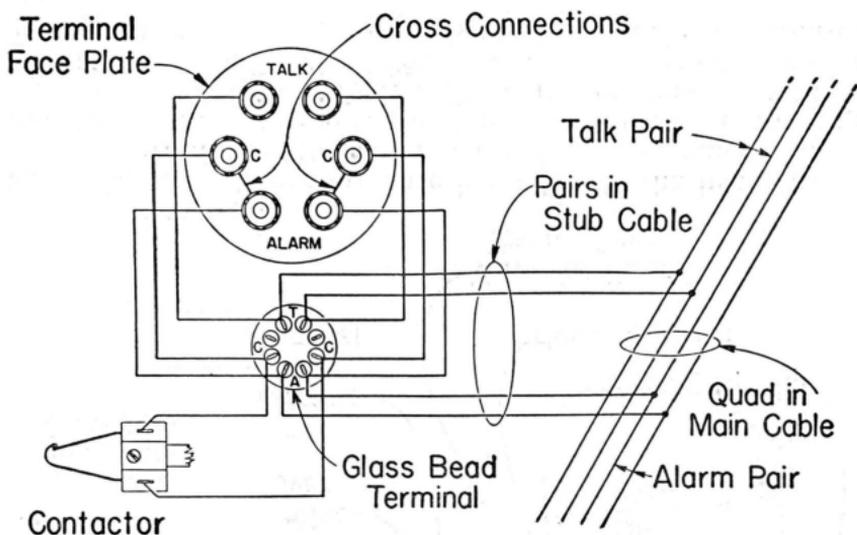
4. T CONTACTOR-TERMINAL

4.01 The T Contactor-Terminal illustrated below combines in a metal housing the contactor mechanism and a terminal for the alarm and talking pairs. An externally operated screw, normally covered by a screw plug, is provided for adjusting the contactor mechanism. The unit is equipped with a 15-foot stub cable with either plain lead or lead with polyethylene jacket protection.

T CONTACTOR-TERMINAL



4.02 The terminal chamber is sealed against the entrance of gas from the main housing by means of a fused glass-to-metal seal as illustrated. The binding posts are appropriately marked. The contactor is connected to the alarm pair by cross-connections in the terminal as indicated in the following wiring diagram.

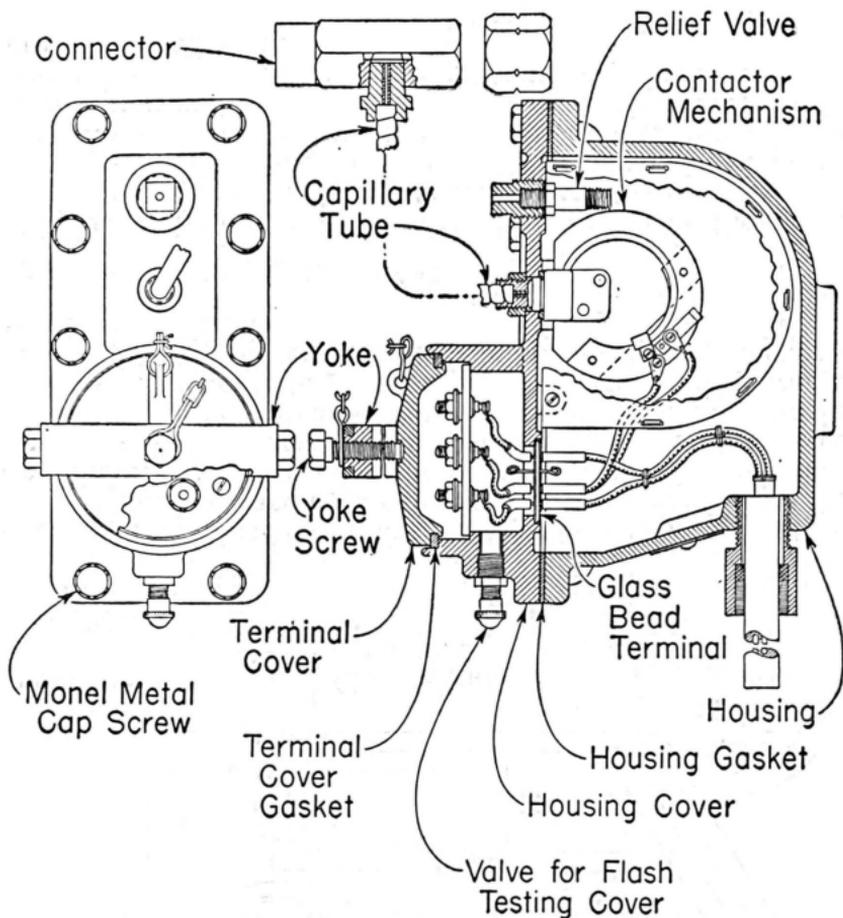


4.03 The terminal cover has a synthetic rubber gasket and is held in place by a cap screw in a swinging yoke. The screw should be tightened sufficiently with a 1/2-inch wrench to ensure a satisfactory seal against the entrance of moisture. A pressure testing valve is provided for flash testing the terminal cover. In order to prevent the cover from being dropped it is attached to the contactor-terminal housing by means of a short brass chain.

5. E CONTACTOR-TERMINAL

5.01 The E Contactor-Terminal illustrated on the following page is similar in external appearance to the T Contactor-Terminal, but the contactor mechanism is designed to operate at cylinder pressure. This contactor-terminal is used in connection with supplementary gas reservoirs, to operate an alarm when the supply of gas in the auxiliary reservoir falls to a predetermined value.

E CONTACTOR-TERMINAL



5.02 Gas at cylinder pressure is applied to the inside of the Bourdon tube through a length of small diameter tubing connected between it and the high pressure side of a two-stage regulator on the gas cylinder. Thus, the operation of the E Contactor-Terminal differs from that of the T Contactor-Terminal in which the gas pressure is applied outside the Bourdon tube.

5.03 A relief valve is incorporated in the contactor housing to protect the apparatus and the cable in the event that a leak occurs in the high pressure Bourdon tube.

5.04 The wiring diagram for the E Contactor-Terminal is the same as for the T Contactor-Terminal shown in Paragraph 4.02.