

CABLE PRESSURE SYSTEMS
CONTINUOUS FEED — MAINTENANCE
CONTACTORS AND CONTACTOR TERMINALS
GENERAL

CONTENTS	PAGE
1. GENERAL	1
2. CONTACTORS	1
3. CONTACTOR-TERMINALS	2
4. MISCELLANEOUS	3

1. GENERAL

1.01 This section describes contactors and contactor-terminals currently available for use on cables maintained under continuous feed pressure.

1.02 Detailed information covering description, installation and maintenance of contactors and contactor-terminals is covered in other sections of this Division.

2. CONTACTORS

2.01 *L Pressure Contactor*: A pressure operated electrical switch for monitoring pressures in aerial subscriber cables in continuous feed pressure systems. When used on subscriber cable, it is electrically connected to a working cable pair (no separate alarm pair is required). It is suitable for installing on toll and interoffice trunk cables in some locations. Its principal features are:

- (1) Pole mounted.
- (2) Weatherproof but not watertight.
- (3) Bellows actuated microswitch.

(4) 270,000-ohm bridging resistor. This may be strapped out when used on toll and interoffice trunk cables where the contactor is connected to an alarm pair.

(5) Tinned copper tube for pressure connection between bellows and cable at sleeve or splice case.

(6) Two-conductor neoprene covered cord for electrical connection to subscriber line at terminal. Conductors may also be connected to subscriber line or alarm pair at MDF or similar appearances.

(7) Contactor pressure adjustment screw accessible when coverplate is removed.

(8) Externally mounted pressure testing valve.

2.02 *M Pressure Contactor*: A pressure operated electrical switch for monitoring pressures in aerial subscriber cables in continuous feed pressure systems. Its principal features and uses are the same as those listed for the L Pressure Contactor, except as follows:

(1) Equipped with a pipe threaded fitting on the back of the housing (instead of a tinned copper tube) to provide direct mounting of the contactor in the flange of a sleeve or splice case.

2.03 *B End Point Contactor*: Similar to and superseded by the L Pressure Contactor. It is equipped with a 330,000 rather than a 270,000-ohm bridging resistor. May be converted to equivalent L Pressure Contactor by replacing resistor with one of 270,000 ohms.

2.04 J Pressure Contactor: A nontemperature compensated, pressure operated electrical switch for monitoring pressures in aerial, underground and buried toll and interoffice trunk cables in continuous feed pressure systems. Its principal features are:

- (1) Fastens directly to cable with clamp or mounts on pole or manhole wall with bracket.
- (2) Weatherproof and watertight.
- (3) Bourdon tube actuated switch.
- (4) External pressure testing valve.
- (5) Pressure connection by means of stub cable between sealed contactor housing and cable at sleeve or splice case.
- (6) Two insulated conductors in stub for bridging directly to alarm pair in cable.
- (7) Externally accessible screw for adjusting contactor operating pressure.

2.05 G Pressure Contactor: A temperature compensated, pressure operated electrical switch designed initially for monitoring pressures in aerial, underground and buried toll and interoffice trunk cables in periodic charge pressure systems. It can be reused, in place, on cables converted to continuous feed pressure systems by resetting its operating value to conform to the sloping gradient of this type of system.

2.06 H Pressure Contactor: A temperature compensated, pressure operated electrical switch designed initially for monitoring pressures in high dielectric coaxial aerial, underground and buried cables in periodic charge pressure systems. It is installed inside sleeves and splice cases primarily on high dielectric cables such as lepeh and PAP. It can be reused on cables converted to continuous feed pressure systems by resetting its operating value to conform to the sloping gradient of this type of system. Its principal features are:

- (1) Bourdon tube actuated switch.
- (2) No gas pressure connection required because gas enters the case through opening for adjusting screw.
- (3) Two short insulated conductors for bridging directly to alarm pair.

(4) Screw for adjusting operating pressure setting accessible on outside of case; however, case must be removed from cable, placed inside a gastight chamber and the chamber pressurized to check each setting.

3. CONTACTOR-TERMINALS

3.01 K Pressure Contactor-Terminal: Combination of (a) nontemperature compensated, pressure operated electrical switch for monitoring aerial, underground and buried toll and interoffice trunk cables in continuous feed pressure systems and (b) terminal for making alarm and talking pairs accessible outside the cable. Its principal features are:

- (1) Fastens directly to cable with clamp or mounts on pole or manhole wall with bracket.
- (2) Bourdon tube actuated switch.
- (3) Pressure connection by means of stub cable between sealed contactor housing and cable at sleeve or splice case.
- (4) Four insulated conductors in stub cable for connecting terminal to alarm and talking pairs in cable.
- (5) Alarm and talking pair terminations accessible in terminal which is sealed against entrance of gas from the main housing.
- (6) Externally accessible screw for adjusting contactor operating pressure.
- (7) Pressure testing valve externally mounted on alarm case.
- (8) Flash testing valve externally mounted on terminal cover.

3.02 T Pressure Contactor-Terminal: Combination of (a) temperature compensated, pressure operated electrical switch designed initially for monitoring pressures in aerial, underground and buried toll and interoffice trunk cables in periodic charge pressure systems and (b) terminal for making alarm and talking pairs accessible outside the cable. It is very similar to the K Pressure Contactor-Terminal and can be reused, in place, on cables converted to continuous feed pressure systems by resetting its op-

erating value to conform to the sloping gradient of this type of system.

3.03 E-2 Contactor-Terminal: Combination of (a) pressure operated electrical switch for monitoring, by pressure, the volume of gas remaining in a nitrogen cylinder source of supply on all types of cables and (b) terminal for making alarm and talking pairs accessible outside the cable. Its principal features are:

- (1) Mounts on wall with bracket.
- (2) Weatherproof and watertight.
- (3) Bourdon tube actuated switch.
- (4) Switch operates at 200 psi (20 cu. ft. of gas remaining).
- (5) Capillary tube connects Bourdon tube directly to high pressure side of two-stage regulator.
- (6) Four insulated conductors in stub cable for connecting terminal to alarm and talking pairs in cable.
- (7) Relief valve in housing for protection against leaks in high pressure Bourdon tube.
- (8) Flash testing valve externally mounted on terminal cover.

3.04 E-8 Contactor-Terminal: Combination of (a) pressure operated electrical switch for monitoring, by pressure, the volume of gas remaining in a nitrogen cylinder source of supply on all types of cables and (b) terminal for making alarm and talking pairs accessible outside the

cable. Its principal features are the same as those listed for the E-2 Contactor-Terminal with one exception: Switch operates at 800 psi (80 cu. ft. of gas remaining).

4. MISCELLANEOUS

4.01 37-Type Cable Terminal: A 4-pair gastight terminal designed initially for use with H Contactors for terminating talking pairs in underground and buried toll and interoffice trunk cables in periodic charge pressure systems. It can be reused in place on these cables when they are converted to continuous feed pressure systems. It provides (a) bleed valve for lowering cable pressure to the contactor operating point, (b) test valve for reading cable pressure and (c) talking pair for checking the contactor operation with the operation of the associated visual and/or audible alarm at the office. The four kinds of 37-type cable terminals are:

- (1) 37A — For use with H contactors on buried lepeh sheath cables. Mounted on posts with bracket.
- (2) 37B — For use with H, G or J contactors on buried cables having other than lepeh sheath. Mounted on posts with bracket.
- (3) 37C — For use with H contactors on underground lepeh sheath cables. Mounted on manhole walls with bracket.
- (4) 37D — For use with H, G or J contactors on underground cables having other than lepeh sheath. Mounted on manhole walls with bracket.