

N PRESSURE CONTACTOR

DESCRIPTION AND INSTALLATION

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1. GENERAL

1.01 This section covers the description, installation, and adjustment of the N pressure contactor (AT-8679) for use in the splice, apparatus, or maintenance cases of cable systems maintained under continuous pressure.

1.02 The N pressure contactor replaces the H pressure contactor which is rated Manufacture Discontinued.

2. DESCRIPTION

2.01 The N pressure contactor (Fig. 1) is designed for installation within a protected environment such as inside an apparatus case. It is a nontemperature compensated, pressure monitoring device consisting of a bellows assembly and a snap-action switch enclosed in an anodized or chemical film (Irridite) aluminum cylinder.

2.02 One end of the contactor is equipped with a 1/4-inch plastic tubing fitting and two threaded terminals with screws. The other end

**Reprinted to comply with modified final judgment.

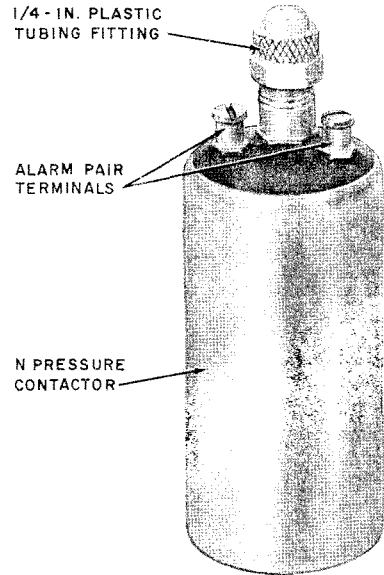
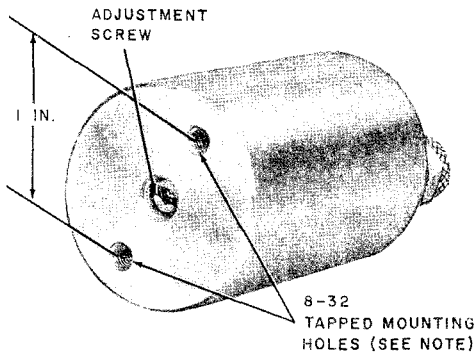


Fig. 1—N Pressure Contactor

provides two 8-32 tapped holes for mounting and a pressure adjustment screw (Fig. 2).

2.03 The operate point, which is preset to operate at 6 pounds per square inch gauge (psig), may be externally adjusted by turning the adjustment screw clockwise to increase and counter-clockwise to decrease the pressure operate point. This adjustment covers a pressure range of 0 to 7.0 psig by changing the pressure required to contact the bellows for switch operation.

2.04 The pressure fitting permits the entrance of cable pressure to the contactor. The

**NOTE:**

THE TWO MOUNTING HOLES ARE USED WHEN THE CONTACTOR IS INSTALLED IN AN APPARATUS CASE

Fig. 2—N Pressure Contactor (Bottom View)

two terminals provide a means for connection of the alarm pair.

3. CHECKING OPERATING PRESSURE

3.01 The operating pressure of the N contactor should be checked as follows before making any adjustments:

- (1) Prepare the contactor for checking in accordance with details given in Fig. 3.

- (2) Attach a C pressure gauge to one of the F pressure testing valves.
- (3) Connect a volt-ohm meter, set to read ohms, to the alarm pair terminals.
- (4) While watching the meter, pressurize the contactor through the other F pressure testing valve until the meter indicates infinite resistance (open circuit).
- (5) Slowly bleed the air from the contactor by carefully depressing the F pressure testing valve core until the meter *just* indicates zero resistance (closed circuit).
- (6) The operate pressure point can now be read directly from the C pressure gauge.

3.02 If the operate pressure point of the contactor is within the required limits, the contactor is ready for installation. If it is not within the required limits, adjust as outlined in Part 4.

4. ADJUSTING OPERATING PRESSURE

4.01 When the contactor operate point is less than the required operate point, the desired setting may be obtained as follows:

- (1) Perform steps 1 thru 3 in 3.01.
- (2) While watching the C pressure gauge, pressurize the contactor until the gauge indicates the required pressure.

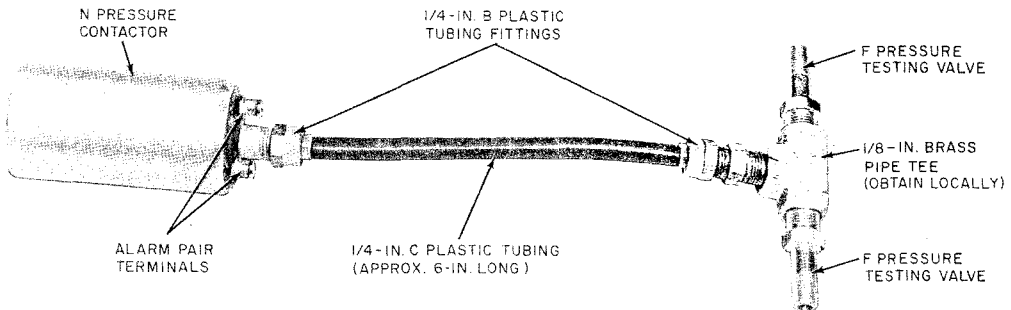


Fig. 3—N Pressure Contactor Prepared for Checking Operate Pressure Point

(3) Slowly turn the adjustment screw clockwise until the meter indicates zero resistance (closed circuit). At this point reverse adjustment screw rotation until the meter *just* indicates infinite resistance (open circuit).

(4) The contactor operate point is now set at the psig indicated on the C pressure gauge.

4.02 When the contactor operate point is greater than the required operate point, the desired setting may be obtained as follows:

- (1) Perform steps 1 thru 3 in 3.01.
- (2) While watching the C pressure gauge, pressurize the contactor until the gauge indicates the required pressure.
- (3) Slowly turn the adjustment screw counterclockwise until the meter *just* indicates infinite resistance (open circuit).
- (4) The contactor is now set at the psig indicated on the C pressure gauge.

5. INSTALLATION OF CONTACTORS

A. Splice Case Installation

5.01 For splice case installation, air tubing is not connected to the contactor. Cable pressure at the splice enters through the open 1/4-inch plastic tubing fitting at the end of the contactor. ***Do not plug or otherwise obstruct this fitting during installation.***

5.02 Before installation, the contactor operating pressure must be verified and adjusted if necessary as outlined in Parts 3 and 4, respectively.

5.03 Install the contactor in the splice case as follows:

- (1) Locate and identify the proper pair of conductors within the splice which are to be used for the alarm facility.
- (2) Strip 1/4-inch insulation from each alarm pair conductor and terminate at the alarm terminals located on the contactor.

(3) Wrap the contactor with muslin and place it within the splice bundle in a manner similar to that used for splice-type loading (Section 643-640-201). Add the required quantity of *C desiccant*, loose desiccant ***must not*** be used at a splice containing a contactor.

(4) Wrap down the splice bundle in accordance with Section 632-490-200. Close the splice opening and flash test the closure.

5.04 To identify splices containing contactors, place a strap cable tag worded "CONTACTOR" around the cable adjacent to the splice as shown in Fig. 4. In addition, where buried or underground cable routes are marked with aboveground markers, place a second tag on the nearest marker.

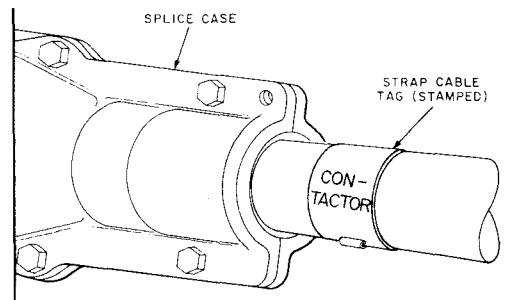


Fig. 4—Strap Cable Tag at Splice Containing N Pressure Contactor

B. Apparatus Case Installation

5.05 When the N pressure contactor is required for use in an apparatus case, the installation procedure will be covered in the 640 Division of the Bell System Practices describing the apparatus case in which the contactor is to be used.

5.06 Section 640-530-107 covers the installation in a T2 System.