Westinghouse

TYPE L-63 ELECTRICAL INTERLOCK

APPLICATION

THE TYPE L-63 ELECTRICAL INTERLOCK is an auxiliary switching device designed primarily for mounting on D.C. magnetic contactors. A single unit provides either one contact normally open, or one contact normally closed.

RATING

The interlock is capable of closing and carrying 10 amperes continuously. It has a D.C. interrupting capacity of 300 volt-amperes inductive at a maximum of 600 volts.

CONSTRUCTION

The L-63 interlock employs a bridging type of contact arrangement as shown in Figure 1.

The stationary contact assembly consists of a pair of silver contact buttons (1) welded to supports (2) which enclose two ceramic permanent (blow-out) magnets (3). These supports also provide connecting terminals (4) and function as arc horns during current interruption. The blow-out magnets are oriented such that one arc blows outward and the other arc blows inward during interruption so that operation of the interlock is independent of terminal polarity.

The moving contact assembly comprises a pair of silver contacts (5) welded to a bridging member carried on an insulating pushrod (6). The pushrod also carries a contact spring (7) and spring seat (8); and a return spring (9) which is shielded by an arc resisting tube (10).

Two identical molded housings (11) enclose the complete unit which is permanently riveted together.

Choice between normally open and normally closed contacts is achieved by selection of one of the two positions, for the contact spring seat (8). Access to the spring seat is acheived by removing the covers, (12).

Conversion From Normally Open to Normally Closed Contact Action.

1. Remove both covers (12) from the access openings by prying with a screwdriver blade.

2. Move the spring seat (8) against the spring (7), compressing the spring nearly solid. Then rotate the spring seat about the pushrod until it drops back and locks into the two triangular shelves in the molded housing. Figure 4 shows the spring seat in this position.

3. Note that the contacts are now closed and that the interlock is operated by depressing the end of the pushrod indicated in Figure 4.

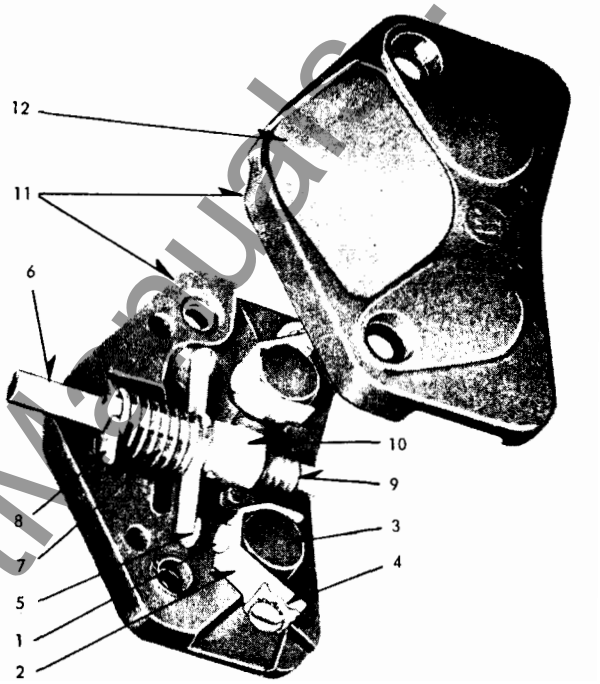

FIG. 1. Internal Parts of Interlock

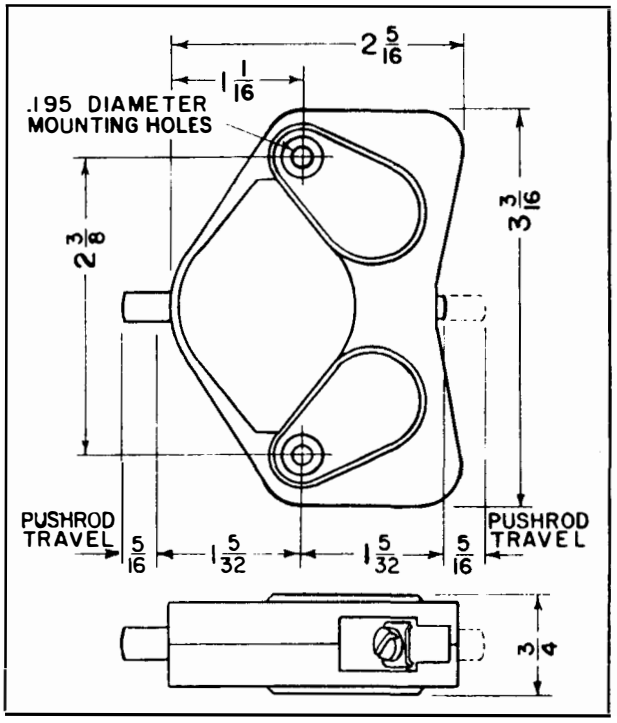

FIG. 2. Outline Dimensions of Interlock

4. Replace the covers by inserting one corner under the ledge provided in the molded housing and bending the cover between thumb and forefinger until the other corner may be freely inserted under the other retaining ledge.

Conversion From Normally Closed to Normally Open Contact Action.

1. Remove both covers (12) from the access openings by prying with a screwdriver blade.

2. Move the spring seat (8) against the springs (7), and lift it out of the triangular shelves in the molded housing. Rotate the spring seat about the pushrod until it can snap back into the open position as shown in Figure 3.

3. Note that the contacts are now open and that the interlock is operated by depressing the pushrod from the end indicated in Figure 3.

4. Replace the covers by inserting one corner under the retaining ledge in the housing and bending the cover between thumb and forefinger until the other corner may be freely inserted under the other ledge.

INSTALLATION

The interlock is mounted by two screws which pass through the riveted eyelet holes. Note that the direction of mounting depends upon whether the interlock is to be used for normally open or normally closed operation. In either case, the operative end of the pushrod must face toward the actuating finger. Note, too, that it is possible to stack two interlocks by mounting one against the other using common (uninsulated) mounting screws.

When an interlock and its actuating finger are first mounted on a contactor the actuating finger must be adjusted to allow the interlock pushrod to protrude 3/32" from the interlock housing when the pushrod has been depressed by the actuating finger. This adjustment is essential to insure proper contact overtravel and to avoid bottoming the pushrod inside the housing. After adjustment, the pushrod should have at least 1/32" of free travel beyond the position of the pushrod when it is depressed to the limit of the actuating finger travel.

MAINTENANCE

Very little maintenance is required by the L-63 interlock beyond occasional examination to see that the parts move freely without friction or binding, and that the actuating finger remains in proper adjustment—as described above.

Under dusty conditions, it is recommended that the interlock be cleaned occasionally by blowing through the terminal openings with compressed air, but no attempt to use oil or grease should be made, since this only hastens the accumulation of dust.

The condition of the contacts can be observed approximately by examination through the terminal openings. When the contacts eventually become worn, after prolonged life, to the point where operation becomes unreliable, the complete interlock should be replaced by a new unit.

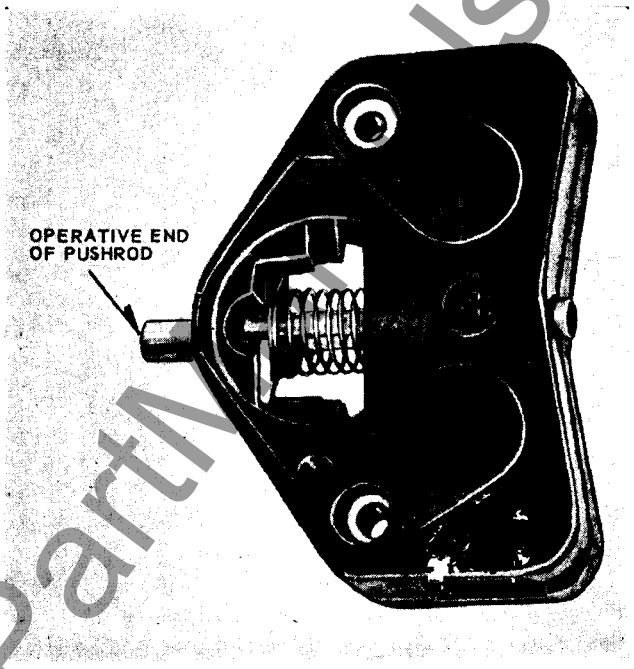

FIG. 3. Interlock Set for Normally Open Operation (Shown with Covers Removed)

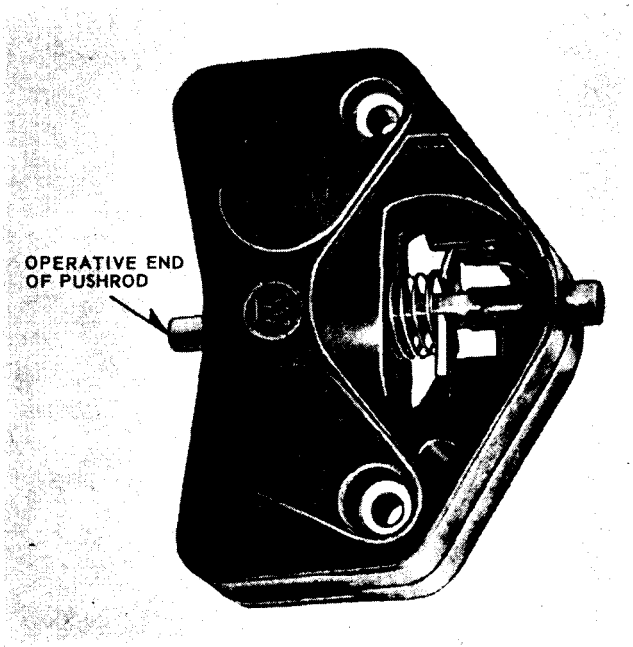

FIG. 4. Interlock Set for Normally Closed Operation (Shown With Covers Removed)