

Instruction Bulletin

DC Timing Relay Types HO-10 and HO-20, D or E Class 9050

NOTE: N.O. and N.C. circuits A & B are reversed from those found on Class 9050 Types H-1D and H-1E.

TIMED CONTACT ACTION

The timing relay consists of timing head, mounting base, magnet assembly, and single-pole double throw or double-pole double throw timed contacts. Rotating the magnet assembly 180° changes the timing mode.

The timed contact action depends on the timing mode (ON DELAY or OFF DELAY). See Figures 1 and 2.

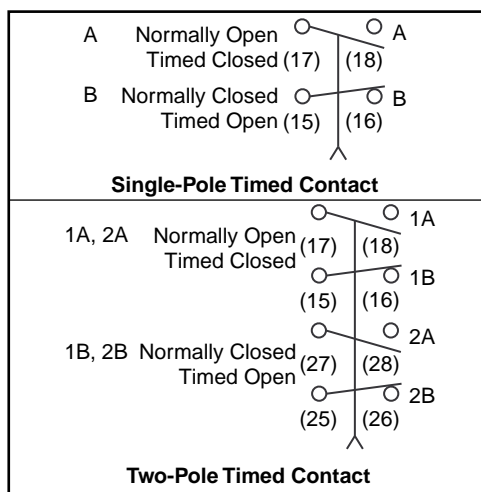


Figure 1: Timed Contact Action-On Delay

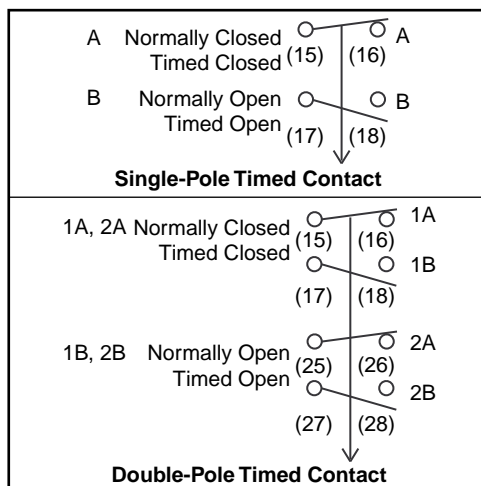


Figure 2: Timed Contact Action-Off Delay

NOTE: Circuits A and B, circuits 1A and 1B, or circuits 2A and 2B must be the same polarity; circuits 1A and 1B may be the opposite polarity of circuits 2A and 2B.

NOTE: The IEC terminal markings shown in this bulletin (i.e., (17)) do not appear on the device.

TIMING MODE CONVERSION FOR TYPES 10 AND 20, D OR E

The current timing mode (ON or OFF DELAY) is visible on the mounting base. To convert current timing mode to the other mode, follow these steps:

1. Remove the two magnet screws from magnet assembly, invert the assembly (rotate 180°), and replace the screws. The new timing mode should be visible on the mounting base.
2. Manually close armature.
3. Check and adjust gap according to new timing mode. See Figure 3 or 4.

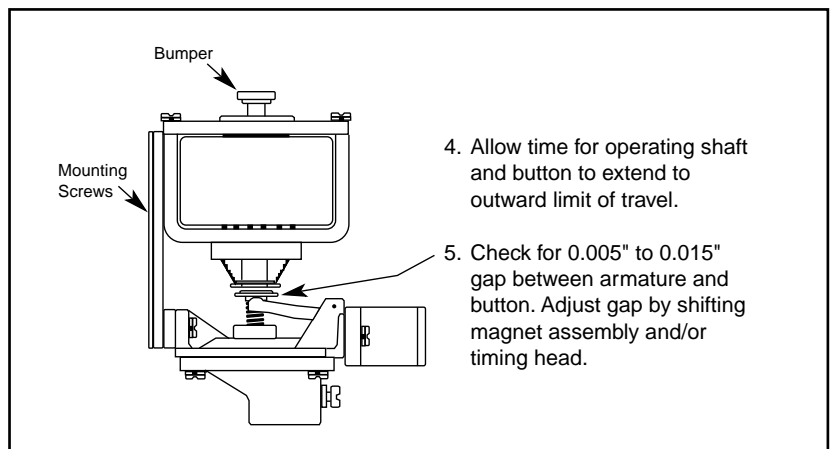


Figure 3: Timing Mode Conversion-On Delay

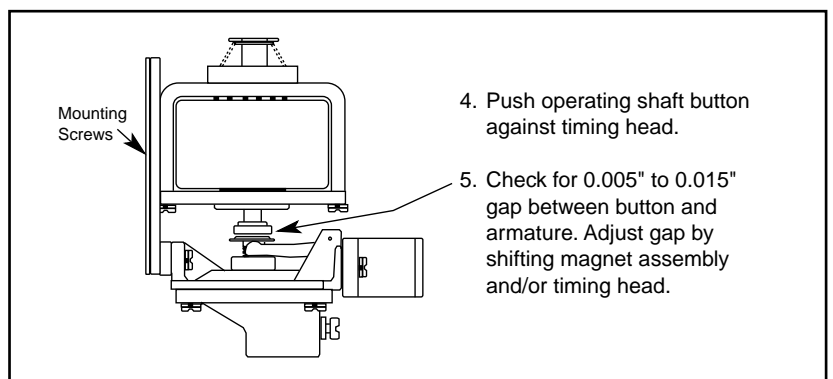


Figure 4: Timing Mode Conversion-Off Delay

MAGNET COIL REPLACEMENT

To replace the magnet coil, follow these steps:

1. Disconnect all wires from coil terminals.
2. Remove the two magnet screws and magnet assembly.
3. Release the magnet top plate assembly by removing the bumper, bumper screw, and four screws.
4. Replace coil.
5. Reassemble in reverse order; i.e., do steps 4, 3, then 2.
6. Install and adjust magnet assembly to obtain 0.005" to 0.015" gap. See "Timing Mode Conversion" on page 1.

Table 2: Magnet Coils

DC Voltage	60 Hz
6	4491-S1-W21
12	4491-S1-W24
24	4491-S1-W27
36	4491-S1-W29
48	4491-S1-W30
115	4491-S1-W34
230/250	4491-S1-W37

When ordering replacement coils, give part number and voltage of coil being replaced.

ENCLOSED DEVICE

To enclose the device, use a Class 9991 Type UE-6 Enclosure. See Figure 5 and follow these steps:

1. Install enclosure back plate so that "TOP" is at the bottom and upside down.
2. When "↑ UP" faces up, the device is installed correctly.

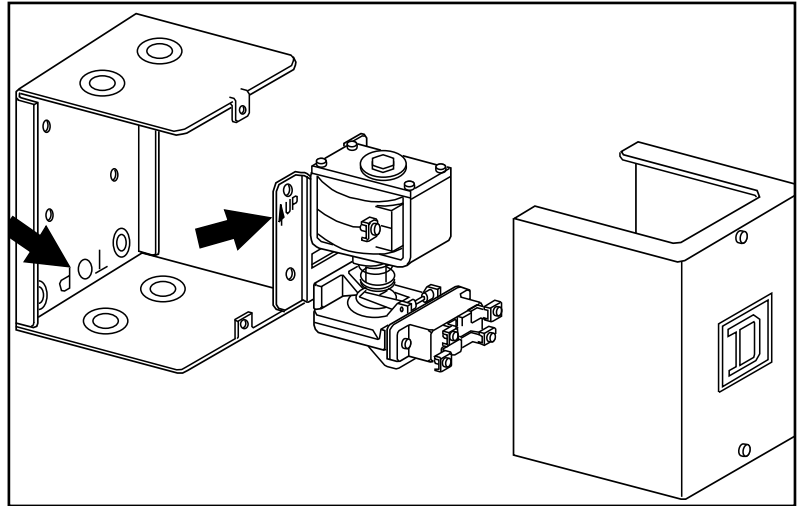


Figure 5: Enclosed Device

REPLACEMENT PARTS

Coil

Table 2 lists the part numbers corresponding to specific voltages and frequencies. Order replacement coils by requesting part number, voltage, and frequency.

Contacts

For single-pole snap switches: order Class 9007, Type AO-104. For double-pole snap switches: order Class 9007, Type CO-3.