

Instructions for Type AYK Multipole, 600 VDC Relay

I.L. 15-827-8A

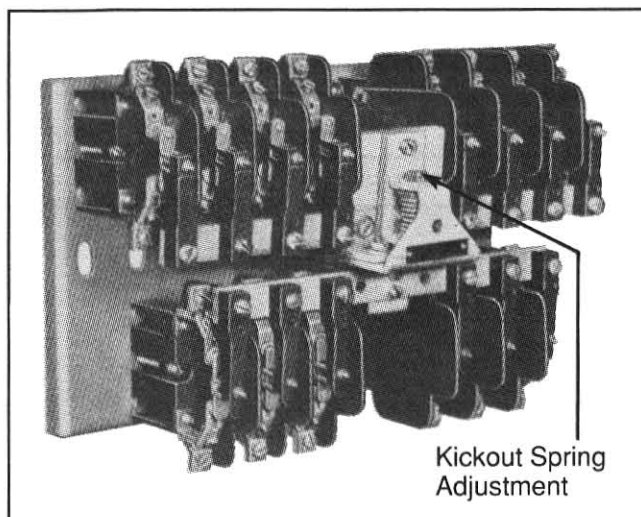


Fig. 1 Type AYK-86 Relay, Eight Normally-Open and Six Normally-Closed Poles

THE RELAY

Type AYK relays are 600 volt DC magnet-operated, multipole industrial control relays designed for heavy duty service. They are made with an even number of either normally-open (N.O.) or normally-closed (N.C.) poles or with a combination of both normally-open and normally-closed poles. N.O. poles are mounted in the top row and N.C. poles are mounted in the bottom row. See Figure 1. The maximum number of poles obtainable is eight normally-open and six normally-closed. The coil is rated for continuous operation and draws a nominal 30 watts.

The complete relay is assembled on a sheet steel base, arranged for front connections. It may be mounted on the front of a control panel made of either steel or insulating material. To facilitate wiring and inspection or replacement of contacts, the moving parts of the relay are removable as a self-contained unit by taking out two screws accessible from the front. See Figure 2.

ADJUSTMENTS

Bearing Adjustment. Contacts are carried on two steel bars attached to the moving armature. This armature has a knife edge bearing which is intended to rest against the armature stop bracket where it meets the face of the magnet frame. In order to maintain full contact pressure on the normally-closed contacts, it is necessary to maintain the correct knife edge position. For this purpose, a bevelled edge guide plate having slotted holes for adjustment is provided. Assemble this plate with its bevelled face parallel to the armature when the armature is in its de-energized position.

To adjust the guide plate position, first loosen the two holding screws. Hold the armature with its knife edge

against the lower face of the magnet and stop bracket and with its back touching the upper leg of the stop bracket. Move the guide plate until its bevelled edge is parallel to and resting lightly against the armature. Tighten the holding screws securely. There should be no binding against the guide plate when the armature closes. Clearance should be only enough to permit free motion.

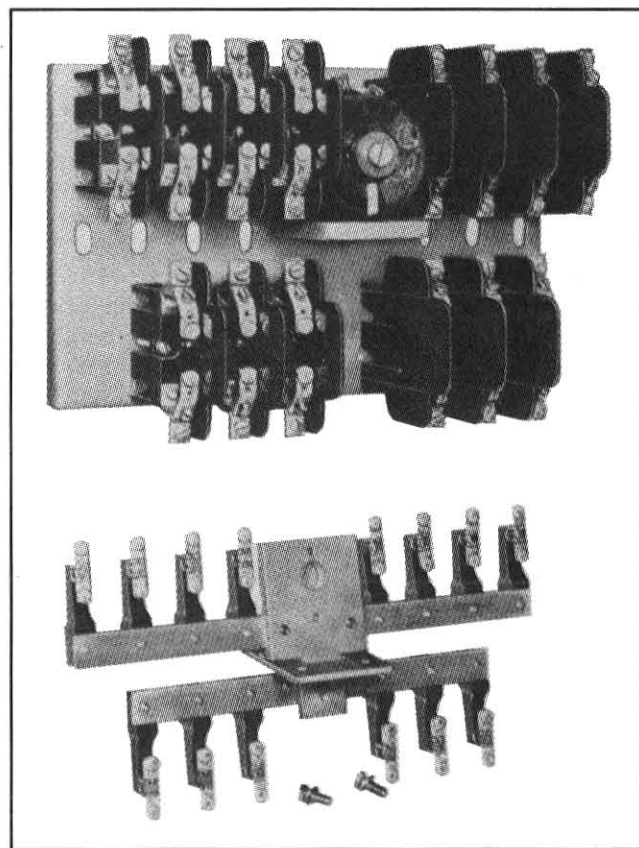


Fig. 2 Relay with Moving-Parts Assembly Detached and Shown Separately

Kickout Spring Adjustment. A kickout spring is provided to exert pressure on the normally-closed contacts. Since the number of contacts is not always the same, this spring has been made adjustable by means of a hexagonal nut. (See Figure 1.) Tighten this nut until the de-energized armature is pulled back against the upper leg of the stop bracket and normal compression of contact springs is obtained. The nut should never be tightened so far that the kickout spring is fully compressed when the armature seals against the magnet. In this position there should always be some clearance between turns of the spring. The kickout spring controls the magnetic pickup and seal characteristic of the armature. For that reason, it should never be set tighter than just enough to pull the armature against the stop bracket.

TYPE AYK MULTIPOLE RELAY

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MAINTENANCE

This industrial type control is designed to be installed, operated, and maintained by adequately trained workmen. These instructions do not cover all details, variations, or combinations of the equipment, its storage, delivery, installation, check-out, safe operation, or maintenance. Care must be exercised to comply with local, state, and national regulations, as well as safety practices, for this class of equipment.

The only maintenance required is to keep the electrical connections tight and the relay clean. Do not lubricate. Oil and grease only collect grit.

Moving Parts. To remove the assembled moving parts, take out the two screws holding the stop bracket to the lower leg of the magnet frame. Tap the armature lightly downward to disengage the stop bracket from the dowel pins. The assembly may then be lifted out.

Contacts. Stationary contacts can be removed and replaced from the front. This is more easily done if the moving-parts assembly is first removed. When replacing the molded supports for stationary contacts, align them carefully against the projecting dowels in the base before tightening the holding screws.

Keep the moving contact arms tightly secured to the mounting bars and squared up so as to avoid rubbing against stationary parts. To replace moving contacts, take out the small bolts which fasten them to contact arms, turn the contacts on edge and withdraw them from the guide yoke. When replacing a movable contact, be sure that the lock nut is tight but not so tight as to crush or deform the guide yoke.

Replace contacts when burned or worn enough that their spring compression is reduced to 1/32 inch. Do not file contacts unless their surface is so rough as to prevent normal separation of about 3/16 inch.

Coil. To remove the coil, disconnect its leads, take out the screw holding the pole washer to the core and the screw accessible through the holddown bracket at the rear. Slide the coil toward the front of the core.

CONTACT RATINGS

Volts DC	Make Current	Break Current	Carry Current
125	30A	1.76A	10A
250	20A	.88A	10A
600	12A	.36A	10A

RENEWAL PARTS

Item	Part Number
1 Pole Contact Kit	7858A16G11
Kickout Spring	04D8951H10
12 VDC Coil	45A5523G08
24 VDC Coil	45A5523G06
36 VDC Coil	45A5523G01
60 VDC Coil	45A5523G02
125 VDC Coil	45A5523G03
230 VDC Coil	45A5523G07
250 VDC Coil	45A5523G04