

## KS-5923 CURRENT OR VOLTAGE RELAYS REQUIREMENTS AND ADJUSTING PROCEDURES

### 1. GENERAL

1.01 This section covers the KS-5923 current or voltage relays as manufactured by the Roller Smith Co.

1.02 Reference shall be made to Section 020-010-711 covering General Requirements and Definitions for additional information necessary for the proper application of the requirements listed herein.

1.03 Requirements and associated procedures marked with a number sign (#) need not be checked by the installer unless it is thought that the requirement is not being met, or performance indicates that such a check is advisable.

1.04 Requirements marked with an asterisk (\*) need not be checked during

maintenance unless the apparatus or part is made accessible for other reasons, or performance indicates that such a check is advisable.

1.05 Description: This current relay has a pointer which moves over a scale of 40 divisions and makes contact with either of two adjustable contacts under the influence of the current in the moving coil. It is frequently used, in combination with suitable resistances, as a voltage relay.

1.06 The covers are dust tight. They should be kept on the relays and removed only while work is being done. It is essential to prevent lint, dust, or other dirt getting on the working parts of the relay.

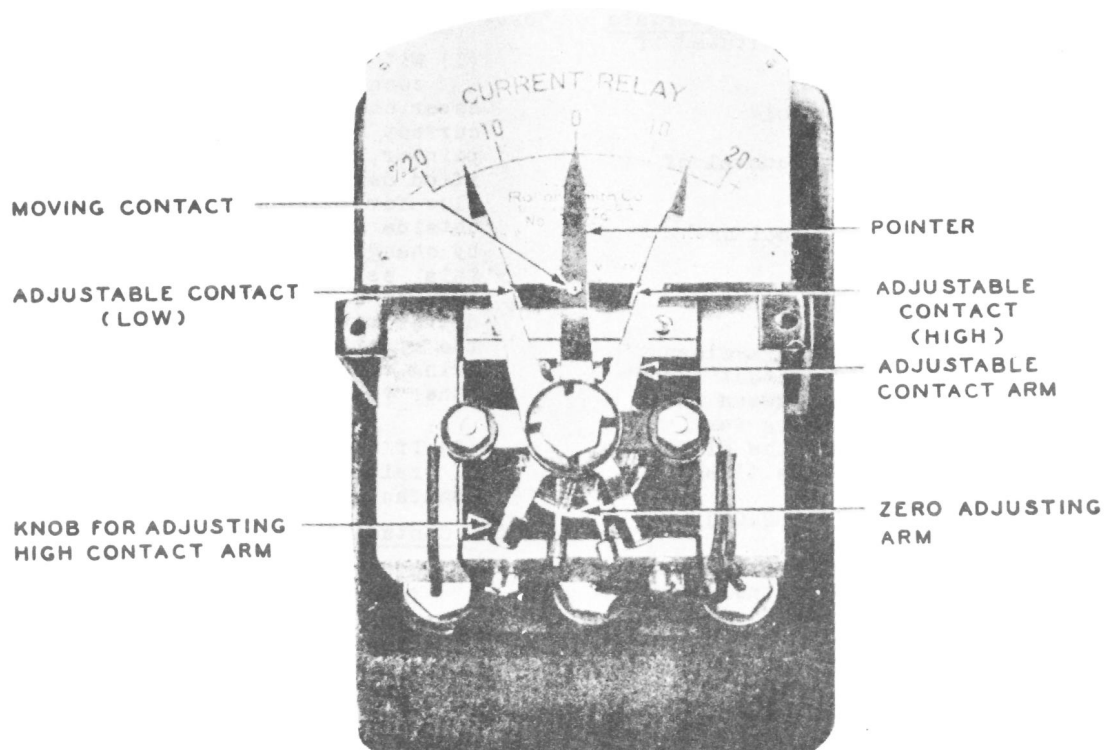


Fig. 1 - KS-5923 Relay, Cover Removed

2. REQUIREMENTS

#\* 2.01 Contacts shall be clean.

\* 2.02 Freedom of Movement: When current through the relay is gradually changed, the pointer shall smoothly follow this change. Gauge by eye.

\* 2.03 The adjustable contact arms shall move with sufficient friction to insure their maintaining their adjustment. Gauge by feel.

\* 2.04 Accuracy of Indication: The current at the deflections specified shall be:

Deflection	-20	0	+20
Min.	110	150	190 milliamperes
Max.	130	170	210 milliamperes

Use 35 type test set.

#\* 2.05 Contact Accuracy: At the time of making contact, the indication of the pointer shall coincide with that of the adjustable contact within  $\pm 1$  division of the scale. Gauge by eye.

3. ADJUSTING PROCEDURES

3.001 List of Tools, Gauges, and Materials (Equivalents may be substituted if desired.)

Contact burnisher, No. 265C tool  
Pliers, P-long nose, 6-1/2"  
Screwdriver, 3" cabinet, for removal of cover  
Test Set, No. 35-Type  
Wrench, hex. open end, No. 63 tool or No. 245 tool

#\* 3.01 Contacts (Rq. 2.01)

(1) Clean contacts by using a clean blade in a No. 265C contact burnisher. Place the blade between the contacts, press the contacts very lightly together and move the blade back and forth two or three times.

\* 3.02 Freedom of Movement (Rq. 2.02)

(1) Spread the adjustable contacts to the respective ends of the scale and connect the relay coil to the test set, which should be set up for current flow test. Unless circuit and test set preparation are given in circuit requirement tables, M, Grd., Bat., B/G, or NGB application may be used, as convenient, with coil leads disconnected if necessary.

Using the sliding contact in the test set, pass a varying current through the relay. Observe the operation of the pointer. If it does not follow the variation in current smoothly and without jerks, the entire relay may require sending to the manufacturer for repair. Refer to the supervisor.

\* 3.03 Adjustable Contact Arms (Rq. 2.03)

(1) An adjustable contact is adjusted by rotating the arm which supports it around its mounting, by pushing the knob at the lower end of the arm with the fingers, as required. The upper end, in addition to carrying the contact, is provided with a means of indicating on the scale the point at which the contacts will make. Some older models have a slotted head at the mounting for the use of a screwdriver in adjusting.

(2) Friction is provided in the mounting sufficient to maintain the arm in position. If an arm is found so loose that the adjustment is not maintained, the relay should be returned to the manufacturer. Refer to the supervisor.

\* 3.04 Accuracy of Indication (Rq. 2.04)

(1) With the relay coil and test set connected as before, and relay cover on or off as convenient, pass current through the coil to operate the pointer, setting it at each of the specified deflections. Note the current flow for each, and, if the values fall outside the limits, endeavor to correct by changing the zero adjustment. To do this, set the current flow at 160 milliamperes and, with the end of the screwdriver move the zero adjusting arm to the right or left, as required, to bring the pointer to zero. Recheck the other values.

(2) If the requirement is not met, the relay should be returned to the manufacturer. Refer to the supervisor.

#\* 3.05 Contact Accuracy (Rq. 2.05)

(1) With the test set connected as before, operate the pointer so that it makes contact with each of the adjustable contacts, successively, as indicated by the functioning of the controlled circuit. Observe the indication of the pointer at the moment of contact. If the requirement is not met, the relay should be returned to the manufacturer. Refer to the supervisor.