TYPE KS ACCELERATING RELAYS
INSTRUCTIONS

Description

The type KS is an alternating current limit accelerating relay.

Operation

The relay is mechanically interlocked with a magnetic contactor so that the spring in the relay cap is compressed when the contactor closes. When the cap is depressed, the armature of the relay is free to drop, providing there is not sufficient current in the relay coil to hold it closed. When the armature drops, the contact disc bridges across the two stationary contacts thus completing the circuit for the operating coil of the next accelerating contactor. In case the relay coil has sufficient current through it to hold the armature closed, the armature will keep the disc from closing the circuit to the next accelerating contactor until the current has dropped to the drop out setting.

Rating

The contactor on the relay is good for 5 amperes continuous and 30 amperes arc rupturing capacity. The relay is insulated for 600 volts.

Magnet Frame

The magnet frame is made from laminated punching securely riveted together. The front portion of the magnet frame is made adjustable in order to introduce an air gap in the magnet circuit, thus providing a range in the drop out current setting. The settings are made by an adjusting screw at the top of the frame and after the adjustment is made, it is held securely by two lock nuts on the screw.

Armature

The armature is attached to the lower portion of the magnet frame with a hinge pin. The armature has an arm projecting down which supports and actuates the contacting discs for making and breaking the circuit to the next accelerating contactor. The armature is always held in the closed position by a spring held in a recess of the depressing cap of the reset mechanism and cannot drop until the contactor, under which the relay has been assembled, has depressed the cap on the reset mechanism and the current in the coil has reduced to the predetermined value or dropout setting.

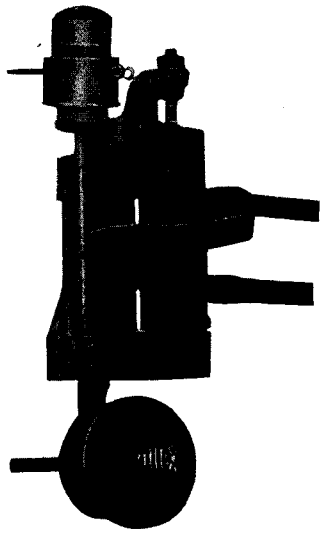

FIG. 1—TYPE KS ACCELERATING RELAY

Contact Disc

The contact disc is made from a high grade of graph-alloy and is insulated from the magnet frame. It is provided with a contact pressure spring of sufficient compression so that when the armature is down it will insure good contact with the stationary contacts.

Reset Mechanism

The reset mechanism consists of a rod attached to the armature and has an adjusting cap at the top. This mechanism holds the armature in the closed position by means of a compression spring concealed inside the cap. The depress cap is made adjustable in order to set it to the roll of the contact tips, and is held in place with two cotter pins.

Stationary Contacts

The stationary contacts are made of heavy copper segments and held in position to the panel by means of a dowel and a stud.

Adjustments

The relay depress cap must be set to the roll of the contact tip. There must be approximately $\frac{1}{64}$th clearance between the top of the cap and the contactor when the contact tips just touch, otherwise the magnet coil will not be energized to hold the armature up. In case the $\frac{1}{64}$ clearance is reduced due to the tips burning away, all that is necessary is to pull the two cotter pins in the depress cap, then hold the outer threaded sleeve and turn the depress cap the required number of half turns and put the cotter pins back in place.

The current dropout setting is effected by changing the air gap in the core of the relay coil. To change the setting, loosen the lock nuts on the adjusting screw at the top of the frame. Lowering the core will hold the armature in to a lower current value thus giving longer time. Raising the core increases the air gap in the coil and allows the armature to drop at the higher current values, thus giving a shorter time.

Maintenance

Use no oil or other lubricant on the relay. Oil collects dust and unless parts are frequently cleaned, will interfere with the freedom to operate. Inspection should be made periodically to see that the reset mechanism is free to operate. In case it should get sluggish in operation, remove the two cotter pins in the cap, then remove the cap and clean thoroughly of any dust which may have collected. Test the lift rod to see if it has freedom.

The contact discs should be examined occasionally to see that there is no dirt interfering with good contact.

*To be filed as an Instruction and Renewal Parts Leaflet: for Renewal Parts, see reverse side of this sheet.

TYPE KS ACCELERATING RELAYS
RENEWAL PARTS DATA

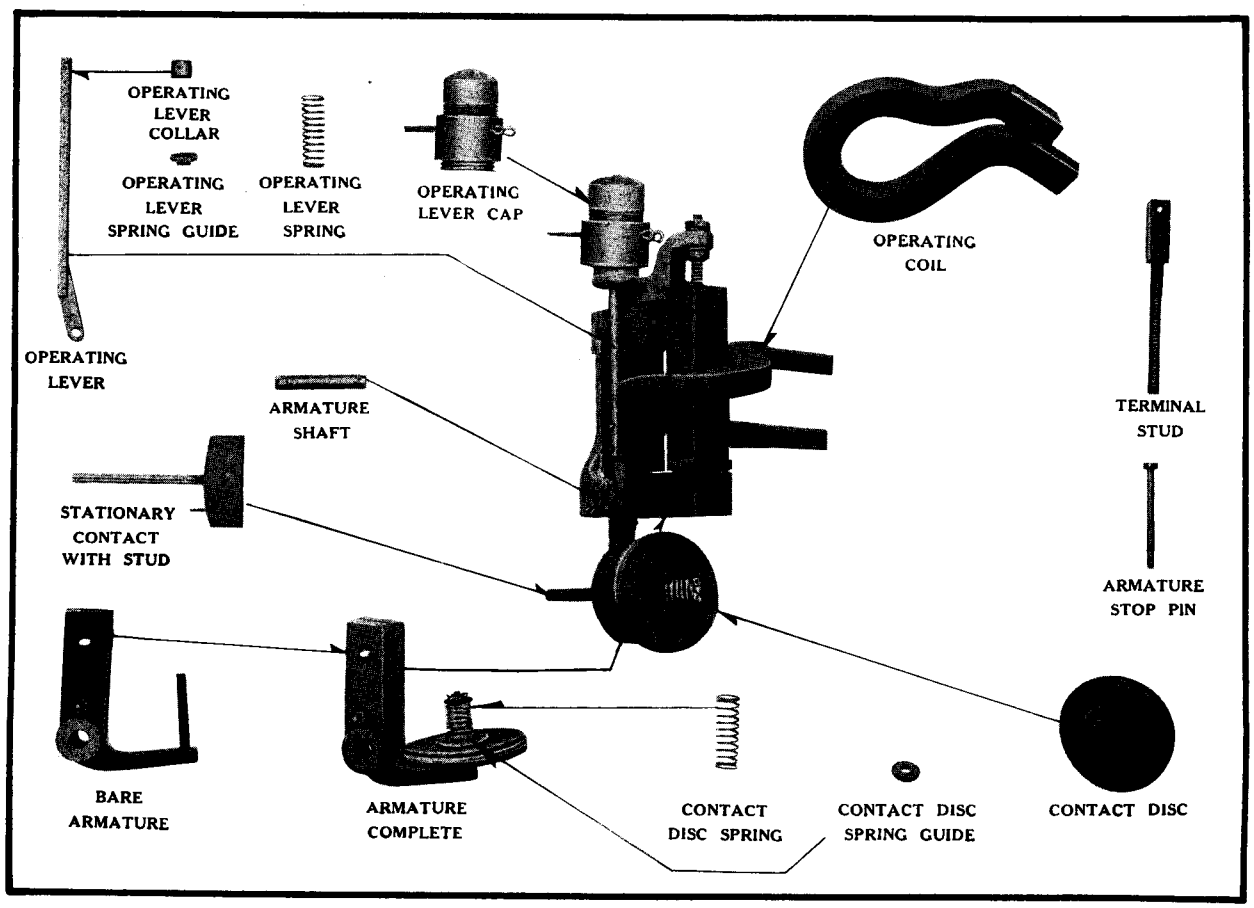

FIG. 2—RENEWAL PARTS FOR TYPE KS ACCELERATING RELAYS

RECOMMENDED STOCK OF RENEWAL PARTS

Style Number of Relay			215088-C 547312-A
Relays in use up to and including	1	5	
Name of Part	**No. Per Relay**	**Recommended for Stock**	**Style No. of Part**
Armature Complete	1	0	0	370613
Bare Armature	1	0	0	246162
Contact Disc	1	1	2	402983
Contact Disc Spring	1	1	1	210729
Contact Disc Spring Guide	2	0	1	177352
Stationary Contact with Stud for Style No. 547312	2	2	4	547313
†Stationary Contact with Stud for Style No. 215088	2	2	4	705233
Armature Shaft	1	0	1	77480
Armature Stop Pin	1	0	0	215081
Operating Lever	1	0	0	219256
Operating Lever Collar	1	0	0	246129
Operating Lever Spring	1	0	1	209856
Operating Lever Spring Guide	1	0	0	215078
Operating Lever Cap	1	0	0	540358
Operating Coil	1	0	1	See Key Sheet

Parts indented are included in the part under which they are indented.

†It is recommended when renewing stationary contact, to use the new design contact, Style No. 547313. It will be necessary to drill a .129" diameter hole ⅜" deep in the panel for dowel pin, using the new type contact as template.

This is a list of Renewal Parts and the quantities of each that we recommend should be stocked by the user of this apparatus to minimize service interruptions caused by breakdowns. The parts recommended are those most subject to wear in normal operation, or to damage or breakage due to possible abnormal conditions.

This list of Renewal Parts is given only as a guide. When continuous operation is a primary consideration, additional insurance against shutdowns is desirable. Under such conditions more renewal parts stock should be carried, considering the severity of service and the time required to secure replacements.

ORDERING INSTRUCTIONS

Name the part and give its style number. Give the complete name plate reading. State whether shipment is desired by express, freight or by parcel post. Send all orders or correspondence to nearest sales office of the company. Small orders should be combined so as to amount to a value of at least $1.00 net. Where the total of the sale is less than this, the material will be invoiced at $1.00.

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Westinghouse Electric & Manufacturing Company

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