

## TYPE L4 ELECTRICAL INTERLOCKS

For Alternating and Direct-Current  
Single Pole, Double Pole and Transfer Make and Break

### INSTRUCTIONS

MOTION OF THE OPERATION LEVER PARALLEL TO THE PANEL

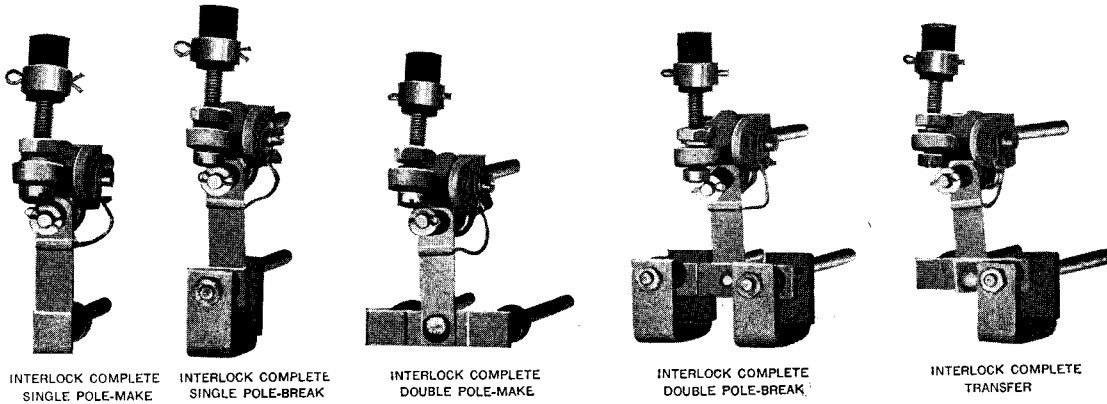


Fig. 1

MOTION OF THE OPERATION LEVER PERPENDICULAR TO THE PANEL

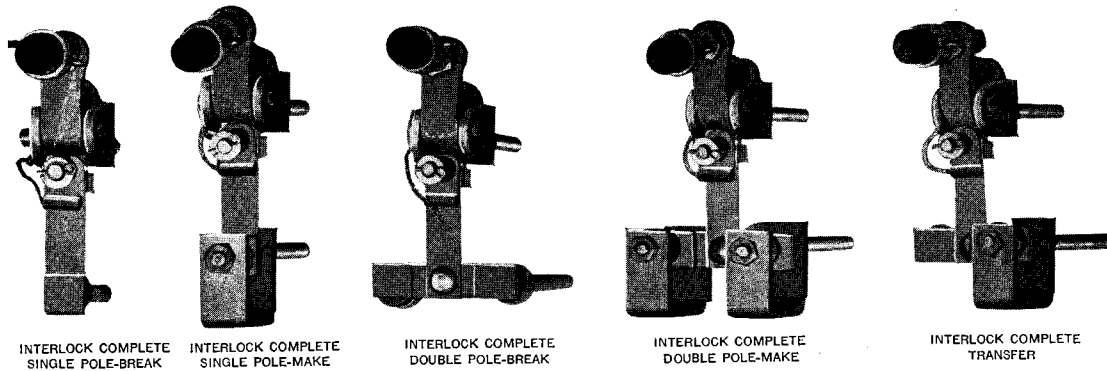


Fig. 2

### Description

Type L4 electrical interlock is an auxiliary contact device which can be furnished in ten different standard combinations, all of which are self-contained. It is commonly known as the clapper type interlock.

The following are the types which are available.

1. Motion of the operating lever parallel to the panel: Single make, single break, transfer, double make and the double break.
2. Motion of the operating lever perpendicular to the panel: Single make, single break, transfer, double make and the double break.

The interlocks are all provided for mounting on panels of 2" thickness or less.

**Rating**—The L4 interlock will withstand 5 amperes continuously on control circuits up to 600 volts and will successfully break 30 ampere peak load on alternating-current. The operating lever is insulated for 600 volts.

**Operation**—The operation of the interlock is dependent upon the motion of some other moving member of the control panel, usually a contactor.

**Contacts**—The stationary contact is a copper-graphite alloy moulded to a stud. The moving contacts have a copper arcing tip securely fastened to a copper contact finger. The interlock has been designed so that a slight wiping action is given to the contacts on opening and closing. This action insures a clean, low resistance contact area. A steel compression spring gives a positive and sufficient contact pressure up to their maximum life.

**Shunt**—The moving contact and its support is connected with a flexible braided copper cable, which gives complete freedom to the moving contact and has ample capacity to withstand the maximum current for which the interlock is rated.

### Maintenance

**Bearing**—Do not use oil or other lubricants on the bearings. Oil collects dust and unless the parts are frequently

cleaned will cause the interlock to be sluggish on opening, thus causing excess arcing on the contacts.

**Contact and Spring Pressures**—Use no oil or other lubricant on the contacts. The contacts should give satisfactory results without much attention.

The contacts should be replaced when maximum usefulness has been reached, in order that the spring pressure does not reach too low a value, which results in excessive arcing and poor contact.

**Contact Gap and Adjustment**—The operating lever has an insulated button. This lever can be adjusted to the apparatus to which it has been mounted to make it operate. The contact gap on the interlock should be set approximately  $\frac{3}{16}$ " to  $\frac{1}{4}$ " when it is in the open position.

In case the gap does not measure up to these dimensions, loosen up the lock nut on the stud of the operating lever and set to the minimum dimensions when the contacts are new. This will compensate for the wear and maintain a reasonable contact pressure after the gap has increased to the  $\frac{1}{4}$ " dimension.

## TYPE L4 ELECTRICAL INTERLOCKS

Motion of the Operating Lever Parallel to the Panel

### RENEWAL PARTS DATA

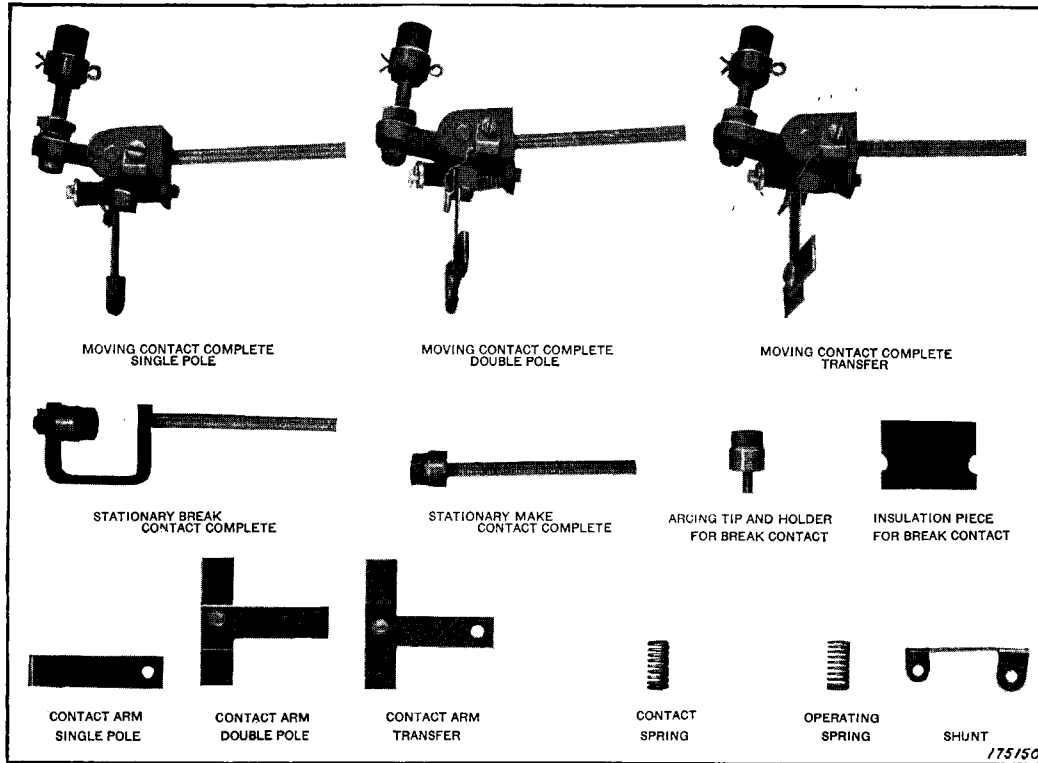


Fig. 3—Renewal Parts for Type L4 Interlock.

### RECOMMENDED STOCK OF RENEWAL PARTS

Style Number of Interlock . . . . .	406915-L	406916-I	486531-K	486533-H	468191-K	No. Per Interlock	Interlocks in Use	
	Single Pole	Single Pole	Double Pole	Double Pole	Transfer		1	5
Description of Part	STYLE NUMBER OF PART						RECOMMENDED FOR STOCK	
Moving Contact Complete . . . . .	316192	316192	330022	330022	468190	1	0	0
Contact Arm . . . . .	320775	320775	355370	355370	468189	1	1	2
†† Contact Arm Bracket . . . . .	586701	586701	586701	586701	586701	1	0	0
Contact Spring . . . . .	420605	420605	420605	420605	420605	1	0	1
Operating Spring . . . . .	320781	320781	320781	320781	320781	1	0	1
Shunt . . . . .	594931	594931	594931	594931	594931	1	0	1
†† Button . . . . .	355862	355862	355862	355862	355862	1	0	0
† Stationary Make Contact Complete . . . . .	705233	705233	705233	705233	705233	1	1	2
† Stationary Break Contact Complete . . . . .	883481	883481	883481	883481	883481	1	0	0
† Arcing Tip and Holder . . . . .	705232	705232	705232	705232	705232	1	1	2
† Insulation Piece for Break Contact . . . . .	320776	320776	320776	320776	320776	1	0	1

†Two stationary contacts required for Double Pole Interlocks.

††Not Illustrated.

Note—See page 4 for ordering instructions.

This is a list of the 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.

## TYPE L4 ELECTRICAL INTERLOCKS

Motion of the Operating Lever Perpendicular to the Panel

### RENEWAL PARTS DATA—Continued

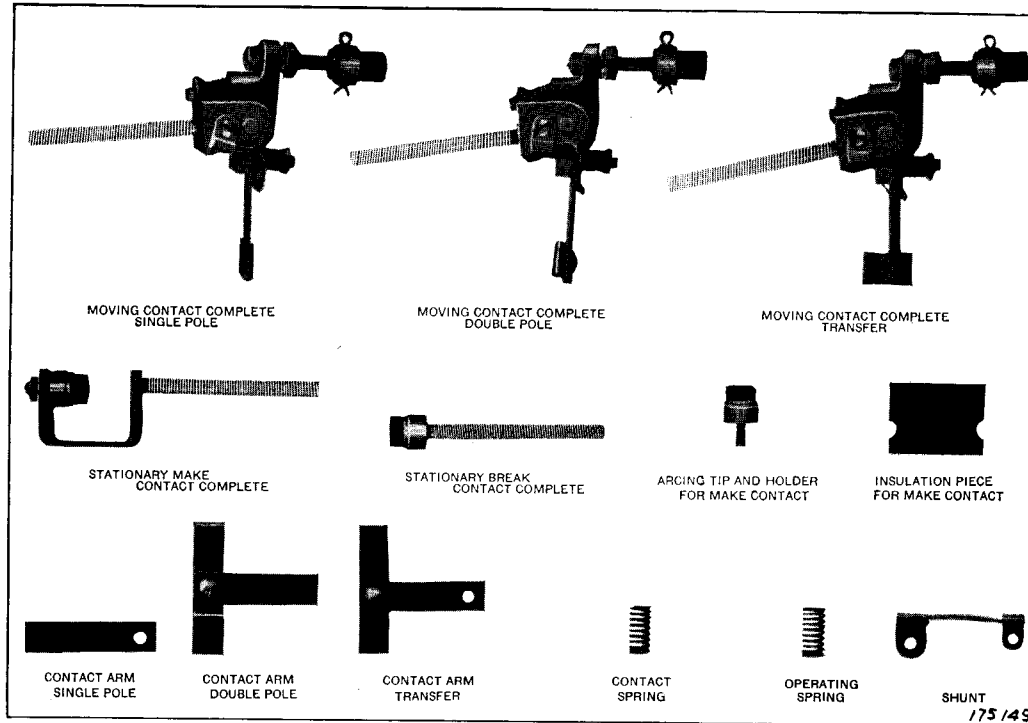


Fig. 4—Renewal Parts for Type L4 Interlock.

### RECOMMENDED STOCK OF RENEWAL PARTS

Style Number of Interlock..	Style Number of Part							No-Per Inter-lock	Interlocks in Use	
	406917-G	406918-J	553992	558093	486532-G	486534-J	486530-J		1	5
Contact Arrangement.....	Single Pole	Single Pole	Single Pole	Single Pole	Double Pole	Double Pole	Transfer	Recommended for Stock		
Description of Part	STYLE NUMBER OF PART									
Moving Contact Complete..	316194	316194	844550	844550	330024	330024	482831	1	0	0
†† Contact Arm.....	320775	320775	320775	320775	355370	355370	468189	1	1	2
†† Contact Arm Bracket ...	586702	586702	586702	586702	586702	586702	586702	1	0	0
Contact Spring.....	420605	420605	420605	420605	420605	420605	420605	1	0	1
Operating Spring.....	320781	320781	320781	320781	320781	320781	320781	1	0	1
Shunt.....	594931	594931	594931	594931	594931	594931	594931	1	0	1
†† Button.....	355862	355862	355862	355862	355862	355862	355862	1	0	0
† Stationary Break Contact Complete.....	.....	705233	.....	705233	.....	705233	705233	1	1	2
† Stationary Make Contact Complete.....	883481	.....	883481	.....	883481	.....	883481	1	0	0
Arcing Tip and Holder...	705232	.....	705232	.....	705232	.....	705232	1	1	2
Insulation Piece for Make Contact.....	320776	.....	320776	.....	320776	.....	320776	1	0	1

†Two stationary contacts required for Double Pole Interlocks.

††Not Illustrated.

Note—See page 4 for ordering instructions.

This is a list of the 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.

## TYPE L4 ELECTRICAL INTERLOCKS

For Alternating and Direct-Current  
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## RENEWAL PARTS—Continued

## ORDERING INSTRUCTIONS

Quick shipments from sales warehouse stock and prompt replies to inquiries without the necessity of referring to the Works for information, are possible only when complete identifying information for the part is given. Careful observance of the following points on inquiries or orders is essential for correct shipments and prompt service.

1. Name the part, using the name shown on the illustrations, Figure 3 or Figure 4 and state quantity desired.
2. Specify the type of interlock—as shown on Figure 1 or Figure 2, Page 1.
3. State whether shipment is to be made by freight, express or by parcel post.
4. Send all orders or inquiries to the nearest Sales Office of the Company.
5. Small orders should be combined so as to amount to a value of at least one dollar, as order-handling and shipping expenses prevent us from billing a smaller amount.

## WESTINGHOUSE SALES OFFICES

AKRON, OHIO, 11 S. Main St.  
ALBANY, N. Y., 360 Broadway  
ALLENTOWN, PA., 522 Maple St.  
APPLETON, WIS., 81 Bellaire Court  
\*ATLANTA, GA., 426 Marietta St. N. W.  
BAKERSFIELD, CALIF., 2224 San Emedio St.  
BALTIMORE, MD., 118 E. Lombard St.  
BEAUMONT, TEX., La Salle Hotel  
BIRMINGHAM, ALA., 2030 Second Ave.  
BLUEFIELD, W. VA., 208 Bluefield Ave.  
\*BOSTON, MASS., 10 High St.  
BRIDGEPORT, CONN., Bruce Ave. and Seymour St.  
\*BUFFALO, N. Y., 814 Ellicott Square  
BURLINGTON, IOWA, P. O. 197  
BURLINGTON, VT., 208 Park Ave.  
\*BUTTE, MONT., 52 E. Broadway  
CANTON, OHIO, 120 Tuscarawas St., West  
\*CHARLOTTE, N. C., 210 E. Sixth St.  
\*CHATTANOOGA, TENN., 536 Market St.  
\*CHICAGO, ILL., 20 N. Wacker Drive  
\*CINCINNATI, OHIO, 207 W. Third St.  
\*CLEVELAND, OHIO, 1216 W. 58th St.  
COLUMBUS, OHIO, 209 S. Third St.  
\*DALLAS, TEX., 209 Browder St.  
DAVENPORT, IOWA, 206 E. Second St.  
DAYTON, OHIO, 32 N. Main St.  
\*DENVER, COLO., 910 Fifteenth St.  
DES MOINES, IOWA, 218 Second St.  
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\*EL PASO, TEXAS, 303 N. Oregon St.  
\*EMERYVILLE, CALIF., 5815 Peladeau St.  
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KANSAS CITY, MO., 2124 Wyandotte St.  
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YOUNGSTOWN, OHIO, 25 E. Boardman St.  
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\*Warehouses located in these cities.

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CHICAGO, ILL., 2211 W. Pershing Road  
CINCINNATI, OHIO, 207 W. Third St.  
CLEVELAND, OHIO, 1216 W. 58th St.  
DENVER, COLO., 2644 Walnut St.  
DETROIT, MICH., 5757 Trumbull Ave.

FAIRMONT, W. VA., 602 Cleveland Ave.  
HOUSTON, TEX., 2315 Commerce St.  
HUNTINGTON, W. VA., 209 Ninth St.  
INDIANAPOLIS, IND., 551 W. Merrill St.  
JOHNSTOWN, PA., 47 Messenger St.  
KANSAS CITY, MO., 2124 Wyandotte St.  
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MILWAUKEE, WIS., 1669 N. Water Street  
MINNEAPOLIS, MINN., 2303 Kennedy St. N. E.  
NEWARK, N. J., Haynes Ave. and Lincoln Highway  
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SPRINGFIELD, MASS., 395 Liberty St.  
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UTICA, N. Y., 113 N. Genesee St.  
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