

SEPTEMBER, 1967

## NEMA 2 DOUBLE POLE S CONTACTOR

### FOLIO 7

### FOR DC OPERATION

#### INSTRUCTIONS

TYPE S CONTACTORS are general purpose, direct current magnetic contactors.

RATING: 50 amp. continuous, 500 amp. rupturing capacity. 115-550 Volts.

**ELECTRICAL INTERLOCKS:** These consist of stationary contacts mounted on the base and a moving contact attached to the bottom of the magnet arm. The moving contact should provide  $\frac{1}{8}$ " follow-up when the magnet arm reaches its limit of travel, either completely closed or completely opened. The rating of these electrical interlocks is as follows:

	Max. Inrush	Cont. Amps.	Rupturing Capacity Amps. Inductive			
			115 V.	250 V.	440 V.	550 V.
A.C.	30	15	10	10	5	5
D.C.	30	15	2.5	1.0	.4	.4

**MECHANICAL INTERLOCKS:** Horizontal mechanical interlocks are bakelite bars pivoted at their centers. These are carefully ground on the ends to suit so that they do not interfere with the complete closure and seal of either contactor but prevent the contacts of either contactor to close or touch while the contact tips of the other contactor are closed.

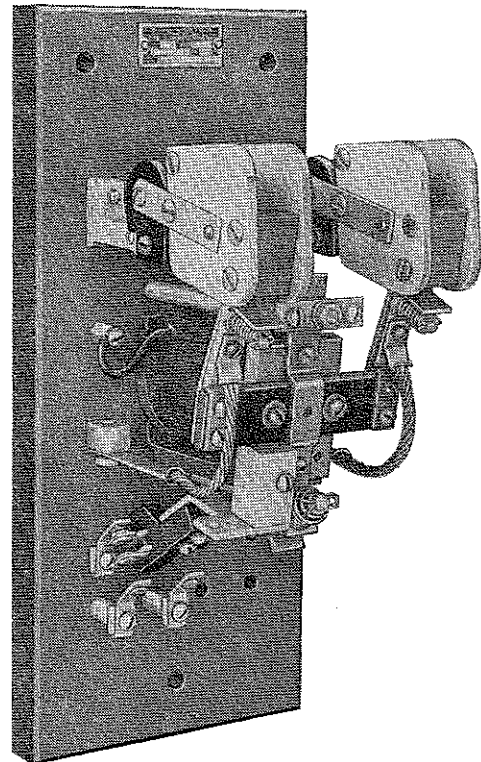
**OPERATING COILS:** Continuous duty operating coils are furnished for 115 volts and 230 volts. For 550 volts, the 230 volt coil is used and connected in series with a suitable resistor.

To remove the coil, remove the cotter pin from the magnet arm spring pin. The armature may then be worked out of its bearing, exposing the coil. Remove core cap and coil terminal screws.

The contactor will pick up and seal on 80% normal voltage, with the coil hot, will stand 110% voltage continuously, and will hold in to approximately 15% of normal voltage.

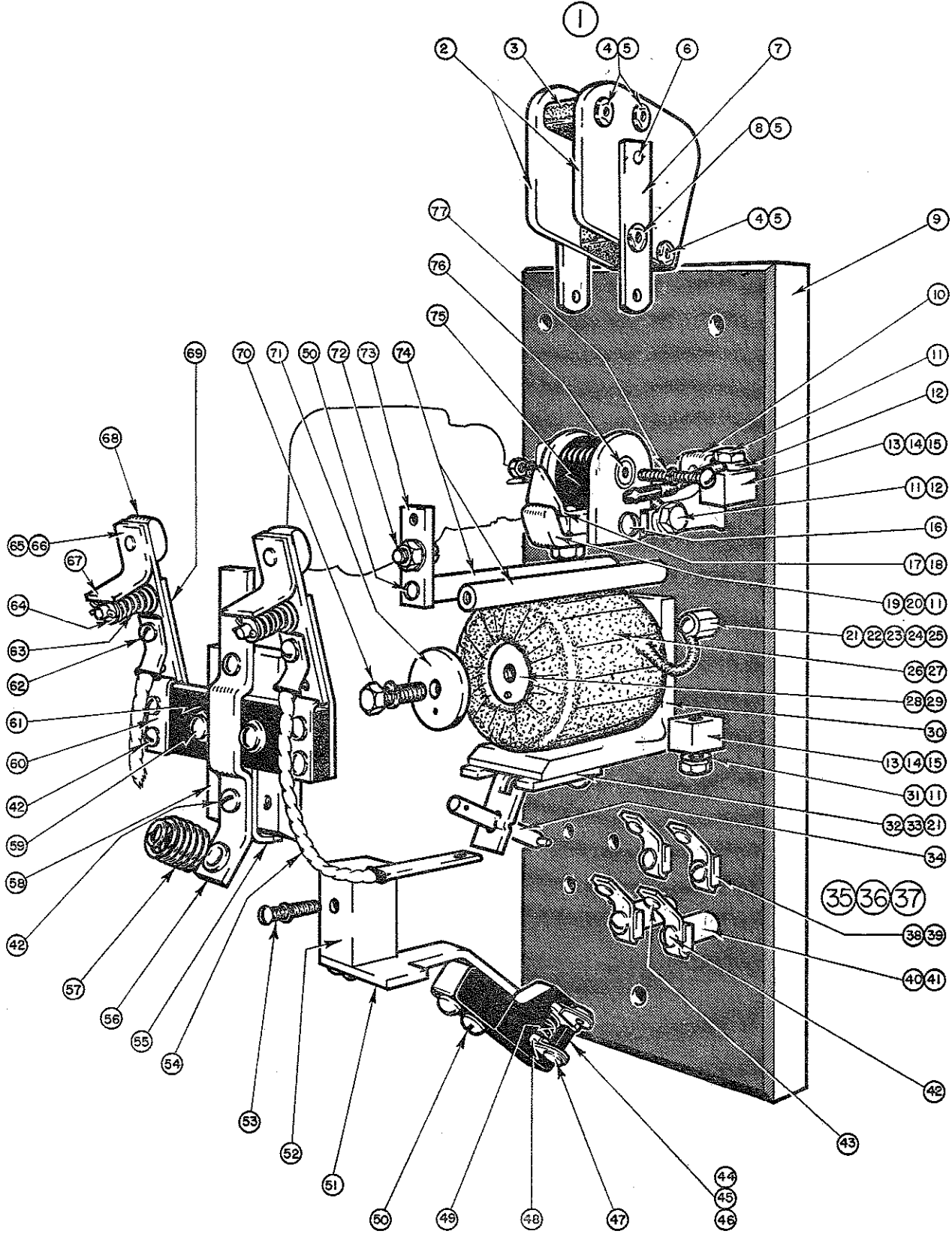
**MAGNET AIR GAP:** The air gap is provided by means of a non-magnetic spacer between the core and the frame which are held together by a brass screw. The armature seals directly against the core cap. See that this point of contact is free of any sticky, foreign material.

**BEARINGS:** Knife edge bearings are used and require no oiling. After assembly or adjustment, merely see that the knife edge bearing is properly located in its seat so that the arm moves freely. The armature spring has no adjustment but is sufficient to maintain the armature properly in its bearing.



**CONTACTS AND CONTACT SPRINGS:** The follow-up with new contacts is  $\frac{1}{4}$ " which is equivalent to  $\frac{1}{8}$ " when measured on the contact finger opposite the spring pin. When this measurement decreases to  $\frac{1}{32}$ " because of contact wear, the contacts should be replaced. The contact spring pressure is not adjustable. The initial pressure should be approx. one pound, and the final sealed pressure approx.  $1\frac{1}{2}$  pounds. There is sufficient tolerance in the assembly of contact fingers to permit alignment of the contacts. When replacing contact tips, see that they align properly and that the contact springs do not bind. Always have the arc shields fully down when operating the contactor under load.

NEMA 2 DOUBLE POLE S CONTACTOR, FOLIO 7



ADVISE NAMEPLATE MARKING WHEN ORDERING PARTS

NEMA 2 DOUBLE POLE 5 CONTACTOR, FOLIO 7

NOTE: Indented items are component parts of item immediately preceding.

Item No.	List No.	Description	Item No.	List No.	Description
✓ 1	SS-0746-A	Assembled Arc Shield, Complete.....	41	EL-14 <i>obsolete</i>	Stud, for 1½"-2" Base.....
2	SS-0770	Arc Shield, 2 req'd.....	42		10-24x½" R.I. Mch. Screw & Lk. Washer.....
✓ 3	SS-0771	Arc Shield Spacer, 2 req'd.....	✓ 43	EL-6-A	Contact.....
● 4	29418-14120	Binding Post, 3 req'd.....	44	EL-1-A	Control Circuit Arm, Complete, for Open or Closed Control Circuit (same as Item 45 except only 1 Item 47)..
● 5	22999-14400	Binding Screw, 4 req'd.....	45	EL-2-A	
6		# 6x¾" Washer Hd. U-Drive Screw, 2 req'd.....	46	EL-47	
✓ 7	SS-0753	Blowout Ear, 2 req'd.....	47	EL-84-A	51075-023-50 Contact Bridge, 1 req'd., for Item 44, 2 for Item 45.....
● 8	29418-14400	Binding Post.....	48	EL-87	51075-040-01 Spring Retainer, 2 req'd.....
9		Base, specify thickness.....	49	EL-49	50502-602-38 Spring.....
10	SS-0750	Contact Bracket. <i>obsolete</i> .....	50		10-24x¾" R.I. Mch. Screw & Lk. Washer.....
11		¼"-20x½" H.I. Cap Screw.....	51	EL-64 <i>obsolete</i>	Control Circuit Arm Support.....
12	ZO-1150	Cup Washer. <i>obsolete</i> .....	52	EL-65 <i>obsolete</i>	Mounting Block.....
13	SS-0756	Main Terminal Stud, for ¾" Base. <i>obsolete</i> .....	53		10-24x1⅛" R.I. Mch. Screw & Lk. Washer.....
14	SS-0757	Main Terminal Stud, for 1"-1¼" Base. <i>obsolete</i> .....	✓ 54	SS-0933-A	Connector.....
15	SS-0758	Main Terminal Stud, for 1½"-2" Base. <i>obsolete</i> .....	55	SS-0765	Guide Plate. <i>obsolete</i> .....
16		10-24x1½" R.I. Mch. Screw, # 6 Bik. Burr, ⅜" Lk. Washer & Nut.....	56	SS-0761	Spring Retaining Plate. <i>obsolete</i> .....
✓ 17	SS-0752	Arc Horn.....	✓ 57	SS-0768	Arm Spring.....
✓ 18		# 6x¾" R.H. U-Drive Screw.....	58	SS-0764	Armature Plate. <i>obsolete</i> .....
✓ 19	A50005-040-01	Contact Tip.....	59		10-24x¾" R.I. Mch. Screw, # 6 Bik. Burr & ⅜" Lk. Washer.....
20		¼" Lk. Washer.....	60	SS-0759	Lock Plate. <i>obsolete</i> .....
21		10-24x¾" R.I. Mch. Screw.....	✓ 61	SS-0772	Cross Bar.....
22	S-0110	Coil Terminal Stud, for ¾" Base. <i>obsolete</i> .....	62		8-32x¾" R.I. Mch. Screw & Lk. Washer.....
23	LTZ-1809	Coil Terminal Stud, for 1" Base. <i>obsolete</i> .....	✓ 63	SS-0896	Contact Spring.....
24	LTZ-1810	Coil Terminal Stud, for 1¼"-1½" Base. <i>obsolete</i> .....	✓ 64	ZS-0349	Contact Spring Guide.....
25	LTZ-1811	Coil Terminal Stud, for 2" Base. <i>obsolete</i> .....	✓ 65	SS-0755-A	Assembled Contact Finger, Complete.....
✓ 26	LT-1017-AE	Coil, for 230 Volt.....	66	SS-0784	Contact Finger, only. <i>obsolete</i> <sup>Copper. SS0755A</sup>
✓ 27	LT-1016-AE	Coil, for 115 Volt.....	67	SS-0786	Guard. <i>obsolete</i> <sup>Copper. SS0755A</sup>
28	S-0143-A	Core. <i>obsolete</i> .....	68	DR-1139	Contact Tip. <i>obsolete</i> <sup>Silver. SS0755AS</sup>
29	SS-0775	Non-Magnetic Spacer (at rear of Coil, not shown).....	✓ 69	SS-0763-A	Contact Bracket.....
30	SK-64-A	Frame. <i>obsolete</i> .....	70		¼"-20x¾" H.B. Cap Screw & Lk. Washer.....
✓ 31	B5-0502-004-01	Spring Washer.....	71	LT-1067	Core Cap. <i>obsolete</i> .....
32	SK-48	Frame Plate. <i>obsolete</i> .....	72		¼"-20x½" R.I. Mch. Screw, Lk. Washer & Nut....
33		⅜" Lk. Washer.....	73	SS-0760	Stop Plate. <i>obsolete</i> .....
✓ 34	SS-0769-A	Spring Pin (uses ⅜"x¾" cotter pin).....	74	SS-0780	Stop Bar. <i>obsolete</i> .....
* 35	EL-59-G	Assembled Control Circuit, Complete, Normally Closed. <i>obsolete</i> .....	✓ 75	SS-0747-A	Blowout Coil.....
* 36	EL-60-G	Assembled Control Circuit, Complete, Normally Open. <i>obsolete</i> .....	76	SS-0781	Blowout Core. <i>obsolete</i> .....
* 37	EL-61-G	Assembled Control Circuit, Complete, Open and Closed. <i>obsolete</i> .....	77		10-24x1¼" R.I. Mch. Screw, ⅜" Lk. Washer & Nut.....
38	EL-7 <i>obsolete</i>	Stud, for ¾"-1"-1¼" Base.....			
39	EL-8 <i>obsolete</i>	Stud, for 1½"-2" Base.....			
40	EL-13 <i>obsolete</i>	Stud, for ¾"-1"-1¼" Base.....			

†Essential Parts for General Maintenance.  
\*Advise Base Thickness When Ordering.  
● Minor revision since previous issue.

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