

General Electric Company

Schenectady, N.Y.

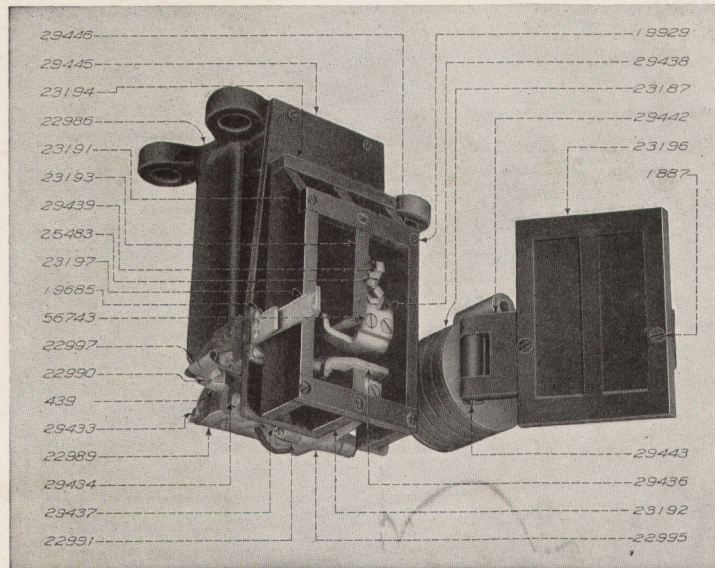
SUPPLY DEPARTMENT

July, 1912

* Bulletin No. 4970

PARTS OF CONTACTORS AND INTERLOCKS

Used Principally with Sprague-General Electric Type M Control Apparatus



TYPE DB-15, FORMS A AND E CONTACTORS

Cat. No.	Description
<i>Following are the parts:</i>	
30426	OPERATING MAGNET SPOOL, complete, DB-15-A-6.....
30427	Operating magnet spool, complete, DB-15-A-7
34268	Operating magnet spool, complete, DB-15-A-8
40127	Operating magnet spool, complete, DB-15-A-9
40173	Operating magnet spool, complete, DB-15-A-10.....
40174	Operating magnet spool, complete, DB-15-A-11.....
40175	Operating magnet spool, complete, DB-15-A-12.....
40176	Operating magnet spool, complete, DB-15-A-13.....
40177	Operating magnet spool, complete, DB-15-A-14.....
40178	Operating magnet spool, complete, DB-15-A-15.....
40196	Operating magnet spool, complete, DB-15-A-16.....
47547	Operating magnet spool, complete, DB-15-A-18
47548	Operating magnet spool, complete, DB-15-A-19
22778	Copper terminal for magnet spool.....
19682	Screw fastening terminal in position (14-24, 3/8 in. r.h. blued).....
22780	Lock washer for No. 19682 (1/4 in. by 1/2 in. by 0.060 in.).....

NOTE.—The data in this publication are for the convenience of customers, and every effort is made to avoid error, but this Company does not guarantee their correctness, nor does it hold itself responsible for any errors or omissions in this publication. Subject to change without notice.

* Supersedes Bulletin No. 4583.

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TYPE DB-151, FORM A CONTACTOR

Cat. No.	Description
46251	BLOWOUT COIL, complete, with terminal, contact base and contact tip.....
46245	Contact tip.....
30815	Cap screw fastening contact tip to base (14-24, 5/8 in. hex. h. slot. blued).....
22780	Lock washer for No. 30815 (3/4 in. by 1/2 in. by 0.060 in.).....
40551	Clamping screw for blowout coil terminal (3/8 in.-16, 3/4 in. hex. h. slot. cap screw).....
40552	Lock washer plate for No. 40551.....
307	Long screw fastening No. 46251 to arc chute (14-24, 1 in. f.h.).....
56743	Short screw fastening No. 46251 to arc chute (14-24, 1/2 in. f.h.).....
40562	POLE PIECE, two parts, with blowout coil core and cap screw.....
30368	Cap screw for No. 40562 (5/8 in.-18, 1/2 in. hex. h.).....
40563	Fiber sleeve for blowout coil core.....
46252	Supporting bracket for arc chute.....
10576	Screw fastening No. 46252 to mechanism plate (5/8 in.-18, 1 in. f.h.).....
46253	ARC CHUTE, complete, includes screws and washers for fastening in position
51899	Screw fastening chute to supporting bracket (5/8 in.-18, 1 in. r.h. blued).....
30371	Screw fastening chute to top plate (5/8 in.-18, 1 1/4 in. r.h. blued).....
47173	Lock washer for Nos. 51899, 30371 (3/4 in. by 5/8 in. by 0.0625 in.).....
46254	Back plate.....
40566	Side plate (right-hand).....
40567	Side plate (left-hand).....
40568	Upper end plate.....
40569	Arcing plate, upper.....
40570	Arcing plate, lower.....
40571	Arcing plate, side.....
46260	Insulation for back plate.....
40574	Insulation for upper end plate.....
882	Screw fastening back plate to side plate (No. 8, 1 in. f.h.).....
1013	Screw fastening insulation and upper end plate to side plates (No. 8, 3/4 in. f.h.).....
40575	Stud for chute (10-32, 5 3/8 in. long).....
40576	Fiber sleeve for stud.....
42362	Nut for stud (10-32, 3/2 in. thick, hex. brass, sp'l).....

TYPE DB-151, FORM C CONTACTOR

Following is the only part of the DB-151-C contactor which differs from those of the DB-151-A:

46261	BLOWOUT COIL, complete, with terminal, contact base and contact tip.....
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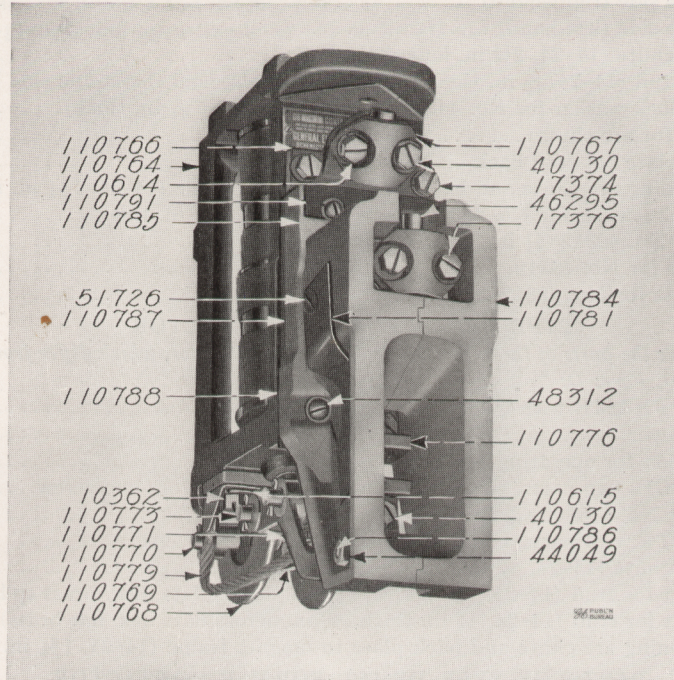
TYPE DB-160, FORMS A AND D CONTACTORS

Following are the parts:

110759	OPERATING MAGNET SPOOL, complete, DB-160-D-1.....
110760	Operating magnet spool, complete, DB-160-D-2.....
110761	Operating magnet spool, complete, DB-160-D-3.....
110762	Operating magnet spool, complete, DB-160-D-4.....
110763	Operating magnet spool, complete, DB-160-D-5.....
22778	Copper terminal for magnet spool.....
19682	Screw fastening terminal in position (14-24, 3/8 in. r.h. blued).....
22780	Lock washer for No. 19682 (3/4 in. by 1/2 in. by 0.060 in.).....
110764	MAGNET FRAME with bushing for plunger.....
110765	Magnet pole.....
110766	Terminal, complete, for frame.....
110767	Clamp for terminal.....
46295	Bushing for terminal.....
40130	Clamping screw for terminal (5/8 in.-18, 5/8 in. hex. h. slot. blued cap screw).....
110614	Positive lock washer for No. 40130 (1 1/2 in. by 2 3/2 in. by 3/2 in. thick).....
17374	Cap screw fastening No. 110766 to magnet frame (5/8 in.-18, 7/8 in. hex. h. slot. blued).....
110614	Positive lock washer for No. 17374 (1 1/2 in. by 2 3/2 in. by 3/2 in. thick).....

TYPE DB-160, FORMS A AND D CONTACTORS

Cat. No.	Description
110768	* Operating lever.....
110769	Hinge bracket for operating lever.....
10362	Cap screw fastening hinge bracket to magnet frame ($\frac{3}{8}$ in.-16, $\frac{7}{8}$ in. hex. h. slot.).....
110615	Positive lock washer for No. 10362 ($\frac{13}{32}$ in. by $\frac{29}{32}$ in. by 0.125 in.).....
110770	Hinge pin for operating lever and bracket ($\frac{7}{16}$ in. by $3\frac{3}{8}$ in. Tob. bronze).....
110771	Plunger for operating lever.....



110772	Disk for plunger and magnet pole.....
110773	Pin for plunger and operating lever ($\frac{7}{16}$ in. by $3\frac{3}{8}$ in. zinc plated).....
110774	Spring cotter for Nos. 110770, 110773 ($\frac{3}{32}$ in. by $\frac{5}{8}$ in. sherardized).....
110775	* Contact lever.....
110776	Contact tip.....
40130	Cap screw fastening contact tip to contact lever ($\frac{5}{16}$ in.-18, $\frac{5}{8}$ in. hex. h. slot. blued).....
110614	Positive lock washer for No. 40130 ($\frac{11}{32}$ in. by $\frac{23}{32}$ in. by $\frac{3}{32}$ in. thick).....
110773	Pin for contact and operating levers ($\frac{7}{16}$ in. by $3\frac{3}{8}$ in. zinc plated).....
110774	Spring cotter for No. 110773 ($\frac{3}{32}$ in. by $\frac{5}{8}$ in. sherardized).....
110777	Pressure spring for contact lever.....
110778	Fiber button for spring.....
110779	Flexible pigtail connector with terminals, for contact lever and magnet frame.....
17375	Cap screw fastening No. 110779 to contact lever ($\frac{5}{16}$ in.-18, $\frac{3}{8}$ in. hex. h. slot, sherardized).....
110614	Positive lock washer for No. 17375 ($\frac{11}{32}$ in. by $\frac{23}{32}$ in. by $\frac{3}{32}$ in. thick).....
48135	Washer for No. 17375 ($\frac{21}{64}$ in. by $\frac{5}{8}$ in. by 0.060 in. brass).....
110780	BLOWOUT COIL, complete, with terminal, contact base and contact tip.....
110776	Contact tip.....
40130	Cap screw fastening contact tip to base ($\frac{5}{16}$ in.-18, $\frac{5}{8}$ in. hex. h. slot. blued).....
110614	Positive lock washer for No. 40130 ($\frac{11}{32}$ in. by $\frac{23}{32}$ in. by $\frac{3}{32}$ in. thick).....
110767	Clamp for terminal.....
46295	Bushing for terminal.....

* Must be ordered together for Form A contactors, whereupon the contactor becomes Form D.

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TYPE DB-160, FORMS A AND D CONTACTORS

Cat. No.	Description
17376	Clamping screw for terminal ($\frac{5}{16}$ in.-18, $\frac{3}{4}$ in. hex. h. slot. sherardized cap screw)
110614	Positive lock washer for No. 17376 ($\frac{1}{2}$ in. by $\frac{3}{32}$ in. by $\frac{3}{32}$ in. thick)
40158	Screw fastening No. 110780 in position ($\frac{5}{16}$ in.-18, $\frac{7}{8}$ in. f.h.)
110781	POLE PIECE, two parts, with blowout coil core and screw
51726	Screw for No. 110781 ($\frac{5}{16}$ in.-18, $\frac{5}{8}$ in. f.h.)
110782	Fiber sleeve for blowout coil core
110783	ARC CHUTE, two parts, complete, with stud
110784	Arc chute side (right-hand)
110785	Arc chute side (left-hand)
110786	Stud for chute (14-24, $2\frac{1}{8}$ in. long, brass)
44049	Nut for stud (14-24, $\frac{3}{8}$ in. thick, $\frac{1}{2}$ in. across flats, hex. cham. one side blued)
110624	Positive lock washer for No. 44049 ($\frac{9}{32}$ in. by $\frac{9}{16}$ in. by $\frac{5}{64}$ in. thick)
110787	Back plate for arc chute
110788	Insulation plate between back plate and magnet frame
48312	Screw fastening arc chute and back plate to magnet frame (14-24, $1\frac{3}{4}$ in. r.h. blued)
110624	Positive lock washer for No. 48312 ($\frac{9}{32}$ in. by $\frac{9}{16}$ in. by $\frac{5}{64}$ in. thick)
110789	Washer for No. 48312 ($\frac{1}{4}$ in. by $\frac{1}{2}$ in. by 0.014 in.)
110790	Fiber sleeve for No. 48312
110791	Washer plate for No. 48312

TYPE DB-160, FORM C CONTACTOR

Following are the parts of the Type DB-160, Form C contactor, which differ from those of the Type DB-160, Form D:

110802	MAGNET FRAME with bushing for plunger
110795	Operating lever
110803	Hinge bracket for operating lever
110800	POLE PIECE, two parts, galvanized, with blowout coil core and screw
17380	Screw for No. 110800 ($\frac{5}{16}$ in.-18, $\frac{5}{8}$ in. f.h. zinc plated)
110801	ARC CHUTE, two parts, complete, with stud
17381	Stud for chute (14-24, $3\frac{1}{8}$ in. long, brass)
17382	Large nut for stud (14-24, $\frac{1}{2}$ in. thick, $\frac{1}{2}$ in. across flats, hex. brass sp'l)
22213	Small nut for stud (14-24, $\frac{1}{8}$ in. thick, $\frac{1}{2}$ in. across flats hex. flat brass)
22245	Screw fastening arc chute and back plate to magnet frame (14-24, $1\frac{3}{4}$ in. r.h. brass)

PARTS OF TYPE DB-160, FORM F CONTACTOR

Following are the parts of the Type DB-160, Form F contactor, which differ from those of the Type DB-160, Form A:

133578	POLE PIECE, two parts, with blow-out coil core and screw
133579	Fiber sleeve for blow-out coil core

TYPE DB-166, FORM A CONTACTOR

Following are the parts:

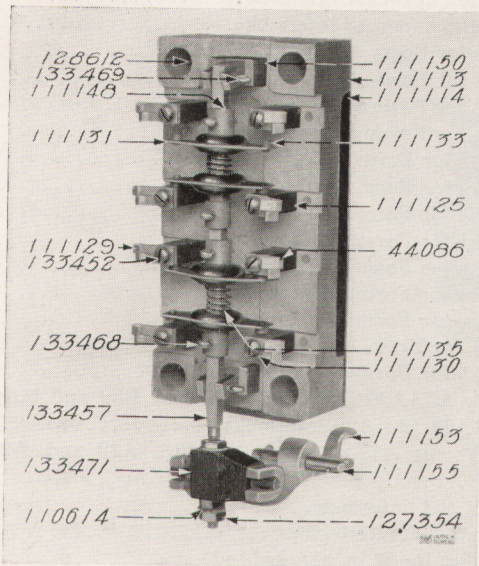
110605	OPERATING MAGNET SPOOL, complete, DB-166-A-1
110606	Operating magnet spool, complete, DB-166-A-2
110607	Operating magnet spool, complete, DB-166-A-3
110608	Operating magnet spool, complete, DB-166-A-4
110609	Operating magnet spool, complete, DB-166-A-5
22778	Copper terminal for magnet spool
19682	Screw fastening terminal in position (14-24, $\frac{3}{8}$ in. r.h. blued)
22780	Lock washer for No. 19682 ($\frac{1}{4}$ in. by $\frac{1}{2}$ in. by 0.060 in.)
110610	MAGNET FRAME with bushing for plunger
110611	Magnet pole
110612	Terminal, complete, for frame
110613	Clamp for terminal
40200	Bushing for terminal
21119	Clamping screw for terminal ($\frac{5}{16}$ in.-18, $\frac{3}{4}$ in. hex. h. slot. blued cap screw)
110614	Positive lock washer for No. 21119 ($\frac{1}{2}$ in. by $\frac{3}{32}$ in. by $\frac{3}{32}$ in. thick)
47989	Cap screw fastening No. 110612 to magnet frame ($\frac{3}{8}$ in.-16, $1\frac{1}{4}$ in. hex. h. slot. blued)

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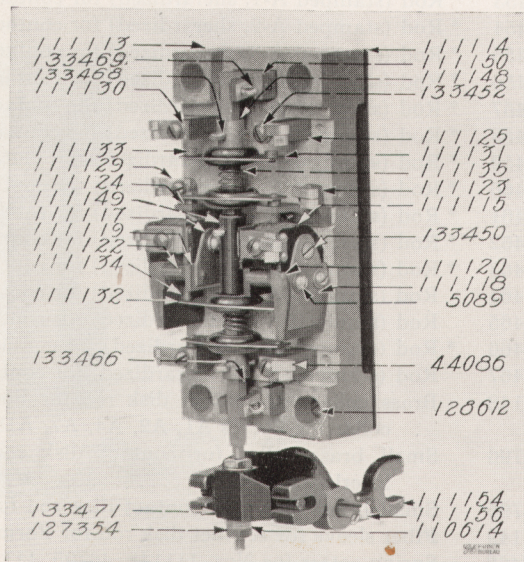
TYPES DI-160 AND DI-166, FORMS A1, A2, A3, A4, A5, A7, A18, A20, A24, A25, A27, A28, A29, B5 AND B30 INTERLOCKS

NOTE.—Type DI-160 interlocks are for use with Type DB-160, Forms A, D and F contactors. Type DI-166 interlocks are for use with Type DB-166, Forms A and B contactors.

Cat. No.	Description
111113	INTERLOCK FRAME
128612	Screw fastening interlock frame in position (14-24, 1 in. r.h. sherardized).....
110624	Positive lock washer for No. 128612 ($\frac{3}{32}$ in. by $\frac{9}{16}$ in. by $\frac{5}{64}$ in. thick).....
110789	Washer for No. 128612 ($\frac{17}{64}$ in. by $\frac{1}{2}$ in. by 0.014 in.).....
111114	Insulation plate between interlock frame and contactor.....



DI-160-A-5 INTERLOCK



DI-166-B-5 INTERLOCK

111115	BLOWOUT COIL, complete, for Forms B5 and B30 interlocks
111117	Inside pole piece with pins, for blowout coil
111118	Outside pole piece for blowout coil
111119	Barrier between inside pole piece and contact post
111120	Barrier between outside pole piece and contact post
133450	Screw fastening pole pieces to blowout coil core (8-32, $\frac{1}{4}$ in. f.h. sherardized).....
5089	Screw fastening Nos. 111118, 111120 to contact post (8-32, $\frac{1}{2}$ in. r.h. brass).....
111121	Positive lock washer for No. 5089 ($\frac{11}{64}$ in. by $\frac{23}{32}$ in. by $\frac{3}{64}$ in. thick).....
111122	Contact post for blowout-coil for Forms B5 and B30 interlocks
111123	Inside contact post (right-hand) for Forms B5 and B30 interlocks
111124	Inside contact post (left-hand) for Forms B5 and B30 interlocks
111125	Contact post for Forms A1, A2, A3, A4, A5, A7, A18, A20, A24, A25, A27, A28 and A29 interlocks and outside contact post for Forms B5 and B30 interlocks
17398	Screw fastening No. 111122 in position (12-24, $\frac{3}{4}$ in. r.h. brass).....
133451	Screw fastening Nos. 111123, 111124, 111125 in position (12-24, $\frac{3}{4}$ in. r.h. sherardized).....
111126	Positive lock washer for Nos. 17398, 133451 ($\frac{7}{32}$ in. by $\frac{13}{32}$ in. by $\frac{3}{64}$ in. thick).....
17399	Washer for Nos. 17398, 133451 ($\frac{15}{64}$ in. by $\frac{7}{16}$ in. by 0.014).....
111127	Connection strip for contact posts ($1\frac{1}{8}$ in. between centers of holes).....
111128	Connection strip for contact posts ($1\frac{5}{8}$ in. between centers of holes).....
44086	Copper terminal (right-hand) for contact posts and blowout coils.....

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PARTS OF TYPE DI-160 AND TYPE DI-166 INTERLOCKS

Cat. No.	Description
111129	Copper terminal (left-hand) for contact posts and blowout coils
133452	Screw fastening terminals in position (10-32, 1/4 in. r.h. sherardized).....
111130	Positive lock washer for No. 133452 (3/8 in. by 3/8 in. by 3/4 in. thick).....
111131	CONTACT DISK, complete, with contact tips for Forms A1, A2, A3, A4, A5, A7, A18, A20, A24, A25, A27, A28 and A29 interlocks and contact disk with small contact tips for Forms B5 and B30 interlocks
111132	Contact disk, complete, with large contact tips for Forms B5 and B30 interlocks.....
111133	Contact tip for No. 111131.....
111134	Contact tip for No. 111132.....
111135	Pressure spring for contact disks.....
133453	* Rod (stamped A-1, sherardized) for contact disk for Form A1 interlock.....
133454	* Rod (stamped A-2, sherardized) for contact disk for Form A2 interlock.....
133455	* Rod (stamped A-3, sherardized) for contact disks for Form A3 interlock.....
133456	* Rod (stamped A-4, sherardized) for contact disks for Form A4 interlock.....
133457	* Rod (stamped A-5, sherardized) for contact disks for Form A5 interlock.....
133458	* Rod (stamped A-7, sherardized) for contact disks for Form A7 interlock.....
133459	* Rod (stamped A-18, sherardized) for contact disks for Form A18 interlock.....
133460	* Rod (stamped A-20, sherardized) for contact disks for Form A20 interlock.....
133461	* Rod (stamped A-24, sherardized) for contact disks for Form A24 interlock.....
133462	* Rod (stamped A-25, sherardized) for contact disks for Form A25 interlock.....
133463	* Rod (stamped A-27, sherardized) for contact disks for Form A27 interlock.....
133464	Rod (stamped A-28, sherardized) for contact disks for Form A28 interlock.....
133465	Rod (stamped A-29, sherardized) for contact disks for Form A29 interlock.....
133466	* Rod (stamped B-5, sherardized) for contact disks for Form B5 interlock.....
133467	Rod (stamped B-30, sherardized) for contact disks for Form B30 interlock.....
111148	Brass collar for contact disk rod for Forms A3, A5, A20, A24, A25, B5 and B30 and large collar for Forms A1, A2, A4, A7, A18, A27, A28 and A29 interlocks
46796	Small brass collar for contact disk rod for Forms A1, A2, A4, A7, A18, A28 and A29 interlocks
46795	Small brass collar for contact disk rod for Form A27 interlock
111149	Fiber sleeve for contact disk rod for Forms B5 and B30 interlocks.....
133468	Spring cotter for Nos. 111148, 46795, 111149 (1/8 in. by 3/4 in. sherardized).....
105302	Spring cotter for No. 46796 (1/8 in. by 1 in. sherardized).....
111150	Bracket with operating links for contact disk rod.....
133469	Spring cotter for link and contact disk rod (1/8 in. by 7/8 in. sherardized).....
133470	Screw fastening No. 111150 in position (12-24, 5/8 in. r.h. sherardized)
111126	Positive lock washer for No. 133470 (7/32 in. by 13/32 in. by 3/4 in. thick).....
17399	Washer for No. 133470 (15/32 in. by 7/8 in. by 0.014 in.).....
111153	OPERATING LEVER for Type DI-160 interlocks.....
111154	Operating lever for Type DI-166 interlocks.....
111155	Pin for No. 111153 and contactor bracket (5/16 in. by 1 13/16 in. Tob. bronze).....
111156	Pin for No. 111154 and contactor bracket (5/16 in. by 1 5/8 in.).....
10110	Spring cotter for Nos. 111155, 111156 (5/32 in. by 1/2 in.).....
133471	* Insulating cross head with pin, for contact disk rod.....
127354	* Adjusting nut for contact disk rod (5/16 in.-18, 3/16 in. thick, 1 1/2 in. across flats, hex. cham., one side sherardized).....
110614	* Positive lock washer for No. 127354 (1 1/2 in. by 2 3/8 in. by 3/8 in. thick).....
133472	Washer for rod (2 1/4 in. by 5/8 in. by 0.034 in. sherardized).....
	* The Types DI-160 and DI-166, Forms A and B interlocks were originally fitted with contact disk rods threaded 14-24 and insulating cross heads having slots for locking nuts. These interlocks as now manufactured have rods threaded 5/8 in.-18 which necessitate larger adjusting nuts and a cross head with larger rod hole. Therefore, customers having the interlocks with rods threaded 14-24, and desiring rods or cross heads must order both.