

# General Electric Company

Schenectady, N.Y.

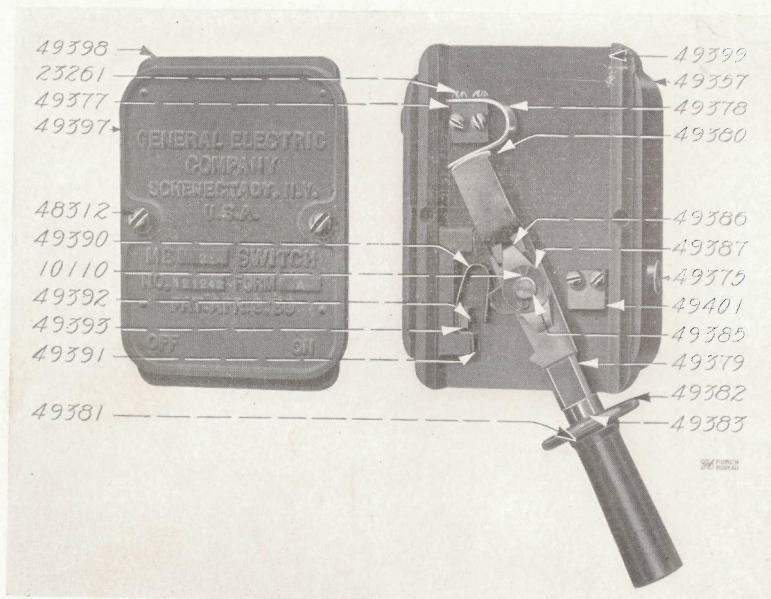
SUPPLY DEPARTMENT

June, 1912

\*Bulletin No. 4964

## PARTS OF TYPE MS †MAGNETIC BLOWOUT SWITCHES

TYPE MS-2, FORM A MAGNETIC BLOWOUT SWITCH



Cat. No.	Description
30421	Type MS-2, Form A, magnetic blowout switch, complete, continuous capacity, 15 ampere, 600 volts <i>Following are the parts:</i>
49357	BOX CASTING.....
49397	Cover for box casting, with arc chute cover.....
49398	Arc chute cover with rivets.....
48312	Screw fastening cover to box casting and arc chute in position (14-24, 1 3/4 in. r.h. blued).....
49375	Bushing for leads for box casting.....
49399	ARC CHUTE BODY.....
49377	Terminal block, upper, with contact spring.....
49401	Terminal block, lower.....
49378	Contact spring for No. 49377.....
23261	Binding screw for Nos. 49377, 49401 and screw fastening contact spring in position (8-32, 1/4 in., r.h. blued).....
1657	Screw fastening Nos. 49377, 49401 to arc chute (8-32, 3/8 in. f.h.).....
49379	Handle lever, with copper contact.....
49380	Copper contact with rivets.....

†The MS 40 C Switch listed on page 9 is not provided with a magnetic blow-out. See note at bottom of that page.

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.

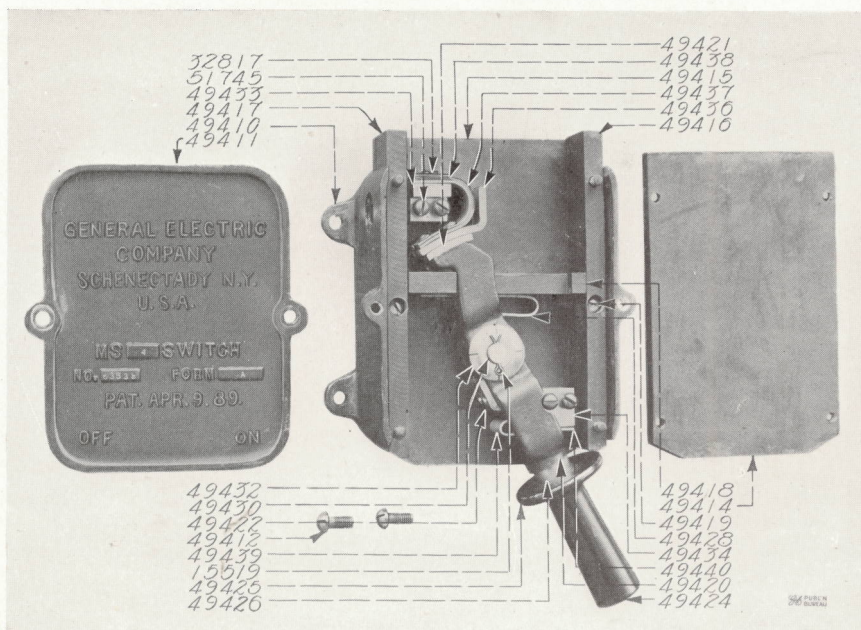
\*Supersedes No. 4614

GENERAL ELECTRIC COMPANY

4964-2 Parts of Type MS Magnetic Blowout Switches

Cat. No.	Description
49381	Handle with stud, collar and guard.....
49382	Handle guard.....
49383	Collar for handle.....
49400	BLOWOUT COIL, complete.....
49385	Pole piece, with fulcrum pin for handle lever.....
49386	Spring washer for handle lever.....
49387	Washer for fulcrum pin ( $\frac{3}{8}$ in. by $\frac{3}{4}$ in. by 0.034 in.).....
10110	Spring cotter for fulcrum pin ( $\frac{5}{16}$ in. by $\frac{1}{2}$ in.).....
49388	Screw fastening pole piece in position (14-24, $\frac{3}{4}$ in. f.h. brass).....
49389	Insulation bushing for No. 49388.....
49390	Spring for handle lever.....
49391	Stop plate for handle lever.....
49392	Screw fastening Nos. 49390, 49391 to arc chute (6-32, $\frac{1}{2}$ in. r.h.).....
49393	Nut for No. 49392 (6-32, sq. brass).....
35829	Washer for No. 49392 ( $\frac{5}{32}$ in. by $\frac{5}{16}$ in. by 0.030 in. brass).....

TYPE MS-4, FORM A, MAGNETIC BLOWOUT SWITCH



30422 Type MS-4, Form A, magnetic blowout switch, complete, continuous capacity 150 amperes, 600 volts.....

Following are the parts:

49410	BOX CASTING.....
49411	Cover for box casting.....
49412	Screw fastening cover to box casting ( $\frac{5}{16}$ in.-18, $\frac{5}{8}$ in. r.h. blued).....
49413	ARC CHUTE, complete.....
49414	Front plate.....
49415	Back plate.....
49416	Side plate with pins (right-hand).....
49417	Side plate with pins (left-hand).....
49418	Partition.....
49419	Screw fastening chute in position (14-24, $2\frac{1}{4}$ in. fill. h.).....

GENERAL ELECTRIC COMPANY

Parts of Type MS Magnetic Blowout Switches 4964-3

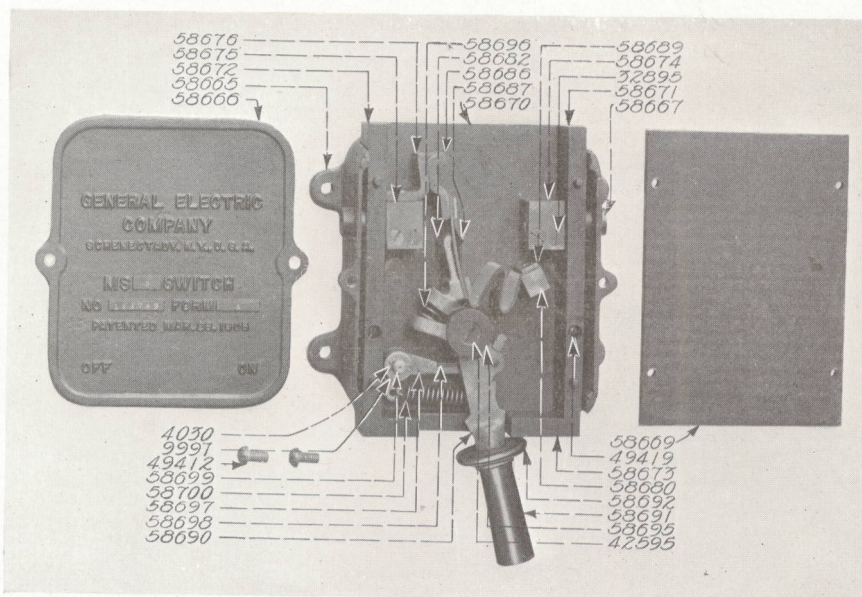
Cat. No.	Description
49433	Terminal block, upper, with contact finger and bushing
49434	Terminal block, lower, with contact tip and bushing
49436	Contact finger with spring and laminated connections for No. 49433
49437	Contact spring with laminations and rivets
32817	Screw fastening No. 49437 to upper terminal block (14-24, 1/2 in. f.h. blued)
49438	Double washer plate for No. 32817
49439	Contact tip with spring and laminated connections for No. 49434
32817	Screw fastening No. 49439 to lower terminal block (14-24, 1/2 in. f.h. blued)
49435	Bushing for Nos. 49433, 49434
51745	Binding screw for Nos. 49433, 49434 (14-24, 3/4 in. r.h. blued)
10298	Screw fastening terminal blocks to arc chute back plate (14-24, 7/8 in. f.h.)
49440	Double washer plate for Nos. 32817, 10298
49420	Handle lever, with copper contacts and wearing plate
49421	Upper copper contact
49422	Lower copper contact
49423	Wearing plate
17733	Screw fastening Nos. 49421, 49422 to lever (14-24, 1/2 in. f.h. blued, sp'l)
9623	Screw fastening No. 49423 to lever (6-32, 3/8 in. f.h.)
49424	Handle with stud, collar and guard
49425	Handle guard
49426	Collar for handle
49428	Spring with rivet, for handle lever
49429	BLOWOUT COIL, complete
49430	Pole piece with fulcrum pin for handle lever
51777	Screw fastening blowout coil to pole piece (14-24, 3/8 in. r.h.)
14426	Washer for No. 51777 (17/64 in. by 1/2 in. by 0.060 in. brass)
49431	Screw fastening pole piece and arc chute partition in position (14-24, 1 3/4 in. f.h. brass)
49432	Spring washer for handle lever (33/64 in. by 1 3/8 in. by 0.050 in. ph. brz.)
15519	Spring cotter for fulcrum pin (3/2 in. by 3/4 in.)
49441	Insulation for back of arc chute

TYPE MS-8, FORM A, MAGNETIC BLOWOUT SWITCH

36881	Type MS-8, Form A, magnetic blowout switch, complete, continuous capacity, 200 amperes, 600 volts
	<i>Following are the parts:</i>
58665	BOX CASTING, with lining
58666	Cover for box casting
49412	Screw fastening cover to box casting (15/16 in.-18, 5/8 in. r.h. blued)
58667	Bushing for leads for box casting
58668	ARC CHUTE, complete
58669	Front plate
58670	Back plate
58671	Side plate with pins (right-hand)
58672	Side plate with pins (left-hand)
58673	Bottom plate
44077	Screw fastening bottom plate to back and side plates (10-32, 7/8 in. f.h.)
49419	Screw fastening arc chute to box casting (14-24, 2 1/4 in. fill. h.)
58674	Terminal block (right-hand), with stud and bushing
58675	Terminal block (left-hand), with contact tip and bushing
58676	Contact tip, for No. 58675
22345	Screw fastening No. 58676 to block (14-24, 1/2 in. f.h. brass)
58677	Bushing for terminal blocks
32895	Binding screw for terminal blocks and screw fastening No. 58675 in position (14-24, 3/4 in. f.h. blued)

4964-4 Parts of Type MS Magnetic Blowout Switches

Cat. No.	Description
2028	Screw fastening No. 58674 in position (14-24, $\frac{5}{8}$ in. f.h.)
58680	Terminal post
58678	Nut for terminal stud and terminal post ( $\frac{1}{2}$ in.-13, $\frac{3}{16}$ in. thick, hex. brass cham. both sides)
58679	Lock washer for No. 58678 ( $\frac{3}{4}$ in. by 1 in. by 0.10 in. ph. brz.)
58681	Nut for terminal post ( $\frac{1}{2}$ in.-13, $\frac{1}{2}$ in. thick hex. brass cham. one side)
58682	Contact lever with catch plate
58683	Catch plate
58684	Screw fastening No. 58683 to lever (6-32, $\frac{3}{8}$ in. f.h. blued)



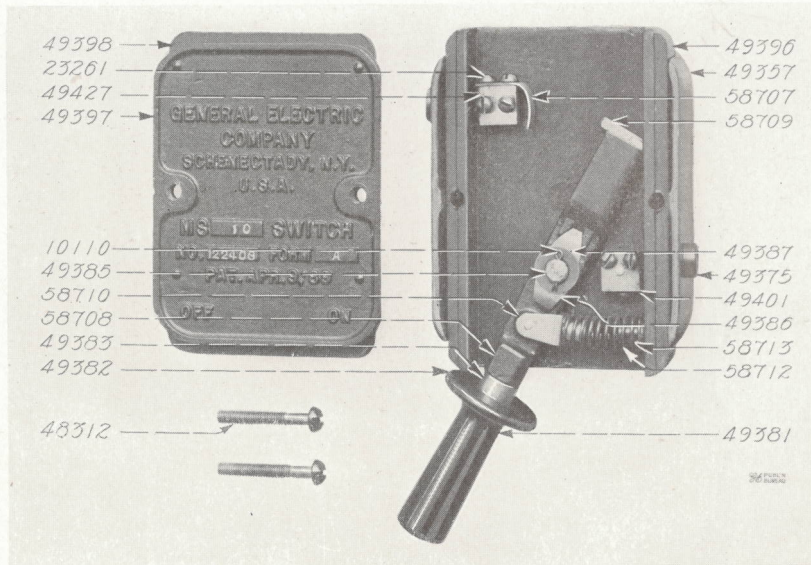
58685	CONTACT FINGERS, complete, with springs and laminated connections
58686	Contact finger, with rivets
58687	Laminated connections with washers and rivets
58688	Screw fastening springs and connections to contact lever and terminal post (10-32, $\frac{1}{2}$ in. f.h. blued)
58689	Double washer plate for No. 58688
58690	Handle lever
58691	Handle with stud and guard
58692	Handle guard
58693	Blowout coil core and fulcrum for contact and handle levers
58694	Lock washer for No. 58693 ( $\frac{3}{4}$ in. by $1\frac{1}{8}$ in. by 0.10 in. ph. brz.)
58695	Retaining washer for handle lever ( $\frac{5}{16}$ in. by $1\frac{3}{4}$ in. by $\frac{3}{16}$ in. thick, c.s. hole)
42595	Screw fastening No. 58695 to blowout coil core ( $\frac{5}{16}$ in.-18, $\frac{5}{8}$ in. f.h. blued)
58696	Compression spring for contact and handle levers (3 $\frac{1}{2}$ turns, 0.091 in. ph. brz. wire)
58697	Catch lever with catch plate
58698	Catch plate with rivets
58699	Hinge pin for catch lever
9997	Large washer for No. 58699 ( $\frac{13}{32}$ in. by $\frac{3}{4}$ in. by 0.060 in. brass)
48135	Small washer for No. 58699 ( $\frac{21}{64}$ in. by $\frac{5}{8}$ in. by 0.060 in. brass)
3884	Nut for No. 58699 ( $\frac{5}{16}$ in.-18, $\frac{1}{4}$ in. thick, hex. brass cham. both sides)
4030	Spring cotter for No. 58699 ( $\frac{3}{32}$ in. by $\frac{5}{8}$ in.)
58700	Tension spring for contact and catch levers

GENERAL ELECTRIC COMPANY

Parts of Type MS Magnetic Blowout Switches 4964-5

Cat. No.	Description
58701	BLOWOUT COIL.....
58702	Bushing for blowout coil core .....
58703	Fiber sleeve for bushing ( $\frac{1}{8}$ in. by 1 in. by $\frac{3}{4}$ in. long).....
58704	Pole piece.....
58705	Washer between pole piece and blowout coil ( $1\frac{1}{16}$ in. by 3 in. by 0.010 in. mica).....
51726	Screw fastening pole piece to fulcrum pin ( $\frac{5}{16}$ in.—18, $\frac{5}{8}$ in. f.h.).....
56743	Screw fastening pole piece to arc chute (14-24, $\frac{1}{2}$ in. f.h.).....
58706	Insulation between blowout coil and arc chute.....

TYPE MS-10, FORM A, MAGNETIC BLOWOUT SWITCH



30424 Type MS-10, Form A, magnetic blowout switch, complete, intermittent capacity, 25 amperes, 600 volts.....

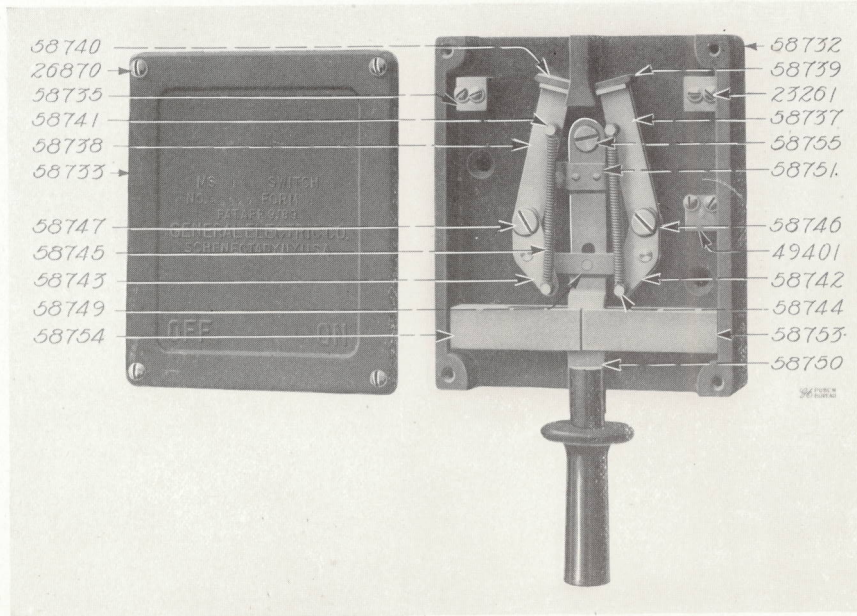
Following are the parts:

49357	BOX CASTING.....
49397	Cover for box casting, with arc chute cover.....
49398	Arc chute cover with rivets.....
48312	Screw fastening cover to box casting and arc chute in position (14-24, $1\frac{3}{4}$ in. r.h. blued).....
49375	Bushing for leads for box casting.....
49396	ARC CHUTE BODY.....
49427	Terminal block, upper, with contact spring.....
49401	Terminal block, lower.....
58707	Contact spring for No. 49427.....
23261	Binding screw for Nos. 49427, 49401 and screw fastening contact spring in position (8-32, $\frac{1}{4}$ in. r.h. blued).....
1657	Screw fastening Nos. 49427, 49401 to arc chute (8-32, $\frac{3}{8}$ in. f.h.).....
58708	Handle lever with copper contact and spring clevis.....
58709	Copper contact with rivets.....
58710	Spring clevis with pin.....
49381	Handle with stud, guard and collar.....
49382	Handle guard.....
49383	Collar for handle.....

4964-6 Parts of Type MS Magnetic Blowout Switches

Cat. No.	Description
58711	BLOWOUT COIL, complete.....
49385	Pole piece with fulcrum pin for handle lever.....
49386	Spring washer for handle lever.....
49387	Washer for fulcrum pin ( $\frac{1}{32}$ in. by $\frac{3}{4}$ in. by 0.034 in.).....
10110	Spring cotter for fulcrum pin ( $\frac{5}{16}$ in. by $\frac{1}{2}$ in.).....
49388	Screw fastening pole piece in position (14-24, $\frac{3}{4}$ in. f.h. brass).....
49389	Insulation bushing for No. 49388.....
58712	Spring for handle lever (10 turns, 0.064 in. steel wire oxidized).....
58713	Fiber button for spring.....

TYPE MS-11, FORMS A AND D, MAGNETIC BLOWOUT SWITCHES



NOTE.—The accompanying illustration of the Type MS-11, Form A, magnetic blowout switch, Cat. No. 27926, is also representative of the Form D.

27926	Type MS-11, Form A, magnetic blowout switch, complete, intermittent capacity, 25 amperes, 600 volts.....
48000	Type MS-11, Form D, magnetic blowout switch, complete, intermittent capacity, 25 amperes, 600 volts.....

Following are the parts:

58732	SWITCH BOX.....
58733	Front cover for switch box.....
58734	Back cover for switch box.....
26870	Screw fastening No. 58733 to box (10-24, $\frac{5}{8}$ in. r.h. blued).....
385	Screw fastening No. 58734 to box (10-24, $\frac{5}{8}$ in. f.h.).....
58735	Terminal block, upper.....
49401	Terminal block, lower.....
23261	Binding screw for terminal blocks (8-32, $\frac{1}{4}$ in. r.h. blued).....
58736	Screw fastening terminal blocks to switch box (8-32, $\frac{5}{16}$ in. f.h.).....
58737	CONTACT ARM with contact tip and spring post (right-hand).....
58738	Contact arm with contact tip and spring post (left-hand).....

Parts of Type MS Magnetic Blowout Switches 4964-7

Cat. No.	Description
58739	Contact tip with rivets, for No. 58737
58740	Contact tip with rivets, for No. 58738
58741	Spring post
58742	Operating arm with spring post (right-hand)
58743	Operating arm with spring post (left-hand)
58744	Spring post
58745	Tension spring for contact and operating arms (50 turns, 0.036 in. steel music wire, copper plated)
58746	Bearing post for contact and operating arms
58747	Bearing screw for contact and operating arms (10-32, $1\frac{1}{4}$ in., fill. h., copper plated, sp'l)
58749	Connection link with pivots for operating arms
58750	Handle lever with handle, guard and starting bar
58751	Starting bar with rivets and pins
58752	Compression spring for handle lever (18 turns, 0.059 in. steel music wire, copper plated)
58753	Spring case (right-hand)
58754	Spring case (left-hand)
58736	Screw fastening spring case to switch box (8-32, $\frac{5}{16}$ in. f.h.)
14426	Washer for spring case ( $\frac{17}{64}$ in. by $\frac{1}{2}$ in. by 0.060 in. brass)
58755	Bearing screw for handle lever (10-32, $\frac{3}{8}$ in. fill. h., copper plated, sp'l)
58756	Bearing post for No. 58755
46874	Nut for No. 58755 (10-32, $\frac{5}{32}$ in. thick, hex.), for No. 27926
58757	Nut for No. 58755 (10-32, $\frac{3}{32}$ in. thick, hex. brass), for No. 48000
58758	Washer for No. 58755 ( $\frac{1}{16}$ in. by $\frac{5}{8}$ in. by $\frac{1}{8}$ in. thick, brass drilled for blowout coil lead), for No. 48000
58759	POLE PIECE, two parts, with connection bar and blowout coil cores, for No. 27926
58748	Blowout coil core, and nut for No. 58747
58760	Pole piece, with blowout coil cores and retaining plates, for No. 48000
58761	Nut for No. 58755 holding pole piece in position, for No. 48000 (10-32, sp'l)
58762	BLOWOUT COIL
58763	Copper terminal for blowout coil, for No. 27926
58764	Mica insulation strip for pole piece
58765	Fiber insulation under blowout coil, for No. 48000

TYPE MS-13, FORMS A AND B, MAGNETIC BLOWOUT SWITCHES

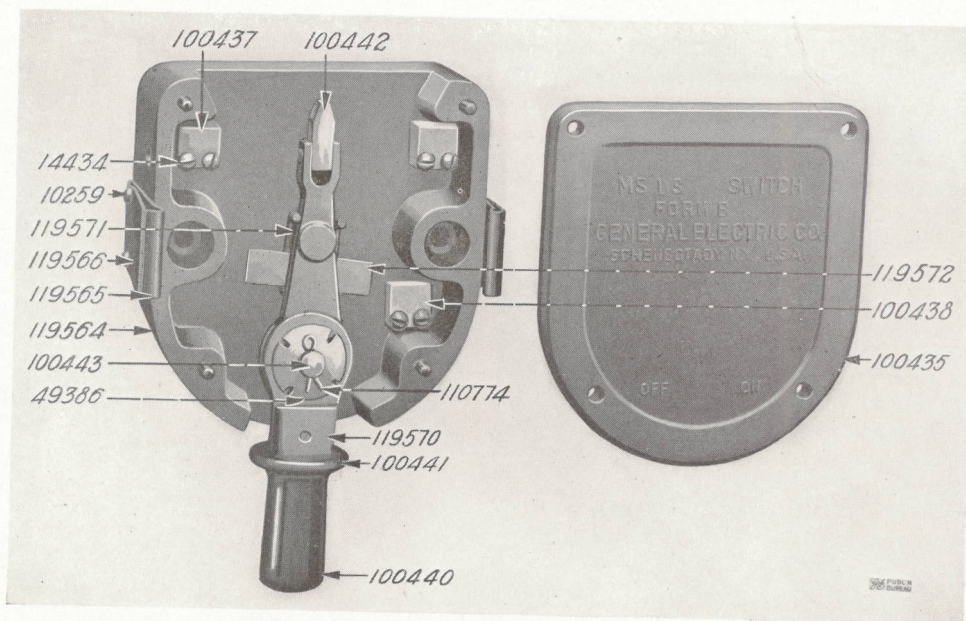
68160	Type MS-13, Form A, magnetic blowout switch, complete, instantaneous capacity, 25 amperes, 600 volts
112147	Type MS-13, Form B, magnetic blowout switch, complete, instantaneous capacity, 15 amperes, 600 volts

Following are the parts:

100432	SWITCH BOX, with pin for handle lever spring, for the MS-13-A switch
119564	Switch box for the MS-13-B switch
100433	Pin for handle lever spring, for No. 100432
100434	Washer for No. 100433 ( $\frac{3}{16}$ in. by $\frac{3}{4}$ in. by 0.034 in.)
100435	Front cover for switch box
100436	Back cover for switch box
26870	Screw fastening No. 100435 to box (10-24, $\frac{5}{8}$ in. r.h. blued), for the MS-13-A switch
4011	Screw fastening No. 100436 to box (No. 6, $\frac{5}{8}$ in. f.h.)
119565	Spring catch for No. 100435, for the MS-13-B switch
119566	Guard for No. 119565
10259	Long screw fastening Nos. 119565, 119566 to box (6-32, $\frac{5}{8}$ in. r.h. blued)
119567	Short screw fastening Nos. 119565, 119566 to box (No. 4, $\frac{1}{2}$ in. r.h. blued)
119568	Washer for No. 10259 ( $\frac{5}{32}$ in. by $\frac{5}{16}$ in. by 0.034 in.)
119569	Nut for No. 10259 (6-32, $\frac{1}{8}$ in. thick, $\frac{5}{16}$ in. across flats, hex. cham. one side)
100437	Terminal block, upper
100438	Terminal block with connection pin, lower
14434	Binding screw for terminal blocks (8-32, $\frac{3}{8}$ in. r.h. blued)

4964-8 Parts of Type MS Magnetic Blowout Switches

Cat. No.	Description
1193	Screw fastening terminal blocks to switch box (8-32, 1/2 in. f.h.)
100439	Handle lever with handle, stud, guard and contact, for the MS-13-A switch
119570	Handle lever with handle, stud, guard and contact, for the MS-13-B switch
100440	Handle
100441	Handle guard
100442	Copper contact with rivets
100443	Bearing post for handle lever
17352	Nut for bearing post (3/8 in.-16, 3/16 in. thick, 1/16 in. across flats, hex. brass cham. both sides)



NOTE.—The accompanying illustration of the Type MS-13, Form B, magnetic blowout switch Cat. No. 112147, is also representative of the Form A.

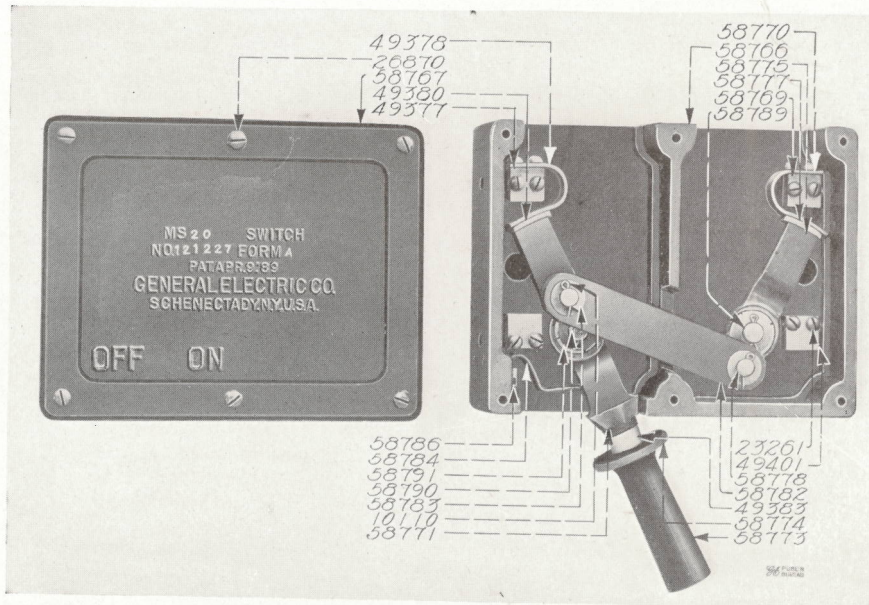
58783	Washer for bearing post (3/4 in. by 5/8 in. by 0.034 in.) for the MS-13-A switch
21392	Washer for bearing post (1 1/2 in. by 3/4 in. by 0.0625 in.) for the MS-13-B switch
49386	Spring washer for bearing post
110774	Spring cotter for bearing post (3/2 in. by 5/8 in. sherardized)
100444	Spring for handle lever, for the MS-13-A switch
119571	Spring for handle lever, for the MS-13-B switch
119572	Guard for No. 119571
119573	Screw fastening No. 119572 in position (10-32, 3/4 in. r.h.)
44071	Washer for No. 119573 (1 1/4 in. by 1 1/2 in. by 0.044 in.)
44072	Nut for No. 119573 (10-32, 5/2 in. thick, 3/8 in. across flats hex. cham. one side)
100445	Pole piece with blowout coil cores
100446	Washer for blowout coil cores (5/8 in. by 1 3/8 in. by 0.034 in.)
58762	Blowout coil
100447	Copper terminal for blowout coil
44061	Copper terminal for blowout coil and lower terminal block, for the MS-13-B switch
5089	Connection screw for No. 44061 and lower terminal block (8-32, 1/2 in. r.h. brass)
111121	Positive lock washer for No. 5089 (1 1/4 in. by 2 3/4 in. by 3/4 in. thick)
100448	Insulation for blowout coil
49388	Screw fastening pole piece in position (14-24, 3/4 in. f.h. brass)
100449	Bushing for No. 49388 (1/4 in. by 1/2 in. by 1/16 in. long fiber)
119574	Mica washer for blowout coil cores, for the MS-13-B switch



Parts of Type MS Magnetic Blowout Switches 4964-9

TYPE MS-20, FORMS A AND C, MAGNETIC BLOWOUT SWITCHES

Cat. No.	Description
30965	Type MS-20, Form A, magnetic blowout switch, complete, continuous capacity, 15 amperes, 600 volts.....
33480	Type MS-20, Form C, magnetic blowout switch, complete, continuous capacity, 15 amperes, 600 volts.....
<i>Following are the parts:</i>	
58766	SWITCH BOX.....
58767	Front cover for switch box.....
58768	Back cover for switch box.....



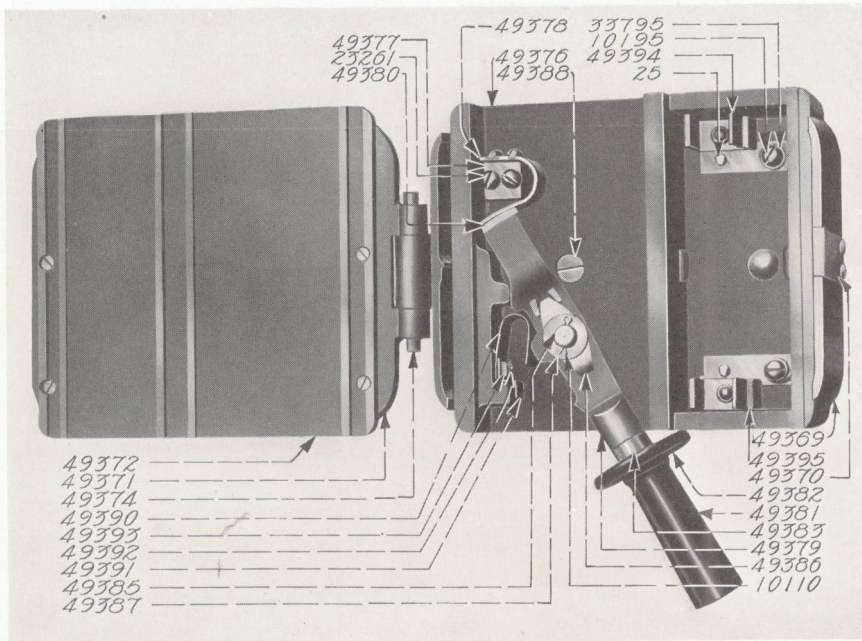
NOTE.—The accompanying illustration of the Type MS-20, Form A, magnetic blowout switch Cat. No. 30965 is also representative of the Form C.

26870	Screw fastening No. 58767 to box (10-24, $\frac{5}{8}$ in. r.h. blued).....
385	Screw fastening No. 58768 to box (10-24, $\frac{5}{8}$ in. f.h.).....
58769	TERMINAL BLOCK, with contact spring (right-hand).....
49377	Terminal block, with contact spring (left-hand).....
49401	Terminal block, without contact spring.....
58770	Contact spring, for No. 58769.....
49378	Contact spring, for No. 49377.....
23261	Binding screw for terminal blocks and screw fastening contact springs to blocks (8-32, $\frac{1}{4}$ in. r.h. blued).....
1657	Screw fastening terminal blocks to switch box (8-32, $\frac{3}{8}$ in. f.h.).....
58771	Handle lever with copper contact and fulcrum pin, for No. 30965.....
58772	Handle lever, for No. 33480.....
49380	Copper contact with rivets, for No. 58771.....
58773	Handle with stud, collar and guard.....
58774	Handle guard.....
49383	Collar for handle.....
58775	Contact lever with copper contact and fulcrum pin, for No. 30965 and right-hand for No. 33480.....
58776	Contact lever with copper contact, fulcrum pin and spring post (left-hand), for No. 33480.....
58777	Copper contact with rivets for No. 58775.....
49380	Copper contact with rivets for No. 58776.....
58778	Fulcrum pin for operating link.....
58779	Spring post ( $\frac{1}{8}$ in. by $1\frac{1}{16}$ in.), for No. 58776.....
58780	Fiber collar for spring post.....

4964-10 Parts of Type MS Magnetic Blowout Switches

Cat. No.	Description
58781	Tension spring for contact and handle levers (38 turns, 0.036 in. steel wire), for No. 33480.....
58782	Operating link.....
58783	Washer for fulcrum pin ( $\frac{3}{8}$ in. by $\frac{5}{8}$ in. by 0.034 in.).....
10110	Spring cotter for fulcrum pin ( $\frac{5}{64}$ in. by $\frac{1}{2}$ in.).....
58784	Spring for handle lever.....
49392	Screw fastening spring to switch box (6-32, $\frac{1}{2}$ in. r.h.).....
58785	Double washer plate, for No. 49392.....
58786	Nut for No. 49392 (6-32, sp'l).....
58787	BLOWOUT COIL, complete (right-hand).....
58788	Blowout coil, complete (left-hand).....
58789	Pole piece with fulcrum pin for contact lever.....
58790	Pole piece with fulcrum pin for handle lever.....
58791	Spring washer for handle lever ( $\frac{25}{64}$ in. by $\frac{7}{8}$ in. by 0.032 in. ph. brz).....
49387	Washer for fulcrum pin ( $\frac{3}{8}$ in. by $\frac{3}{4}$ in. by 0.034 in.).....
10110	Spring cotter for fulcrum pin ( $\frac{5}{64}$ in. by $\frac{1}{2}$ in.).....
49388	Screw fastening pole piece in position (14-24, $\frac{3}{4}$ in. f.h. brass).....
49389	Insulation bushing for No. 49388.....

TYPE MS-40, FORMS A AND \* C. MAGNETIC BLOWOUT SWITCHES



NOTE.—The accompanying illustration of the Type MS-40, Form A, magnetic blowout switch, Cat. No. 30400, is also representative of the Form C.

- 30400 Type MS-40, Form A, magnetic blowout switch, complete, continuous capacity, 15 amperes, 600 volts.....
- 29633 Type MS-40, Form C, lightning arrester switch, complete, continuous capacity, 15 amperes, 600 volts.....

Following are the parts:

- 49369 BOX CASTING, with spring catch for cover.....
- 49370 Spring catch with tip and rivets.....
- 49371 Cover for box casting with arc chute cover and releasing button for spring catch.....
- 49372 Arc chute cover with rivets.....

\*The MS 40 C is used as a lightning arrester switch for Type M Control Equipments. It has no magnetic blowout and is not designed to open circuits carrying current.

GENERAL ELECTRIC COMPANY

Parts of Type MS Magnetic Blowout Switches 4964-11

Cat. No.	Description
49373	Releasing button with pin.....
49374	Hinge pin for cover ( $\frac{1}{4}$ in. by $2\frac{5}{8}$ in.).....
3839	Spring cotter for No. 49374 ( $\frac{5}{64}$ in. by $\frac{3}{8}$ in.).....
49375	Bushing for leads for box casting.....
49376	ARC CHUTE BODY.....
25726	Long screw fastening No. 49376 to box casting (10-24, $1\frac{1}{4}$ in. f.h. brass).....
1397	Short screw fastening No. 49376 to box casting (10-24, $\frac{3}{4}$ in. f.h. brass).....
49377	Terminal block with contact spring.....
49378	Contact spring.....
23261	Binding screw for terminal block and screw fastening contact spring to block (8-32, $\frac{1}{4}$ in. r.h. blued).....
1657	Screw fastening No. 49377 to arc chute (8-32, $\frac{3}{8}$ in. f.h.).....
49379	Handle lever with copper contact.....
49380	Copper contact with rivets.....
49381	Handle with stud, collar and guard.....
49382	Handle guard.....
49383	Collar for handle.....
49384	BLOWOUT COIL, complete, for the MS-40-A switch, only.....
49385	Pole piece with fulcrum pin for handle lever.....
49386	Spring washer for handle lever.....
49387	Washer for fulcrum pin ( $\frac{3}{32}$ in. by $\frac{3}{4}$ in. by 0.034 in.).....
10110	Spring cotter for fulcrum pin ( $\frac{5}{64}$ in. by $\frac{1}{2}$ in.).....
49388	Screw fastening pole piece in position (14-24, $\frac{3}{4}$ in. f.h. brass).....
49389	Insulation bushing for No. 49388.....
49390	Spring for handle lever.....
49391	Stop plate for handle lever.....
49392	Screw fastening Nos. 49390, 49391 to arc chute (6-32, $\frac{1}{2}$ in. r.h.).....
49393	Nut for No. 49392 (6-32, sq. brass).....
35829	Washer for No. 49392 ( $\frac{5}{32}$ in. by $\frac{5}{16}$ in. by 0.030 in. brass).....
49394	Fuse clip with terminal plate, upper.....
49395	Fuse clip with terminal plate, lower.....
25	Screw fastening fuse clips in position (10-32, $\frac{1}{4}$ in. f.h.).....
10195	Connection screw for fuse clips (10-32, $\frac{5}{16}$ in. r.h. brass).....
33795	Washer for No. 10195 ( $\frac{3}{64}$ in. by $\frac{1}{2}$ in. by 0.040 in. brass).....
	Copper connection wire for the MS-40-C switch only (7 $\frac{1}{2}$ in. long, No. 10 B. and S. D.C.C.).....

**TYPE MS-42, FORM A, MAGNETIC BLOWOUT SWITCH**

33592 Type MS-42, Form A, magnetic blowout switch, complete, intermittent capacity, 25 amperes, 600 volts.....

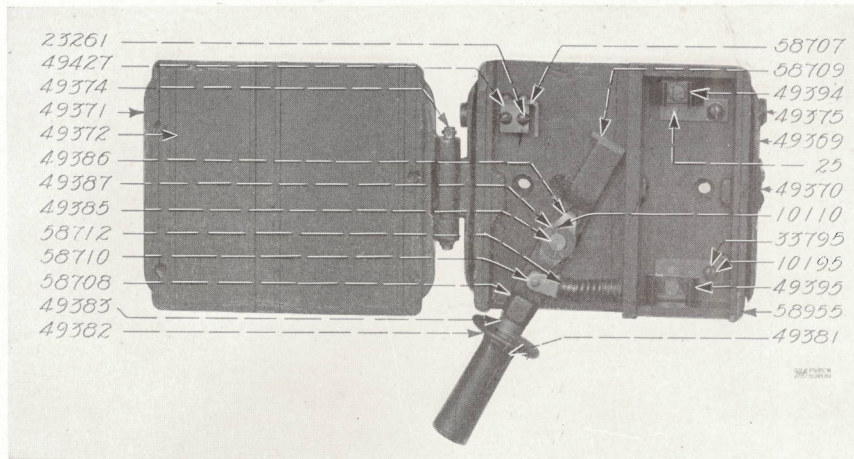
*Following are the parts:*

49369	BOX CASTING with spring catch for cover.....
49370	Spring catch with tip and rivets.....
49371	Cover for box casting with arc chute cover and releasing button for spring catch.....
49372	Arc chute cover with rivets.....
49373	Releasing button with pin.....
49374	Hinge pin for cover ( $\frac{1}{4}$ in. by $2\frac{5}{8}$ in.).....
3839	Spring cotter for No. 49374 ( $\frac{5}{64}$ in. by $\frac{3}{8}$ in.).....
49375	Bushing for leads for box casting.....
58955	ARC CHUTE BODY.....
25726	Long screw fastening No. 58955 to box casting (10-24, $1\frac{1}{4}$ in. f.h. brass).....
1397	Short screw fastening No. 58955 to box casting (10-24, $\frac{3}{4}$ in. f.h. brass).....
49427	Terminal block with contact spring.....
58707	Contact spring.....
23261	Binding screw for terminal block and screw fastening contact spring to block (8-32, $\frac{1}{4}$ in. r.h. blued).....

GENERAL ELECTRIC COMPANY

4964-12 Parts of Type MS Magnetic Blowout Switches

1657	Screw fastening No. 49427 to arc chute (8-32, $\frac{3}{8}$ in. f.h.)	.....
58708	Handle lever with copper contact and spring clevis	.....
58709	Copper contact with rivets	.....
58710	Spring clevis with pin	.....
49381	Handle with stud, guard and collar	.....
49382	Handle guard	.....
49383	Collar for handle	.....
58712	Spring for handle lever (10 turns, 0.064 in. steel wire oxidized)	.....
58713	Fiber button for spring	.....



58956	BLOWOUT COIL, complete	.....
49385	Pole piece, with fulcrum pin for handle lever	.....
49386	Spring washer for handle lever	.....
49387	Washer for fulcrum pin ( $\frac{3}{32}$ in. by $\frac{3}{4}$ in. by 0.034 in.)	.....
10110	Spring cotter for fulcrum pin ( $\frac{5}{64}$ in. by $\frac{1}{2}$ in.)	.....
49388	Screw fastening pole piece in position (14-24, $\frac{3}{4}$ in. f.h. brass)	.....
49389	Insulation bushing for No. 49388	.....
49394	Fuse clip with terminal plate, upper	.....
49395	Fuse clip with terminal plate, lower	.....
25	Screw fastening fuse clips in position (10-32, $\frac{1}{4}$ in. f.h.)	.....
10195	Connection screw for fuse clips (10-32, $\frac{5}{16}$ in. r.h. brass)	.....
33795	Washer for No. 10195 ( $\frac{13}{64}$ in. by $\frac{13}{32}$ in. by 0.040 in. brass)	.....

**TYPE MS-46, FORMS A, \* B AND C, MAGNETIC BLOWOUT SWITCHES**

112170	Type MS-46, Form A, magnetic blowout switch, complete, continuous capacity, 15 amperes, 600 volts	.....
112171	* Type MS-46, Form B, lightning arrester switch, complete, continuous capacity, 15 amperes, 600 volts	.....
112172	Type MS-46, Form C, magnetic blowout switch, complete, continuous capacity, 35 amperes, 600 volts	.....

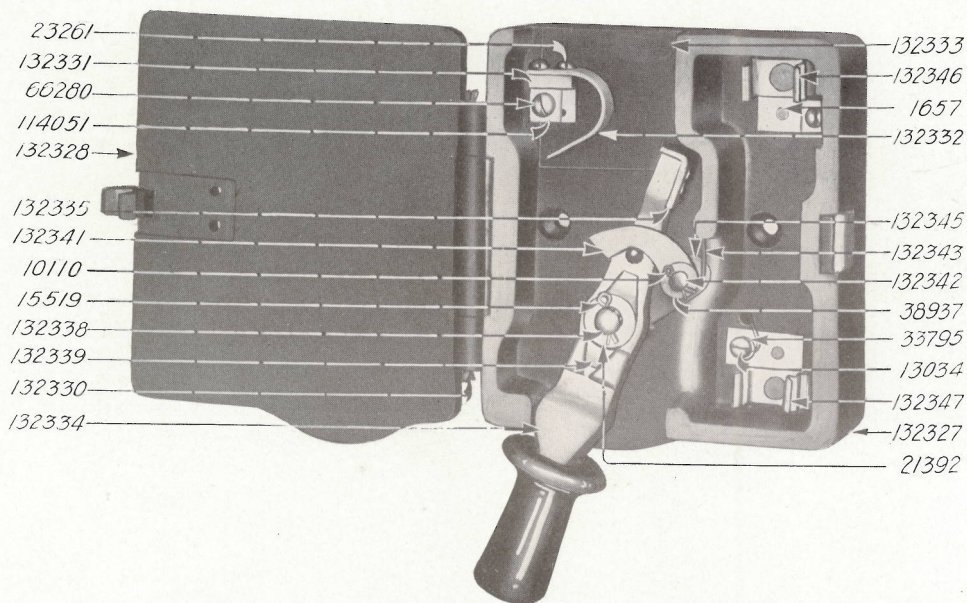
Following are the parts:

132327	SWITCH BOX	.....
132328	Front cover for switch box	.....
132329	Back cover for switch box	.....
132330	Hinge pin for No. 132328 ( $\frac{1}{8}$ in. by $4\frac{1}{8}$ in. split ends)	.....
4011	Screw fastening No. 132329 to switch box (No. 6, $\frac{5}{8}$ in. f.h.)	.....
132331	Terminal block with contact spring	.....
132332	Contact spring	.....

\*The MS-46-B is used as a lightning arrester switch for Type M Control Equipments. It has no magnetic blowout and is not designed to open circuits carrying current.

Parts of Type MS Magnetic Blowout Switches 4964-13

Cat. No.	Description
23261	Screw fastening contact spring to terminal block (8-32, 1/4 in. r.h. blued).....
114051	Terminal plate for No. 132331.....
66280	Binding screw for No. 114051 (10-32, 5/16 in. r.h. blued).....
132333	Burning plate under terminal block.....
14246	Screw fastening burning plate and terminal block in position (10-32, 5/8 in. f.h.).....



NOTE.—The accompanying illustration of the Type MS-46, Form A, magnetic blowout switch, Cat. No. 112170, is also representative of the Forms B and C.

132334	Handle lever with handle and copper contact.....
132335	Copper contact with rivets.....
132336	BLOWOUT COIL, complete, for the MS-46-A switch.....
132337	Blowout coil, complete for the MS-46-C switch.....
132338	Pole piece with terminal and fulcrum pin for handle lever.....
132339	Spring washer for handle lever fulcrum.....
21392	Washer for handle lever fulcrum (3/8 in. by 3/4 in. by 0.0625 in.).....
15519	Spring cotter for handle lever fulcrum (3/32 in. by 3/4 in.).....
49388	Screw fastening pole piece in position (14-24, 3/4 in. f.h. brass).....
49389	Insulation bushing for No. 49388.....
132340	Mica insulation between pole piece and switch box.....
132341	Spring latch for handle lever.....
132342	Pivot pin for spring latch (threaded 10-32, sherardized).....
132343	Spring for latch.....
132344	Nut for No. 132342 (10-32, 5/32 in. thick, 3/8 in. across flats hex. cham. one side brass).....
44071	Washer for No. 132344 (13/64 in. by 11/32 in. by 0.044 in.).....
38937	Washer for No. 132342 (67/64 in. by 1/2 in. by 0.0625 in.).....
10110	Spring cotter for No. 132342 (5/64 in. by 1/2 in.).....
132345	Connection plate for handle lever fulcrum and pivot pin.....
132346	Fuse clip with terminal plate, upper.....
132347	Fuse clip with terminal plate, lower.....
114051	Terminal plate for No. 132346.....
13034	Binding screw for Nos. 132346, 132347 (10-32, 3/8 in. r.h. brass).....
33795	Washer for No. 13034 (13/64 in. by 11/32 in. by 0.040 in. brass).....
1657	Screw fastening Nos. 132346, 132347 in position (8-32, 3/8 in. f.h.).....

## 4964-14 Parts of Type MS Magnetic Blowout Switches

## INDEX TO CATALOGUE NUMBERS

CAT. NO. PAGE	CAT. NO. PAGE	CAT. NO. PAGE	CAT. NO. PAGE
25-11, 12	49377-1, 9, 11	58667-3	58748-7
385-6, 9	49378-1, 9, 11	58668-3	58749-7
1193-8	49379-1, 11	58669-3	58750-7
1397-11	49380-1, 9, 11	58670-3	58751-7
1657-1, 5, 9, 11, 12, 13	49381-2, 5, 11, 12	58671-3	58752-7
2028-4	49382-2, 5, 11, 12	58672-3	58753-7
3839-11	49383-2, 5, 9, 11, 12	58673-3	58754-7
3884-4	49384-11	58674-3	58755-7
4011-7, 12	49385-2, 6, 11, 12	58675-3	58756-7
4030-4	49386-2, 6, 8, 11, 12	58676-3	58757-7
5089-8	49387-2, 6, 10, 11, 12	58677-3	58758-7
9623-3	49388-2, 6, 8, 10, 11, 12, 13	58678-4	58759-7
9997-4	49389-2, 6, 10, 11, 12, 13	58679-4	58760-7
10110-2, 6, 10, 11, 12, 13	49390-2, 11	58680-4	58761-7
10195-11, 12	49391-2, 11	58681-4	58762-7, 8
10259-7	49392-2, 10, 11	58682-4	58763-7
10298-3	49393-2, 11	58683-4	58764-7
13034-13	49394-11, 12	58684-4	58765-7
14246-13	49395-11, 12	58685-4	58766-9
14426-3, 7	49396-5	58686-4	58767-9
14434-7	49397-1, 5	58687-4	58768-9
15519-3, 13	49398-1, 5	58688-4	58769-9
17352-8	49399-1	58689-4	58770-9
17733-3	49400-2	58690-4	58771-9
21392-8, 13	49401-1, 5, 6, 9	58691-4	58772-9
22345-3	49410-2	58692-4	58773-9
23261-1, 5, 6, 9, 11, 13	49411-2	58693-4	58774-9
25726-11	49412-2, 3	58694-4	58775-9
26870-6, 7, 9	49413-2	58695-4	58776-9
27926-6	49414-2	58696-4	58777-9
29633-10	49415-2	58697-4	58778-9
30400-10	49416-2	58698-4	58779-9
30421-1	49417-2	58699-4	58780-9
30422-2	49418-2	58700-4	58781-10
30424-5	49419-2, 3	58701-5	58782-10
30965-9	49420-3	58702-5	58783-8, 10
32817-3	49421-3	58703-5	58784-10
32895-3	49422-3	58704-5	58785-10
33480-9	49423-3	58705-5	58786-10
33592-11	49424-3	58706-5	58787-10
33795-11, 12, 13	49425-3	58707-5, 11	58788-10
35829-2, 11	49426-3	58708-5, 12	58789-10
36881-3	49427-5, 11	58709-5, 12	58790-10
38937-13	49428-3	58710-5, 12	58791-10
42595-4	49429-3	58711-6	58955-11
44061-8	49430-3	58712-6, 12	58956-12
44071-8, 13	49431-3	58713-6, 12	66280-13
44072-8	49432-3	58732-6	68160-7
44077-3	49433-3	58733-6	100432-7
46874-7	49434-3	58734-6	100433-7
48000-6	49435-3	58735-6	100434-7
48135-4	49436-3	58736-6, 7	100435-7
48312-1, 5	49437-3	58737-6	100436-7
49357-1, 5	49438-3	58738-6	100437-7
49369-10, 11	49439-3	58739-7	100438-7
49370-10, 11	49440-3	58740-7	100439-8
49371-10, 11	49441-3	58741-7	100440-8
49372-10, 11	51726-5	58742-7	100441-8
49373-11	51745-3	58743-5, 7	100442-8
49374-11	51777-3	58744-7	100443-8
49375-1, 5, 11	56743-5	58745-7	100444-8
49376-11	58665-3	58746-7	100445-8
	58666-3	58747-7	100446-8

GENERAL ELECTRIC COMPANY

Parts of Type MS Magnetic Blowout Switches 4964-15

CAT. NO. PAGE	CAT. NO. PAGE	CAT. NO. PAGE	CAT. NO. PAGE
100447-8	119565-7	132328-12	132338-13
100448-8	119566-7	132329-12	132339-13
100449-8	119567-7	132330-12	132340-13
110774-8	119568-7	132331-12	132341-13
111121-8	119569-7	132332-12	132342-13
112147-7	119570-8	132333-13	132343-13
112170-12	119571-8	132334-13	132344-13
112171-12	119572-8	132335-13	132345-13
112172-12	119573-8	132336-13	132346-13
114051-13	119574-8	132337-13	132347-13
119564-7	132327-12		

# GENERAL ELECTRIC COMPANY

## PRINCIPAL OFFICES, SCHENECTADY

### SALES OFFICES (Address nearest office)

BOSTON, MASS.	84 State Street
Springfield, Mass.	Massachusetts Mutual Building
Providence, R. I.	Union Trust Building
NEW YORK, N. Y.	30 Church Street
Rochester, N. Y.	Granite Building
Syracuse, N. Y.	Post-Standard Building
Buffalo, N. Y.	Ellicott Square Building
New Haven, Conn.	Malvey Building
PHILADELPHIA, PA.	Witherspoon Building
Baltimore, Md.	Electrical Building
Charlotte, N. C.	Trust Building
Charleston, W. Va.	Charleston National Bank Building
Erie, Pa.	Marine National Bank Building
Pittsburg, Pa.	Oliver Building
Richmond, Va.	Mutual Building
ATLANTA, GA.	Third National Bank Building
Birmingham, Ala.	Brown-Marx Building
New Orleans, La.	Maison-Blanche Building
CINCINNATI, OHIO	Provident Bank Building
Columbus, Ohio	Columbus Savings & Trust Building
Cleveland, Ohio	Citizens Building
Dayton, Ohio	Reibold Building
Youngstown, Ohio	Wick Building
Chattanooga, Tenn.	James Building
Memphis, Tenn.	Randolph Building
Nashville, Tenn.	Stahlman Building
Indianapolis, Ind.	Traction Terminal Building
Louisville, Ky.	Paul Jones Building
CHICAGO, ILL.	Monadnock Building
Detroit, Mich.	Majestic Building (Office of Soliciting Agent)
St. Louis, Mo.	Wainwright Building
Kansas City, Mo.	Dwight Building
Butte, Montana	Electric Building
Minneapolis, Minn.	410 Third Ave., North
Milwaukee, Wis.	Public Service Building
DENVER, COLO.	First National Bank Building
Boise, Idaho	Idaho Building
Salt Lake City, Utah	Newhouse Building
SAN FRANCISCO, CAL.	Rialto Building
Los Angeles, Cal.	124 West Fourth Street
Portland, Ore.	Electric Building
Seattle, Wash.	Colman Building
Spokane, Wash.	Paulsen Building

For TEXAS and OKLAHOMA Business refer to  
General Electric Company of Texas.

Dallas, Tex.	Lamar & Caruth Sts.
El Paso, Tex.	Chamber of Commerce Building
Houston, Tex.	Chronicle Building
Oklahoma City, Okla.	Insurance Building

FOREIGN SALES OFFICES  
Schenectady, N. Y., Foreign Dept.  
New York, N. Y., 30 Church St.  
London, E. C., England, 83 Cannon St.

For all CANADIAN Business refer to  
Canadian General Electric Co., Ltd., Toronto, Ont.