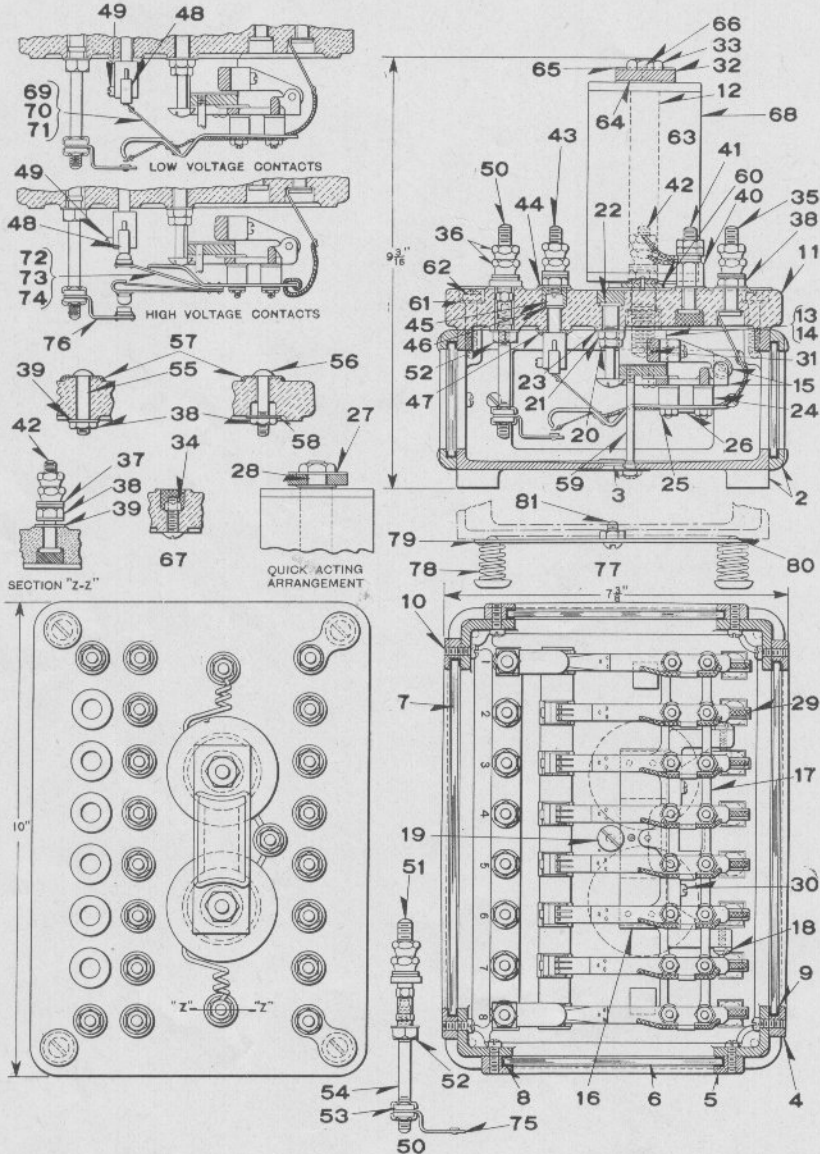


UNION SWITCH & SIGNAL COMPANY



DETAILS OF MODEL 13 NEUTRAL RELAY
(EIGHT-POINT)

UNION SWITCH & SIGNAL COMPANY

DETAILS OF MODEL 13 NEUTRAL RELAY

(EIGHT-POINT)

Order by Plate, Piece, Reference and Abbreviated Description Given in
Heavy Face Type Only.

Piece	Ref.	Description	Drawing Reference
124284	2	Case with Doors, Glass Shields, Gasket and Screws (Inc. 1-2a, 2-4, 2-5, 2-6, 2-7, 2-8, 2-9 and 8-10).....	C-8848-4
97159	2a	Case with Ventilator for Ref. 2.....	C-8849-3
34340	3	Ventilator.....	C-7459-6
97162	4	Door (Side).....	C-8849-3
92119	5	Door (End).....	C-8122-5
92098	6	Glass Shield (End).....	8163-255
97171	7	Glass Shield (Side).....	8163-255
92088	8	Gasket (End).....	8078-1268
95864	9	Gasket (Side).....	8078-1268
	10	Machine Screw No. 10-30x $\frac{1}{2}$ " Fil. Hd. S. (Cad. Pl.) for fastening Doors to Case.	
97166	11	Top Plate.....	C-8849-4
51617	12	Core.....	8101-206
51619	13	Pole Piece R. H.....	8250-44
51618	14	Pole Piece L. H.....	8250-44
113250	15	Armature with Contact Bracket and Trunnions (Inc. 1-16, 1-17 and 2-18).....	C-8849-2
64868	16	Armature only for Ref. 15.....	8303-77
97161	17	Contact Bracket with Armature for Ref. 15.....	C-8849-3
47579	18	Trunnion for Ref. 15.....	8378-197
	19	Screw with Nuts, Washer and Bushing (Inc. 1-19a, 1-20, 1-21, 1-22 and 1-23).....	12471

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UNION SWITCH & SIGNAL COMPANY

DETAILS OF MODEL 13 NEUTRAL RELAY

(EIGHT-POINT)

(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only.

Piece	Ref.	Description	Drawing Reference
65533	19a	Screw only, for Ref. 19.....	8098-1249
26545	20	Nut for Ref. 19.....	8109-181
29577	21	Nut for Ref. 19.....	8109-205
97167	22	Bushing for Ref. 19.....	8350-637
29256	23	Washer for Ref. 19.....	7828-141
22621	24	Bushing.....	8095-199
1515	25	Nut for Ref. 24.....	8109-23
65529	26	Lock Washer for Ref. 24.....	8486-337
25153	27	Washer (Used for Quick Acting Relay).....	7828-127
25107	28	Bushing (Used for Quick Acting Relay).....	C-7459-2
110169	29	Terminal Connector.....	10934-166
	30	Machine Screw No. 8-36x $\frac{1}{2}$ " Fil. Hd. Br. for fasten- ing Ref. 17 to Pole Piece.	
49067	31	Dowel Pin for Ref. 17.....	8097-336
51623	32	Back Strap.....	8162-152
51610	33	Nut for Ref. 12.....	8265-161
72948	34	Nut for Ref. 67.....	8109-383
78078	35	Terminal Post with Nuts and Washers for Terminal Connector (Inc. 1-35a, 2-36, 2-37, 1-38 and 1-39)..	12451-44
29145	35a	Terminal Post only, for Refs. 35, 41 and 42.....	8094-706
29101	36	Nut.....	8109-193
29102	37	Washer.....	7828-139

UNION SWITCH & SIGNAL COMPANY

DETAILS OF MODEL 13 NEUTRAL RELAY

(EIGHT-POINT)

(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only.

Piece	Ref.	Description	Drawing Reference
29103	38	Nut.....	8109-194
29104	39	Washer.....	7828-138
56635	40	Nut for Ref. 41.....	8109-324
	41	Terminal Post with Nuts and Washers, for Magnet Leads (Inc. 1-35a, 2-38, 1-37, 1-39 and 1-40).....	12451-121
	42	Terminal Post with Nuts and Washers for Magnet Leads (Inc. 1-35a, 2-36, 3-37, 2-38 and 1-39).....	12451
	43	Terminal Post with Nuts, Washers, Screw, Lock Washer and Graphite Contact Tip (Inc. 1-43a, 2-36, 2-37, 1-38, 1-44, 1-45, 1-46, 1-47, 1-48 and 1-49) ..	12451
97177	43a	Terminal Post only, for Ref. 43.....	8094-2072
69705	44	Washer, for Ref. 43.....	7828-287
69706	45	Nut for Ref. 43.....	8109-383
70539	46	Lead Washer, for Ref. 43.....	8274-73
29063	47	Lock Washer, for Ref. 43.....	8486-111
30811	48	Graphite Contact Tip.....	8341-32
69758	48a	Silver Contact Tip.....	8341-71
	49	Machine Screw No. 6-40x1½" Fil. Hd. Blued Steel for fastening Ref. 48 to Terminal Post.	
	50	Terminal Post with Nuts, Washers, Lock Washers and Back Post, (Inc. 1-51, 2-36, 2-37, 2-38, 1-39, 1-52, 2-53, 1-54 and 1-75).....	12451-20
	50a	Terminal Post with Nuts, Washers, Lock Washers and Back Post (Inc. 1-51, 2-36, 2-37, 2-38, 1-39, 1-52, 2-53, 1-54 and 1-76).....	12451-20

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DETAILS OF MODEL 13 NEUTRAL RELAY

(EIGHT-POINT)

(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in
Heavy Face Type Only.

Piece	Ref.	Description	Drawing Reference
30813	51	Terminal Post only, for Ref. 50.....	8094-639
31670	52	Nut for Ref. 50.....	8109-218
32186	53	Lock Washer for Ref. 50.....	8486-129
31064	54	Terminal Post only, for Ref. 50.....	8094-654
94436	55	Dummy Post with Nut and Washers for Back Contact Post of Relay (Inc. 1-55a, 1-38, 1-39 and 1-57)	12471-3
31067	55a	Dummy Post only, for Refs. 55 and 56.....	8098-558
	56	Dummy Post with Nut and Washers for Back of Relay (Inc. 1-55a, 1-38, 1-57 and 1-58).....	12471
36088	57	Washer for Refs. 55 and 56.....	7826-136
2615	58	Washer for Ref. 56.....	7828-10
	59	Screw with Nut (Inc. 1-59a and 1-38) (Used in shipping).....	12471
51612	59a	Screw only, for Ref. 59.....	8098-951
121374	59b	Screw (Used in place of Ref. 59 when installed).....	8098-1289
76071	60	Core Plate.....	C-7459-10
26381	61	Washer for Ref. 62.....	7826-78
	62	Machine Screw No. 10-30x1" Fil. Hd. S. (Cad. Pl.) for fastening Top Plate to Case.	
51611	63	Washer.....	7828-218
122646	64	Washer.....	8078-1366
65124	65	Name Plate.....	8225-165
	66	Drive Screw No. 4x $\frac{3}{16}$ " Hardened for fastening Ref. 65 to Back Strap.	

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DETAILS OF MODEL 13 NEUTRAL RELAY

(EIGHT-POINT)

(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only.

Piece	Ref.	Description	Drawing Reference	
	67	Dummy Post with Nut for Front Contact Post Holes of Relay (Inc. 1-67a and 1-34).....	12471	
	67a	Machine Screw No. 14-24x3/4" Rd. Hd. S. (Cad. Pl.) for Ref. 67.		
	68	Magnet Coil complete with Leads and Terminals (for details refer to Plate E-5025)	8133	
Contact Springs				
Piece	Ref.	Description	Remarks	Drawing Reference
97173	69	L. V. Front and Back	Back Contact Tip 3/16" Wide	8385-1614
140570	69a	L. V. Front and Back	Back Contact Tip 3/8" Wide	8385-2056
75956	69b	L. V. Front and Back		8385-1320
97174	70	L. V. Front		8385-1620
112122	71	L. V. Back		8385-1614
69759	72	H. V. Front and Back		8385-1334
76198	73	H. V. Front and L. V. Back		8385-1336
76584	73a	L. V. Front and H. V. Back		8385-1815
76280	74	H. V. Front		8385-1338

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DETAILS OF MODEL 13 NEUTRAL RELAY

(EIGHT-POINT)

(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only.

Piece	Ref.	Description	Drawing Reference
74804	75	Back Contact Post (Silver Tip $\frac{1}{4}$ " Diam.)	8094-2034
80916	75a	Back Contact Post (Silver Tip $\frac{3}{8}$ " Diam.)	8094-2034
76384	76	Back Contact Post (Graphite Tip $\frac{5}{16}$ " Diam.)	8094-2034
127232	76a	Back Contact Post (Graphite Tip $\frac{13}{32}$ " Diam.)	8094-2034
136008	77	Plate with Shock Absorber Springs, Studs, Screw and Nut for Model 13 8-Point Relay	12404-15
410218	78	Shock Absorber Spring.	
136006	79	Plate only for Ref. 77	9999-363
148052	80	Stud only for Ref. 77	8114-631
	81	Machine Screw No. 14-24x $\frac{1}{2}$ " Rd. Hd. S. (Cad. Pl.) with Nut Ref. 38.	