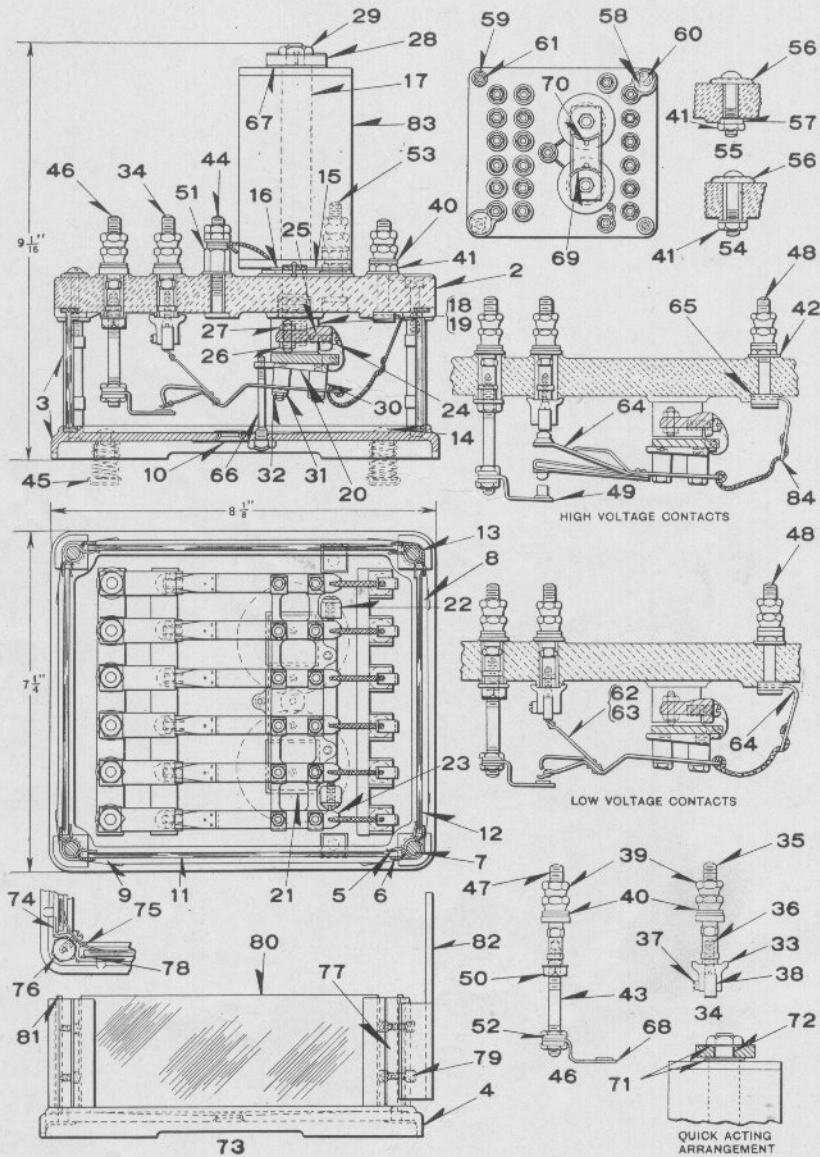


UNION SWITCH & SIGNAL COMPANY



DETAILS OF MODEL 13 NEUTRAL RELAY
(SIX-POINT)

UNION SWITCH & SIGNAL COMPANY

DETAILS OF MODEL 13 NEUTRAL RELAY

(SIX-POINT)

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

Piece	Ref.	Description	Drawing Reference
76774	2	Top Plate with Gasket	C-7459-12
71607	3	Bottom Plate with Glass Shields, Gasket, Ventilator and Supports (Inc. 1-4, 4-5, 4-6, 4-7, 2-8, 2-9, 1-10, 2-11, 2-12 and 1-13)	C-7459-10
145323	3a	Bottom Plate with Glass Shields, Gasket, Ventilator, Supports Posts, and Shock Absorber Springs (Inc. 1-4a, 4-5, 4-6, 4-7, 2-8, 2-9, 1-10, 2-11, 2-12, 1-13 and 4-45)	C-7459-19
51151	4	Bottom Plate, only for Refs. 3 and 73	C-7459-10
145322	4a	Bottom Plates with Studs for Ref. 3a (Inc. 1-4a and 4-14)	C-7459-19
44224	5	Support	10932-10
44225	6	Support	10932-11
51559	7	Post	8114-298
37395	8	Gasket (End) for Refs. 3, 3a and 73	8078-559
37396	9	Gasket (Side) for Refs. 3, 3a and 73	8078-559
34340	10	Ventilator for Refs. 3, 3a and 73	C-7459-6
51561	11	Glass Shield (Side) for Refs. 3 and 3a	8163-107
51414	12	Glass Shield (End) for Ref. 3 and 3a	8163-145
130381	13	Lining	10932-52
145116	14	Stud for Ref. 4a	8114-631
76071	15	Core Plate	C-7459-10
51611	16	Washer	7828-218
51617	17	Core	8101-206

PLATE E-4840

UNION SWITCH & SIGNAL COMPANY

DETAILS OF MODEL 13 NEUTRAL RELAY

(SIX-POINT)

(Continued)

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

Piece	Ref.	Description	Drawing Reference
51619	18	Pole Piece R. H.	8250-44
51618	19	Pole Piece L. H.	8250-44
96904	20	Armature with Bracket and Trunnions (Inc. 1-21, 1-22 and 2-23)	C-7459-8
72163	21	Armature only, for Ref. 20	8157-224
50225	22	Armature Bracket only, for Ref. 20	8303-68
47579	23	Trunnion for Ref. 20	8378-197
	24	Machine Screw No. 8-36x $\frac{1}{2}$ " Fil. Hd. Br. for fasten- ing Ref. 22 to Pole Piece.	
49067	25	Dowel Pin for Ref. 22	8097-356
49141	26	Screw (Core Pin) with Nut Ref. 27	8098-880
26942	27	Nut for Ref. 26	8109-184
51623	28	Back Strap	8162-152
51610	29	Nut for Ref. 17	8265-161
22621	30	Bushing	8095-199
19409	31	Lock Washer for Ref. 30	8486-68
1515	32	Nut for Ref. 30	8109-23
30274	33	Terminal Post only for Ref. 34	8094-641
72926	34	Terminal Post, with Nuts, Washers, Screws and Graphite Contact Tip (Inc. 1-35, 2-39, 2-40, 1-33, 1-37, 1-36 and 1-38)	12451-54
30812	35	Terminal Post only, for Ref. 34	8094-639
30810	36	Screw for fastening Ref. 33 to Ref. 35	8098-538

UNION SWITCH & SIGNAL COMPANY

DETAILS OF MODEL 13 NEUTRAL RELAY

(SIX-POINT)

(Continued)

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

Piece	Ref.	Description	Drawing Reference
	37	Machine Screw No. 6-40x $\frac{1}{2}$ " Fil. Hd. Blued Steel for fastening Ref. 38 to Ref. 33.	
30811	38	Graphite Contact Tip.....	8342-32
29101	39	Nut.....	8109-193
29102	40	Washer.....	7828-139
29103	41	Nut.....	8109-194
29104	42	Washer.....	7828-138
46277	43	Terminal Post only, for Ref. 46.....	8094-706
	44	Terminal Post with Nuts and Washers (Inc. 1-44a, 2-41, 1-40, 1-42 and 1-51).....	12451-121
29147	44a	Terminal Post for Refs. 44 and 53.....	8094-706
410218	45	Shock Absorber Spring for Shelf Type Relays.	
91828	46	Terminal Post with Nuts, Washers, Back Post and Lock Washer (Inc. 1-47, 2-39, 2-40, 1-43, 2-41, 2-52, and 1-68).....	12451-20
112832	46a	Terminal Post with Nuts, Washers, Back Post and Lock Washer (Inc. 1-47, 2-39, 2-40, 1-43, 1-49, 2-41 and 2-52).....	12451-20
30813	47	Terminal Post only, for Ref. 46.....	8094-639
	48	Terminal Post with Nuts, Washers, and Lock Washer (Inc. 1-48a, 2-39, 2-40, 1-41, 1-42 and 1-65).....	12451
30108	48a	Terminal Post only, for Ref. 48.....	8094-706
76384	49	Back Contact Post (High Voltage).....	8094-2034
31670	50	Nut.....	8109-218

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DETAILS OF MODEL 13 NEUTRAL RELAY

(SIX-POINT)

(Continued)

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

Piece	Ref.	Description	Drawing Reference
56635	51	Nut for Ref. 44.....	8109-324
32186	52	Lock Washer for Ref. 46.....	8486-129
	53	Terminal Post with Nuts and Washers for Magnet Coil Leads (Inc. 1-44a, 2-39, 3-40, 2-41 and 1-42)....	12451
94436	54	Dummy Post with Nuts and Washers for Front of Relay (Inc. 1-54a, 1-56, 1-42 and 1-41).....	12451-3
31067	54a	Dummy Post only for Refs. 54 and 55.....	8098-558
98875	55	Dummy Post with Nuts and Washers for Back of Relay (Inc. 1-54a, 1-56, 1-57 and 1-41).....	12451-11
36088	56	Washer for Refs. 54 and 55.....	7826-136
31068	57	Washer for Ref. 55.....	7828-144
37661	58	Anchor Washer for Ref. 60.....	7828-168
73493	69	Washer for Ref. 61.....	7826-78
59306	60	Screw for fastening Top Plate to Corner Post.....	8098-1172
59371	61	Screw for fastening Top Plate to Corner Post.....	8098-1172
Contact Springs			
Piece	Ref.	Description	Drawing Reference
69755	62	L. V. Front and Back	8385-1320
76584	62a	L. V. Front and H. V. Back	8385-1815
69756	63	H. V. Front	8385-1321

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DETAILS OF MODEL 13 NEUTRAL RELAY
(SIX-POINT)
(Continued)

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

Piece	Ref.	Description	Remarks	Drawing Reference
86140	63a	H. V. Back		8385-1320
69759	64	H. V. Front and Back		8385-1334
76280	64a	H. V. Front		8385-1338
76198	64b	H. V. Front and L. V. Back		8385-1336
Piece	Ref.	Description		Drawing Reference
132658	65	Lock Washer for Ref. 48.....		8486-369
	66	Screw with Nut (Inc. 1-66a and 1-41) used for shipping.....		12471
51613	66a	Screw only for Ref. 66.....		8098-951
121374	66b	Screw (Used in place of Ref. 66 when installed).....		8098-1289
122646	67	Washer.....		8078-1366
74804	68	Back Contact Post (Low Voltage) (Silver Tip 1/4" Diam.)		8094-2034
80916	68a	Back Contact Post (Low Voltage) (Silver Tip 3/8" Diam.)		8094-2034
46539	69	Name Plate.....		8225-135
	70	Drive Screw No. 4x3/16" Hardened (N. P.) for fastening Ref. 69 to Back Strap.		
25153	71	Washer (Used for Quick Acting Relay).....		7828-127
25107	72	Bushing (Used for Quick Acting Relay).....		C-7459-2
140276	73	Bottom Plate with Glass Shields, Gasket, Ventilator, Supports, Posts and Wall Bracket, for Wall Type Relay (Inc. 1-4, 4-74, 4-75, 2-76, 2-77, 8-78, 2-9, 2-10, 12-79, 2-80, 2-81, 1-10, and 1-82).....		C-7459-18

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DETAILS OF MODEL 13 NEUTRAL RELAY

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(Continued)

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

Piece	Ref.	Description	Drawing Reference
60608	74	Support.....	10932-48
60606	75	Support.....	10932-38
60610	76	Post.....	8115-148
119778	77	Post.....	8115-148
60612	78	Gasket.....	8078-807
	79	Machine Screw No. 8-36x $\frac{5}{16}$ " Fil. Hd. S. (Cad. Pl.) .	
60616	80	Glass Shield (Side)*.....	8163-186
60615	81	Glass Shield (End).....	8163-186
140214	82	Wall Bracket.....	C-7459-16
	83	Magnet Coil complete with Leads and Terminals (for details refer to Plate E-5025).....	8133
97875	84	Terminal Connector.....	10934-162