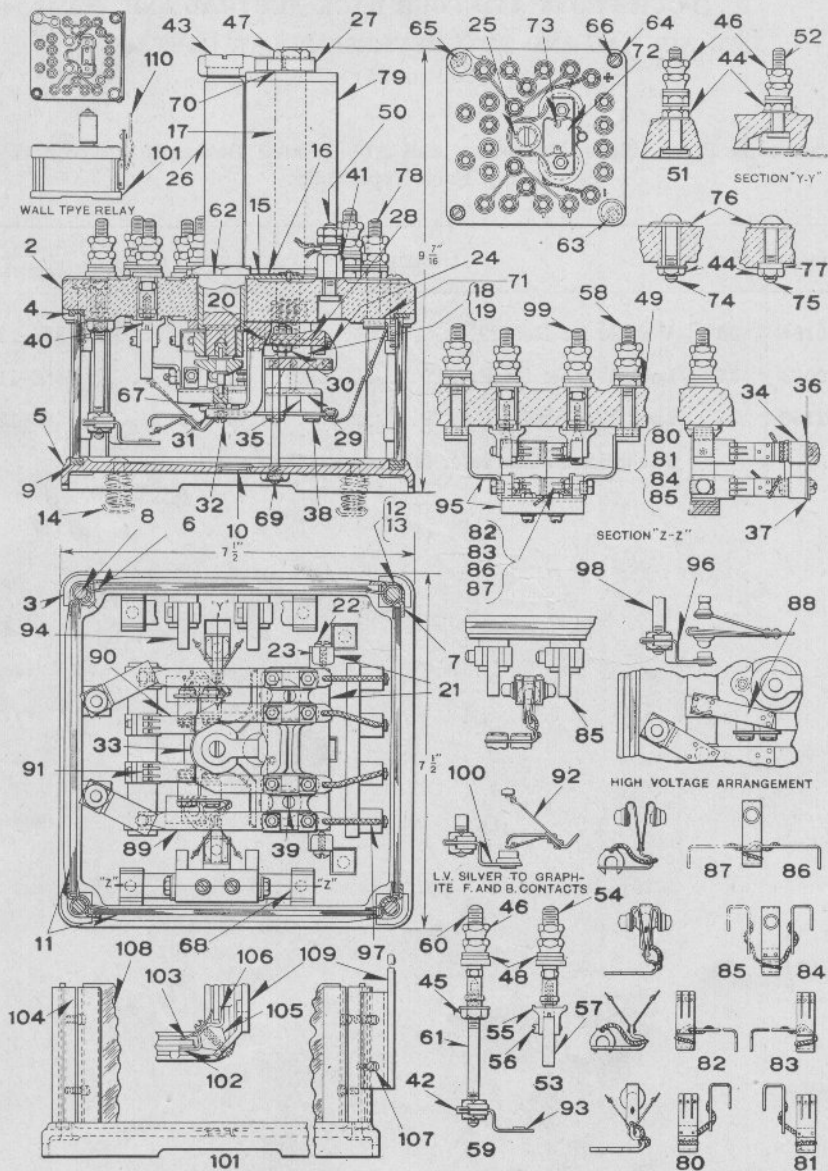


UNION SWITCH & SIGNAL COMPANY



DETAILS OF MODEL 12 POLARIZED RELAY
 (FOUR NORMAL AND FOUR REVERSE POLAR CONTACTS)

UNION SWITCH & SIGNAL COMPANY

**DETAILS OF MODEL 12 POLARIZED RELAY
(FOUR FRONT AND TWO BACK NEUTRAL AND
FOUR NORMAL AND FOUR REVERSE POLAR CONTACTS)**

For complete Relays Refer to Plate E-4805.

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

Piece	Ref.	Description	Drawing Reference
77268	2	Top Plate with Gaskets.....	C-8141-4
59317	3	Gasket (Corner) for Ref. 2.....	8078-1089
51654	4	Gasket for Ref. 2.....	8078-774
70960	5	Base Plate with Supports, Posts, Gaskets, Ventilator, Glass Shields and Linings (Inc. 1-5b, 4-6, 4-7, 4-8, 4-9, 1-10, 4-11, 4-12 and 4-13).....	C-8141-4
145293	5a	Base Plate with Supports, Posts, Gaskets, Ventilator, Glass Shields, Linings and Shock Absorber Springs (Inc. 1-5c, 4-6, 4-7, 4-8, 4-9, 1-10, 4-11, 4-12, 4-13 and 4-14).....	C-8141-10
57541	5b	Base Plate only for Ref. 5.....	C-8141-4
145290	5c	Base Plate only for Ref. 5a.....	C-8141-10
58556	6	Support.....	10932-10
58557	7	Support.....	10932-11
57446	8	Post.....	8114-298
65642	9	Gasket.....	8078-771
34340	10	Ventilator.....	C-7459-6
57442	11	Glass Shield (Side and End).....	8163-164
130381	12	Lining.....	10932-52
130800	13	Lining.....	10932-52
410218	14	Shock Absorber Spring for Ref. 5a.	
72899	15	Core Plate.....	C-8141-2
51611	16	Washer.....	7828-218
51617	17	Core.....	8101-206

Zachary C. Gillihan 2008

PLATE E-4830

UNION SWITCH & SIGNAL COMPANY

DETAILS OF MODEL 12 POLARIZED RELAY (FOUR FRONT AND TWO BACK NEUTRAL AND FOUR NORMAL AND FOUR REVERSE POLAR CONTACTS)

(Continued)

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

Piece	Ref.	Description	Drawing Reference
54581	18	Pole Piece L. H.	8250-44
54582	19	Pole Piece R. H.	8250-44
3912	20	Core Pin.	8097-8
96902	21	Armature with Bracket and Trunnions (Inc. 1-21a, 2-22 and 1-23)	C-7459-8
70959	21a	Armature only, for Ref. 21	8157-246
47579	22	Trunnion for Ref. 21	8378-197
49143	23	Armature Bracket only, for Ref. 21	8303-68
	24	Machine Screw No. 8-36x $\frac{1}{2}$ " Fil. Hd. Br. for fasten- ing Ref. 21 to Pole Piece.	
57496	25	Pin for Ref. 27	8097-872
129986	26	Permanent Magnet	8101-297
55604	27	Back Strap	8162-161
49067	28	Dowel Pin for Ref. 21	8097-336
57440	29	Armature Bar	8130-281
49141	30	Screw (Core Pin) with Hex. Nut Ref. 30a	8098-887
26942	30a	Nut for Ref. 30	8109-184
46286	31	Armature Bracket for Polar Contacts	8303-67
70531	32	Trunnion for Ref. 31	8378-196
70491	33	Armature	8157-215
57578	34	Bushing for Polar Contacts	8095-520
22621	35	Bushing	8095-199

UNION SWITCH & SIGNAL COMPANY

**DETAILS OF MODEL 12 POLARIZED RELAY
(FOUR FRONT AND TWO BACK NEUTRAL AND
FOUR NORMAL AND FOUR REVERSE POLAR CONTACTS)**

(Continued)

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

Piece	Ref.	Description	Drawing Reference
57542	36	Spring Support for Polar Contacts.....	C-8141-4
19409	37	Lock Washer for Refs. 34 and 35.....	8486-68
1515	38	Nut for Refs. 34 and 35.....	8109-23
	39	Machine Screw No. 8-36x $\frac{3}{4}$ " Flat Hd. Br. for fasten- ing Ref. 29 to Armature.	
30810	40	Screw for fastening Ref. 55 to Ref. 53.....	8098-538
56635	41	Nut for Ref. 50.....	8109-324
32186	42	Lock Washer for Ref. 61.....	8486-129
55292	43	Screw for Ref. 26.....	8109-254
29103	44	Nut.....	8109-194
31670	45	Nut for Ref. 61.....	8109-218
29101	46	Nut.....	8109-193
51610	47	Nut for Ref. 17.....	8265-161
29102	48	Washer.....	7828-139
29104	49	Washer.....	7828-138
	50	Terminal Post with Nuts and Washers for Magnet Leads (Inc. 1-50a, 2-44, 1-41, 1-48 and 1-49).....	12451-121
40066	50a	Terminal Post only, for Ref. 50.....	8094-797
	51	Terminal Post with Nuts and Washers for Magnet Leads (Inc. 1-51a, 2-46, 3-48, 2-44 and 1-49).....	12451
30108	51a	Terminal Post only, for Refs. 51 and 78.....	8094-706
78078	52	Terminal Post with Nuts and Washers (Inc. 1-52a, 2-46, 2-48, 1-44 and 1-49).....	12451-44

Zachary C. Gillihan 2008

PLATE E-4830

UNION SWITCH & SIGNAL COMPANY

DETAILS OF MODEL 12 POLARIZED RELAY (FOUR FRONT AND TWO BACK NEUTRAL AND FOUR NORMAL AND FOUR REVERSE POLAR CONTACTS)

(Continued)

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

Piece	Ref.	Description	Drawing Reference
29145	52a	Terminal Post only, for Ref. 52.....	8094-706
96054	53	Terminal Post, with Nuts, Washers, Screws and Graphite Contact Tip (Inc. 1-54, 2-46, 2-48, 1-40, 1-55, 1-56 and 1-57).....	12451-54
30812	54	Terminal Post only, for Refs. 53 and 99.....	8094-639
30274	55	Terminal Post only, for Refs. 53 and 99.....	8094-641
	56	Machine Screw No. 6-40x1/2" Fil. Hd. Blued Steel for fastening Ref. 57 to Ref. 55.	
57272	57	Graphite Contact Tip.....	8341-351
110148	58	Terminal Post with Nuts, Washers and Lock Washer (Inc. 1-58a, 2-46, 2-48, 1-44, 1-49 and 1-68).....	12451-36
31668	58a	Terminal Post only, for Ref. 58.....	8094-706
114955	59	Terminal Post with Nuts, Washers, Lock Washers and L. V. Back Post (Inc. 1-60, 1-61, 2-46, 2-48, 1-49, 1-45, 2-42, 2-44 and 1-93).....	12451-20
	59a	Terminal Post with Nuts, Washers, Lock Washers, and H. V. Back Post (Inc. 1-60, 1-61a, 2-46, 2-48, 1-49, 1-45, 2-42, 2-44 and 1-93a).....	12451-20
30813	60	Terminal Post only, for Ref. 59.....	8094-639
34128	61	Terminal Post only for L. V. for Ref. 59.....	8094-730
32405	61a	Terminal Post only for H. V. for Ref. 98.....	8094-729
55355	62	Washer.....	7828-213
37661	63	Anchor Washer for Ref. 65.....	7828-168
73493	64	Washer for Ref. 66.....	7826-78
59306	65	Screw for fastening Top Plate to Corner Post.....	8098-1172

UNION SWITCH & SIGNAL COMPANY

**DETAILS OF MODEL 12 POLARIZED RELAY
(FOUR FRONT AND TWO BACK NEUTRAL AND
FOUR NORMAL AND FOUR REVERSE POLAR CONTACTS)**

(Continued)

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

Piece	Ref.	Description	Drawing Reference
59371	66	Screw for fastening Top Plate to Corner Post.....	8098-1173
1508	67	Nut for Ref. 32.....	8109-14
29063	68	Lock Washer for Refs. 58 and 78.....	8486-111
	69	Screw with Nut (Inc. 1-69a and 1-44) used in shipping	12471
57584	69a	Screw only, for Ref. 69.....	8098-951
121374	69b	Screw used in place of Ref. 69 when installed.....	8098-1289
122646	70	Washer.....	8078-1366
132658	71	Lock Washer for Ref. 78.....	8486-369
46289	72	Name Plate.....	8225-134
	73	Drive Screw No. $4 \times \frac{1}{16}$ " Hardened (N. P.) for fastening Ref. 72 to Back Strap.	
94436	74	Dummy Post with Nut and Washers for Front of Relay (Inc. 1-74a, 1-76, 1-44 and 1-49).....	12471-3
31067	74a	Dummy Post only, for Refs. 74 and 75.....	8098-558
98875	75	Dummy Post with Nut and Washers for Back of Relay (Inc. 1-74a, 1-76, 1-44 and 1-77).....	12471-11
36088	76	Washer for Refs. 74 and 75.....	7826-136
31068	77	Washer for Ref. 75.....	7828-144
	78	Terminal Post with Nuts, Washers and Lock Washer for Terminal Connector (Inc. 1-51a, 2-46, 2-48, 1-44, 1-49 and 1-68).....	12451
	79	Magnet Coil complete with Leads and Terminals (for details refer to Plate E-5025).....	8133

UNION SWITCH & SIGNAL COMPANY

DETAILS OF MODEL 12 POLARIZED RELAY
(FOUR FRONT AND TWO BACK NEUTRAL AND
FOUR NORMAL AND FOUR REVERSE POLAR CONTACTS)

(Continued)

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

Contact Springs				
Piece	Ref.	Description	Remarks	Drawing Reference
70961	80	L. V. Polar (Upper Deck) R. H.		8385-1262
70962	81	L. V. Polar (Upper Deck) L. H.		8385-1262
70963	82	L. V. Polar (Lower Deck) R. H.		8385-1477
70964	83	L. V. Polar (Lower Deck) L. H.		8385-1477
118840	84	H. V. Polar (Upper Deck) R. H.		8385-1925
118841	85	H. V. Polar (Upper Deck) L. H.		8385-1925
118844	86	H. V. Polar (Lower Deck) R. H.		8385-1926
118843	87	H. V. Polar (Lower Deck) L. H.		8385-1926
80165	88	H. V. Front L. H.		8385-1821
80164	88a	H. V. Front R. H.		8385-1821
70969	89	L. V. Front and Back	Back Contact Tip $\frac{3}{16}$ " Wide	8385-1317
97358	89a	H. V. Front and L. V. Back		8385-1863
70968	90	L. V. Front R. H.		8385-1315
70967	91	L. V. Front L. H.		8385-1315
137377	92	L. V. Front and Back	Back Contact Tip $\frac{3}{8}$ " Wide	8385-2029
Piece	Ref.	Description		Drawing Reference
74804	93	Back Contact Post (Silver Tip $\frac{1}{4}$ " Diam.) L. V.		8094-2034

UNION SWITCH & SIGNAL COMPANY

DETAILS OF MODEL 12 POLARIZED 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
76384	93a	Back Contact Post (Silver Tip $\frac{3}{8}$ " Diam.) L. V.....	8094-2034
81690	94	Graphite Contact Tip only for Polar Contacts.....	8341-356
70861	94a	Silver Contact Tip (Special) only for Polar Contacts.....	8341-457
71114	95	Terminal Post with Contact Tips (Graphite) for Lower Deck Polar Contacts.....	8094-1219
70965	95a	Terminal Post with Contact Tips (Silver) (Special) for Lower Deck Polar Contacts.....	8094-1219
80916	96	Back Contact Post (Graphite Tip) H. V.....	8094-2034
82208	97	Terminal Connector.....	10934-164
	98	Terminal Post, with Nuts, Washers, Lock Washers and H. V. Back Contact (Inc. 1-60, 1-61a, 2-46, 2-48 1-49, 1-45, 2-42, 2-44 and 1-96).....	12451
	99	Terminal Post with Nuts, Washers, Screws and Contact Tip for Polar Contacts (Inc. 1-54, 1-55, 1-40, 1-56, 2-46, 2-48 and 1-94).....	12451
127232	100	Back Contact Post (Used for Silver to Graphite Front and Back Contact).....	8094-1257
121896	101	Bottom Plate with Supports, Posts, Gaskets, Screws, Glass Shields, Ventilator, and Wall Bracket (Inc. 1-5b, 4-102, 4-103, 2-104, 2-105, 8-106, 12-107, 4-108, 1-109, 1-9 and 1-10).....	C-8141-8
60609	102	Support.....	10932-48
60607	103	Support.....	10932-38

Zachary C. Gillihan 2008

PLATE E-4830

UNION SWITCH & SIGNAL COMPANY

DETAILS OF MODEL 12 POLARIZED RELAY (FOUR FRONT AND TWO BACK NEUTRAL AND FOUR NORMAL AND FOUR REVERSE POLAR CONTACTS) (Continued)

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

Piece	Ref.	Description	Drawing Reference
60611	104	Post.....	8115-148
121894	105	Post.....	8115-151
60613	106	Gasket.....	8078-807
	107	Machine Screw No. 8-36x $\frac{5}{16}$ " Fil. Hd. Br.	
60623	108	Glass Shields (Side and End).....	8163-186
121895	109	Wall Bracket.....	C-8141-8
149721	110	Shock Absorber Spring.....	12404-20