

Plug Couplers for Relays and Styles “H” and “H-2” Searchlight Signals

Plug Couplers permit the removal and replacement of relays or operating units without disconnecting any of the field wires. These couplers are made of moulded bakelite and fitted with terminal posts, spaced and marked the same as the terminals on the regular operating unit. Attached to the underside of each terminal post and housed inside individual recesses in the bakelite body are spring clip receptacles which make contact with the standard terminal posts on the operating unit. Ordering references are available as follows.

A.C. Relays—E-1200

D.C. Relays—E-5035 and up

Searchlight Signals—B-2890

Coded Track Circuit Equipment—W-75

Advantages obtainable with these devices are:

1. Materially shortens the time required to remove from service and replace operating units, thus preventing or shortening train delay time, especially important in congested territories.
2. Eliminates any possibility of replacing field wires on wrong terminal when changing operating units, as wires are not removed from the plug coupler.
3. Can be applied to signals or relays now in service with little or no change in the operating units. Wires are simply removed from the present terminal posts and placed on corresponding posts on the plug coupler.
4. Plug coupler spring clips are so designed that ample contact pressure will be maintained.
5. Plug coupler is self-aligning and uniform contact is made on all posts.
6. Terminal binding posts on plug couplers are equipped with an insulated nut which prevents grounding or short circuiting posts when the coupler is removed from the operating unit.
7. Relay testing and wire checking in field are simplified.

Zachary C. Gillihan 2008

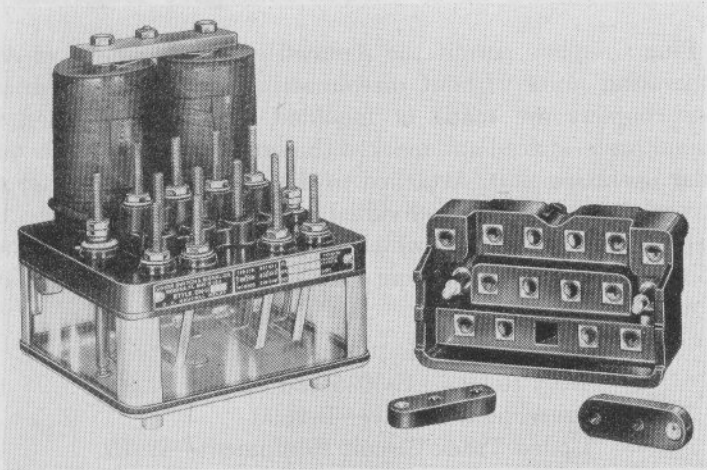


Fig. 1. At left, Style DN-11 relay stripped to receive plug coupler.
At right, plug coupler and clamping pieces.

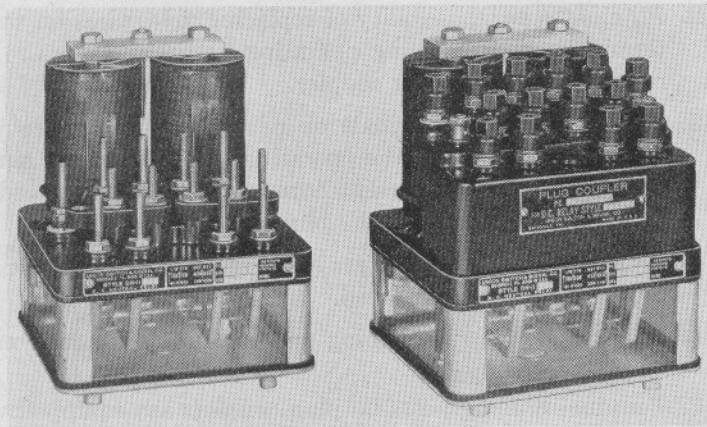


Fig. 2. At left, clamping pieces applied to Style DN-11 relay.
At right, plug coupler in place on relay.

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In most cases these plug couplers can be applied to Union relays and operating units in service, simply by removing terminal nuts and washers as specified, and transferring the field connections to the corresponding terminals of the plug coupler. In the larger plug couplers for D.C. relays, two moulded clamping pieces, shown in lower right corner of Fig. 1, are applied to the relay top plate as shown in the left view, Fig. 2. Clamping screws such as References 15 and 25, Plate E-5035, are assembled to the coupler as shown in the right hand view Fig. 1 so that by alternately turning them clockwise into the clamping pieces the coupler is positively drawn down to its seat, and turning counterclockwise will gradually unseat the coupler.

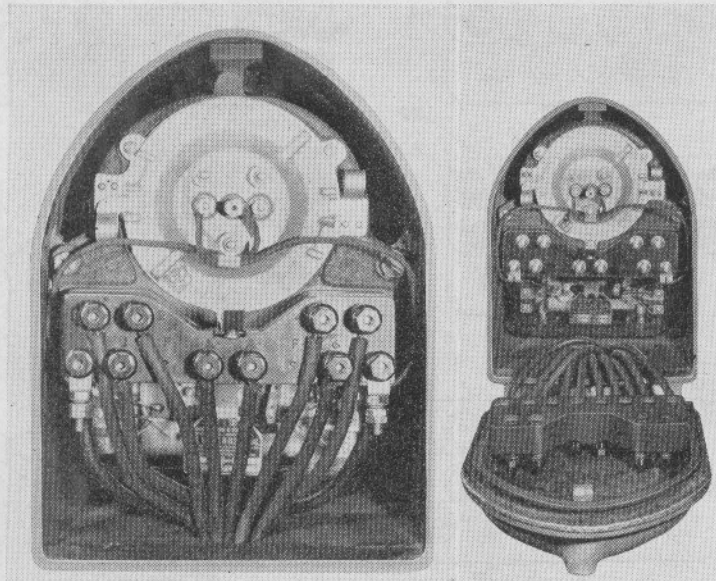


Fig. 3. Application of Plug Coupler to a Style H or H-2 Searchlight Signal. Small view at right shows plug coupler removed.



Plug Couplers for D. C. Relays

(4 and 6-Point "DN-11", "DN-12", "DN-18" and "DN-19")

All Terminal Posts fitted with Insulated Nuts unless otherwise noted.
Insulating Sleeves Ref. 20 for Nut Ref. 10 are not included with Plug Couplers
and if desired, orders should so state.

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

Piece	Ref.	Description	Drawing Reference
108879	A	Plug Coupler Complete with Clamping Pieces (Inc. 2-2 and 1-3) for 4-Pt. "DN-11", "DN-12", "DN-18" and "DN-19" Relays.....	C-16749-1
219430	Aa	Plug Coupler Complete with Clamping Pieces (Inc. 2-2 and 1-4) for 4-Pt. "DN-11", "DN-12", "DN-18" and "DN-19" Relays (No Terminal Nuts).....	C-16749-1
221084	B	Plug Coupler Complete with Clamping Pieces (Inc. 2-2 and 1-5) for 6-Pt. "DN-11", "DN-12", "DN-18" and "DN-19" Relays.....	C-16749-4
226855	C	Plug Couplers Complete with Clamping Pieces (Inc. 2-2, 1-3, 1-26 and 1-27) for 4-Pt. "DN-11", "DN-12", "DN-18" and "DN-19" Relays having Resistor and Back Strap Terminals.....	C-16749-1
226609	Ca	Plug Couplers Complete with Clamping Pieces (Inc. 2-2, 1-3 and 1-26) for 4-Pt. "DN-11" "DN-12", "DN-18" and "DN-19" Relays having Back Strap Terminals.....	C-16749-1
226608	Cb	Plug Couplers Complete with Clamping Pieces (Inc. 2-2, 1-3 and 1-27) for 4-Pt. "DN-11", "DN-12", "DN-18" and "DN-19" Relays having Resistor Terminal.....	C-16749-1
226611	Cc	Plug Couplers Complete with Clamping Pieces (Inc. 2-2, 1-5 and 1-26) for 6-Pt. "DN-11", "DN-12", "DN-18" and "DN-19" Relays having Back Strap Terminals.....	C-16749-4
226610	Cd	Plug Couplers Complete with Clamping Pieces (Inc. 2-2, 1-5 and 1-27) for 6-Pt. "DN-11", "DN-12", "DN-18" and "DN-19" Relays having Resistor Terminal.....	C-16749-4
108875	2	Clamping Piece for Refs. A, Aa, B, C, Ca, Cb, Cc and Cd.....	12770-25
108878	3	Plug Coupler with Insulated Nuts, for Refs. A, C, Ca and Cb.....	C-16749-1
219391	4	Plug Coupler without Terminal Nuts, for Ref. Aa (Use nuts from relay posts).....	C-16749-1

Plug Couplers for D. C. Relays

(4 and 6-Point "DN-11", "DN-12", "DN-18" and "DN-19")

(Continued)

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

Piece	Ref.	Description	Drawing Reference
221083	5	Plug Coupler with Insulated Nuts, for Refs. B, Cc and Cd	C-16749-4
108280	6	Plug Coupler Body for Refs. 3 and 4 (For 4-Pt. "DN-11", "DN-12", "DN-18" and "DN-19" Relays)	C-16750-1
	7	Terminal Post with Nuts, Washers, Insulated Nut, Contact Springs and Receptacle (Inc. 1-7a, 1-9, 2-10, 3-11, 2-12 and 1-13)	12451-
122489	7a	Terminal Post Only	8094-1192
	8	Terminal Post with Nuts, Washers, Insulated Nut, Contact Springs, Receptacle and Spacer (Inc. 1-8a, 1-9, 2-10, 3-11, 2-12, 1-13 and 1-14)	12451-
199852	8a	Terminal Post Only	8094-2207
105713	9	Insulated Nut	12770-1
127260	10	Nut	8109-194
29102	11	Washer	7828-139
216193	12	Contact Spring	8385-2631
216192	13	Receptacle	11893-883
216194	14	Spacer	8350-856
	15	Screw with Sleeve, Washers and Rivet (Inc. 1-15a, 1-16, 2-17 and 1-18) "Y" dim. $\frac{49}{64}$ ", "Z" dim. $2\frac{49}{64}$ ". For Refs. 3 and 4.	12471-
108877	15a	Screw Only ("Y" dim. $\frac{49}{64}$ ", "Z" dim. $2\frac{49}{64}$ ")	8190-300
108876	16	Sleeve	8350-946
216197	17	Washer	7828-401
54921	18	Rivet	10301-1
224740	19	Name Plate	8225-586
224689	20	Insulating Sleeve (for Nut Ref. 10)	8095-752

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UNION SWITCH & SIGNAL CO.

PLATE **E-5035**

Plug Couplers for D. C. Relays

(4 and 6-Point "DN-11", "DN-12", "DN-18" and "DN-19")

(Continued)

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

Piece	Ref.	Description	Drawing Reference
142777	21	Tag (Orders should specify marking desired).....	8988-75
	22	Terminal Post with Nut, Washer, Contact Springs and Receptacle (Inc. 1-8a, 1-10, 1-11, 2-12 and 1-13).....	12451-
	23	Terminal Post with Nut, Washer, Contact Springs, Receptacle and Spacer (Inc. 1-23a, 1-10, 1-11, 2-12, 1-13 and 1-14).....	12451-
130593	23a	Terminal Post Only.....	8094-1192
221225	24	Plug Coupler Body for Ref. 5 (For 6-Pt. "DN-11", "DN-12", "DN-18" and "DN-19" Relays).....	C-16750-5
	25	Screw with Sleeve, Washers and Rivet (Inc. 1-25a, 1-16, 2-17 and 1-18) "Y" dim. $\frac{31}{32}$ ", "Z" dim. $2-\frac{3}{4}$ ". For Ref. 5.....	12471-
221228	25a	Screw Only ("Y" dim. $\frac{31}{32}$ ", "Z" dim. $2-\frac{3}{4}$ ").....	8190-300
222179	26	Plug Coupler Unit Complete for rear terminals for Refs. C, Ca and Cc (For details refer to Ref. 2, Plate E-5035-2).....	C-16749-6
226607	27	Plug Coupler Unit Complete for single terminal for Refs. C, Cb and Cd of this Plate and Ref. B of Plate E-5035-2.....	C-16749-17
226606	28	Plug Coupler Body for Ref. 27.....	12770-35
	29	Terminal Post with Nuts, Washers, Insulated Nut, Contact Springs and Receptacle (Inc. 1-7a, 1-9, 2-10, 3-11, 2-12, 1-13 and 1-30).....	12451-
226411	30	Contact Spring.....	8385-2721