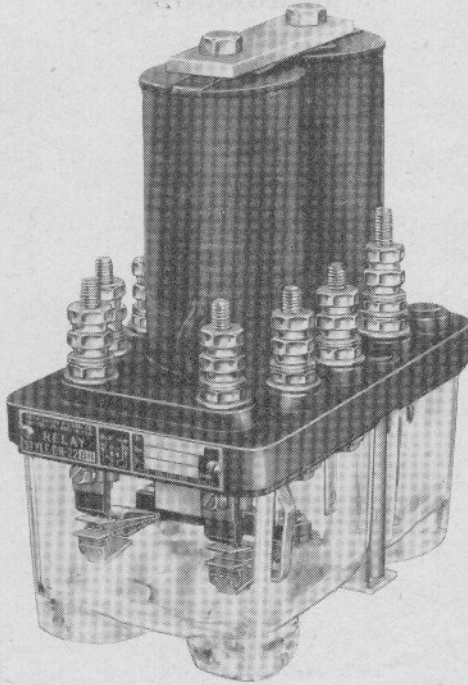


VOID  
PLATE E-4937

UNION SWITCH & SIGNAL CO.



Height  $7\frac{5}{8}$ " , Width 4" , Depth  $6\frac{3}{8}$ "

- A—Style "DN-22B" D.C. Biased Neutral Relay
- B—Style "DN-22BH" D.C. Biased Neutral High Release Relay (As Shown)

The Styles "DN-22B" and "DN-22BH" biased neutral relays offer important advantages over conventional neutral relays in many applications. In both relays the armature is magnetically biased (by means of a permanent magnet) so as to pick up in response to current of one polarity only. Both relays fully meet requirements of A. A. R. Signal Section Spec. 228-47.

Basic design principles of these relays are:

1. Relay will not pick up when permanent magnet is demagnetized.
2. Opening of the magnetic circuit when there is no energy on the coils cannot result in permanent magnet flux tending to pick up the armature.
3. Operating values will not be affected more than 2% after application of 50 times normal working value for two seconds, at either normal or reverse polarity.
4. Relay will not pick up with reverse polarity at 50 times the normal working value.

The Style "DN-22B" relay is particularly suitable for use as a biased neutral line relay, battery checking relay, and for other general applications.

The Style "DN-22BH" high release relay is designed specifically for track circuit applications, and its exceptional operating characteristics not only provide increased safety but also make possible the use of longer steady energy d.c. track circuits than are practicable with previous standard d.c. relays.

UNION SWITCH & SIGNAL CO.

VOID  
PLATE **E-4937**

## Styles "DN-22B" D. C. Biased Neutral Relay And "DN-22BH" D. C. Biased Neutral High Release Relay

For details refer to Plate E-4980.

Relays are equipped with shock absorber, bases and orders should specify whether wall or shelf type is desired.

Orders should specify resistance per pair of coils (See Ref. 8a, Plate E-5025). Plug couplers for "DN-22B" and "DN-22BH" relays are shown on Plate E-5025-2, Ref. Aa.

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

Style "DN-22B" D. C. Biased Neutral Relay, Coils . . . . . Ohms per Pair. Dwg. C-9432-31					
Piece	Ref.	Contact Combination	Contact Members		
			Front Post	Back Post	Spring
	A	2F-2B Dependent (Low Voltage)	S.I.C.	S.	S.
Style "DN-22BH" Biased Neutral High Release Relay, Coils . . . . . Ohms per Pair. Dwg. C-9432-32					
	B	2F-2B Dependent (Low Voltage)	S.I.C.	S.	S.
	Ba	2F-2B Dependent (Low Voltage)	S.I.C.	S.I.C.	S.
	Bb	2F-1B Independent (Low Voltage)	S.I.C.	S.	S.
Note: Meanings of above abbreviations— S.I.C.—Silver Impregnated Carbon S.—Silver					