

## Style FN-16A Flasher Relay

The Style FN-16A improved flasher relay offers the many proved advantages of the former Style FN-16 flasher relay, which include safety, reliability, simplicity of design, and excellent timing characteristics, and in addition provides improved contact life, particularly when the relay is employed to control d.e. lamp circuits. This relay is especially applicable for the control of flashing light highway crossing signals and can be used for either shunt control or make and break control of the lamps. It is also suitable for the operation of flashing signals employed in various railway signaling applications to obtain additional signal indications. The relay is available with either 2N-2R or 4N-4R lamp contacts, rated at 5 amperes per contact.

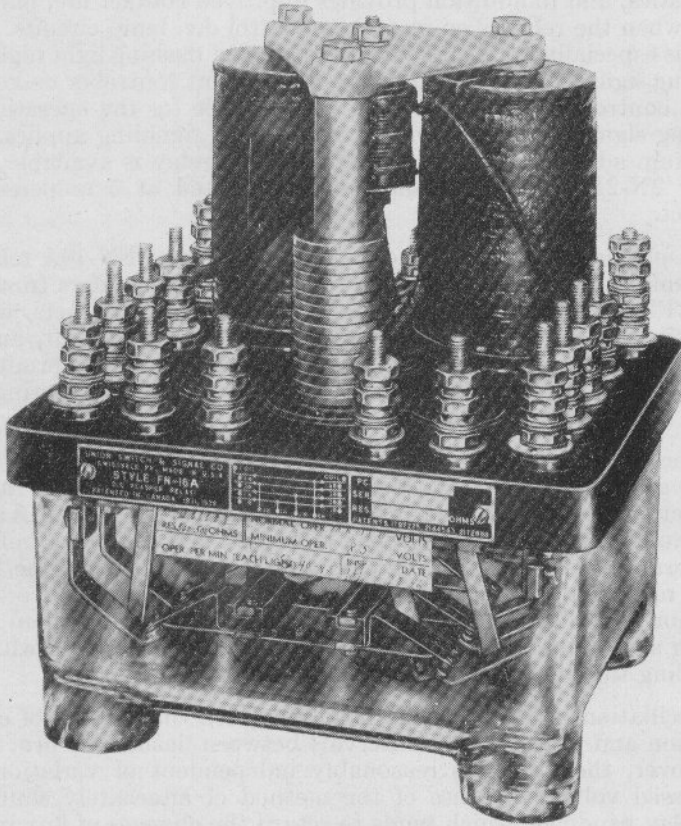
In physical size and in most of its details, the FN-16A relay is the same as the well-known Style FN-16 relay. It differs from the Style FN-16 relay only in the design of the lamp contacts, which necessitates the use of a heavier armature counterweight, and in that the armature supporting bracket is arranged to permit the armature to be assembled in the relay with contact springs in place, thus facilitating relay repair.

The operating mechanism is designed to provide minimum wear at the armature pivots and core pins, thus assuring that the rate of contact operation (i.e., flashing rate) remains above the A.A.R. minimum value without any need of adjustment for many millions of operations. Original timing can readily be restored in the field, when required, by removing one or more copper washers from the common core. The core and coil assembly is so constructed that timing adjustments can be made and coils can be changed without unsealing the relay or disturbing relay adjustments.

Oscillation of the armature is so regulated that flashes of equal duration and uniform time intervals between flashes are provided. Moreover, the timing is reasonably independent of variations in impressed voltage because of the method of alternately shunting the relay windings, which tends to retard the changes of flux in the magnetic circuit.

Another distinctive feature of the relay is that the armature is biased by a counterweight so that one-half of the lamp contacts are normally closed when the relay is deenergized. Thus, in highway crossing signal installations, if the track relay becomes deenergized and proper energy is not received at the Style FN-16A relay to operate it, one steady red indication will be displayed by each signal.

Zachary C. Gillihan 2008



**B**

Height  $8\frac{5}{8}$ " , Width  $7\frac{5}{8}$ " , Depth  $6\frac{1}{2}$ " .

## Style "FN-16A" Flasher Relay

See preceding page for description.

## Style "FN-16A" 4N-4R and 2N-2R D. C. Flasher Relays

For details refer to Plate E-5065. Shelf Type Shock Absorbers (Ref. 76, Plate E-5065) or Wall Type Shock Absorbers (Ref. 77, Plate E-5065) are furnished with each Relay. Orders should specify type desired.

All relays listed below are equipped with a small rectifier for suppression of radio interference originating in the operating contacts. Suppression of radio interference originating in lamp contacts may be obtained by including References 70 or 71 of Plate E-5065 in the order.

Material necessary to change the Style "FN-16" Relay to have the same contacts as Style "FN-16A" Relay may be obtained by ordering reference 83 or 83a of Plate E-5065. Detail parts of Style "FN-16" Relays are shown on Plate E-5064.

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

Piece	Ref.	Description	Drawing Reference
265738	B	Style "FN-16A" 4N-4R D.C. Flasher Relay Complete. 500-ohms resistance per each coil, 40 to 45 Flashes per minute, for 10 or 12 Volts D.C.....	C-9357-9
265739	Ba	Style "FN-16A" 4N-4R D.C. Flasher Relay Complete. 200-ohms resistance per each coil, 40 to 45 Flashes per minute, for 8 Volts D.C.....	C-9357-9
265740	Bb	Style "FN-16A" 4N-4R D.C. Flasher Relay Complete. 4.5-ohms resistance per each coil, 40 to 45 Flashes per minute, for 1.2 Volts D.C.....	C-9357-9
265889	Bc	Style "FN-16A" 2N-2R D.C. Flasher Relay Complete. 500-ohms resistance per each coil, 40 to 45 Flashes per minute, for 10 or 12 Volts D.C.....	C-9357-11
265890	Ed	Style "FN-16A" 2N-2R D.C. Flasher Relay Complete. 200-ohms resistance per each coil, 40 to 45 Flashes per minute, for 8 Volts D.C.....	C-9357-11
265891	Be	Style "FN-16A" 2N-2R D.C. Flasher Relay Complete. 4.5-ohms resistance per each coil, 40 to 45 Flashes per minute, for 1.2 Volts D.C.....	C-9357-11