INSTRUCTIONS

GEI-28801C
SUPERSEDES GEI-28801B

D-C AUXILIARY RELAY

Types
HGA26A
HGA26B

LOW VOLTAGE SWITCHGEAR DEPARTMENT
GENERAL ELECTRIC
PHILADELPHIA, PA.

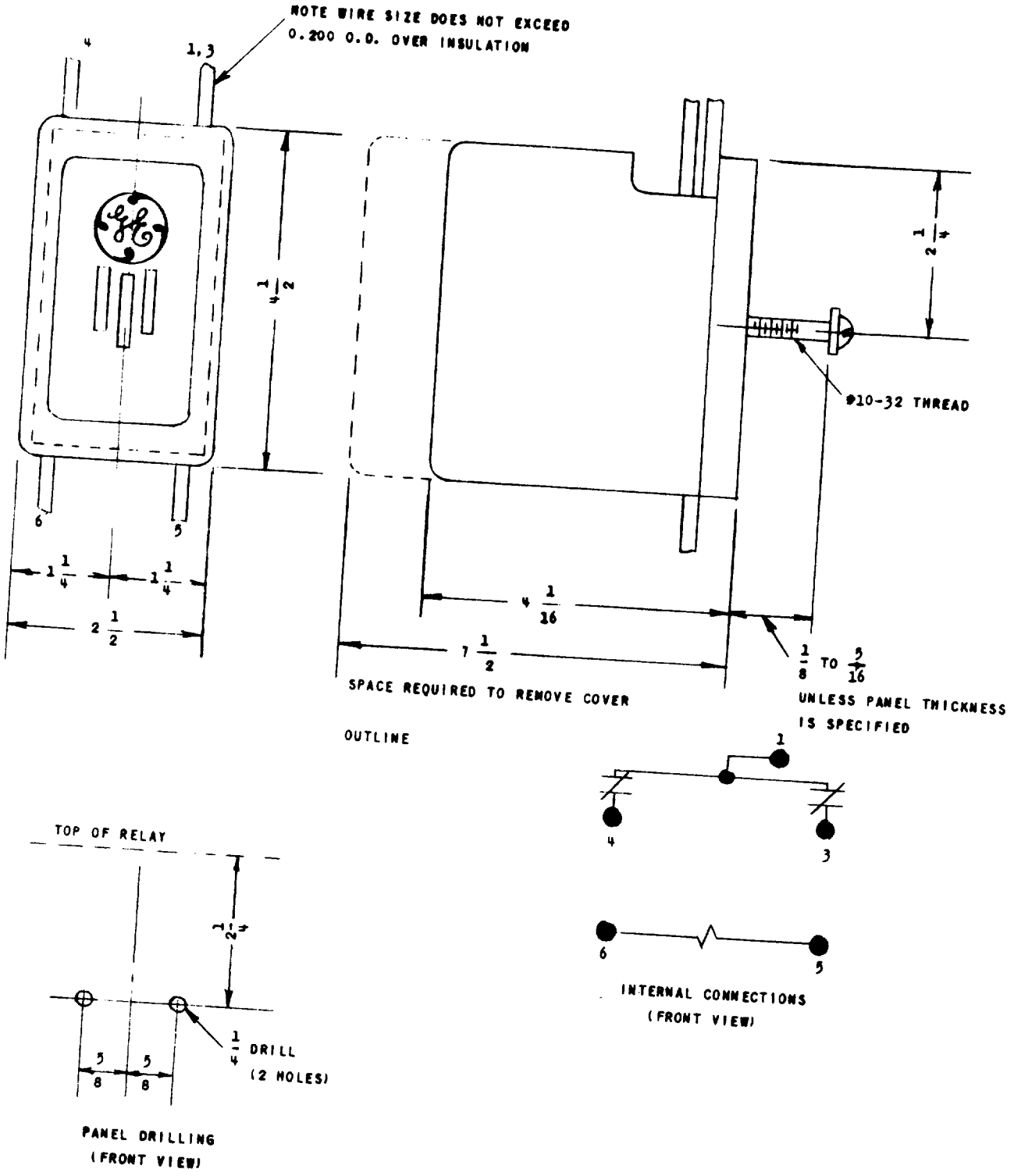

Fig. 1 Internal Connections and Outline & Panel Drilling Dimensions for Relay Types HGA26A & HGA26B.

D-C AUXILIARY RELAY TYPE HGA26A & HGA26B

INTRODUCTION

APPLICATION

The relay types HGA26A and 26B are d-c auxiliary devices designed for use in automatic reclosing schemes for air mechanisms. The relay is shock resistant and is adapted for satisfactory operation under conditions where shock is transmitted to the relay during reclosing operations of the air mechanism.

OPERATING CHARACTERISTICS

These relays are front-connected with cover and have two circuit opening bridging contacts with the bridging member brought out to a connection stud. The construction is similar to the standard Type HGA relay except for a modified moving contact assembly. The opening and closing of the contacts is controlled by a hinge type armature which in turn is actuated by an operating coil and restrained by an adjustable control spring.

The Type HGA26A relay has time delay on pickup and dropout which is accomplished by a special operating coil. This operating coil has a copper spool which in effect is a shorted, single turn, secondary winding. The current induced in it by the changing magnetic field on energizing and de-energizing the coil tends to delay the pickup and dropout of the armature of the relay.

The Type HGA26B relay differs from the HGA-26A only in that it uses a standard HGA d-c operating coil instead of the coil with copper spool. This causes the relay to have instantaneous pickup and dropout instead of time delay.

The standard Type HGA relay moving contacts, contact support, and spring housing are replaced by a special Textolite plate upon which are assembled the moving contact and counterweights. The latter are assembled in such a manner as to statically balance the entire armature assembly. The moving contact is of a leaf spring construction to insure flexibility for maximum wipe on the "b" contacts. A lead is attached to the moving bridgetype contact and is connected to one of the upper terminal studs. The length of the contact gap is adjusted by means of screw contacts and locknuts in the front fixed-contact positions. The back fixed contacts are omitted to insure the maximum contact gap possible which is necessary when the voltage to be interrupted is 250 volts, d-c.

RATINGS

The relays are available for continous operation at all standard d-c voltage ratings up to 250 volts.

The contacts will make and carry 12 amperes continously or 30 amperes for one minute and will interrupt the following currents for non-inductive loads.

Volts	Interrupt (Single Break)
115 a-c	30 amps
230 a-c	20 amps
125 d-c	2.7 amps
250 d-c	.68 amps

BURDENS

	HGA26A		HGA26B	
Coil Rating D-C Volts	Coil R Ohms	Watts	Coil R Ohms	Watts
250	8700	7.2	12,900	4.85
125	2200	7.1	3,250	4.81
48	338	6.8	500	4.61
32	146	7.0	230	4.45
24	86.0	6.7	130	4.43

RECEIVING, HANDLING AND STORAGE

These relays, when not included as a part of a control panel, will be shipped in cartons designed to protect them against damage. Immediately upon receipt of the relay, an examination should be made for any damage sustained during shipment. If injury or damage resulting from rough handling is evident, a claim should be filed at once with the transportation company and the nearest Sales Office of the General Electric Company notified promptly.

Reasonable care should be exercised in unpacking the relay in order that none of the parts are injured or the adjustments disturbed.

If the relays are not to be installed immediately, they should be stored in their original cartons in a place that is free from moisture, dust, and metallic chips. Foreign matter collected on the outside of the case may find its way inside when the cover is removed and cause trouble in the operation of the relay.

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the General Electric Company.

INSTALLATION

LOCATION AND MOUNTING

The relay should be installed in a location that is clean, dry, and free from excessive vibration. It should be mounted on a vertical surface by means of the steel mounting strap on the back of the molded Textolite base. Care should be taken to allow sufficient clearance in front of the relay to remove the cover, if one is included.

CONNECTIONS

The internal connections and outline and panel drilling are shown in Fig. 1.

ADJUSTMENT & INSPECTION

The relays have been adjusted to pickup at approximately 60 per cent of rated voltage. These pick-up values may be affected by the adjustment of the HGA26A relay for time delay but will be approximately equal to the value indicated.

When the Type HGA26A relay is shipped from the factory, the pick-up time is adjusted for approximately 3 cycles with rated voltage applied, and the drop-out time is 15 cycles or more.

If the factory adjustments have been disturbed, the following points should be observed in restoring them. The two adjustable fixed contact screws should be backed out as far as possible and still provide a good locking surface. The two contact tips of the moving contact should make simultaneously, the necessary adjustments being made on the adjustable fixed-contacts.

There are no adjustments on the moving contact; however, when the control spring is set for the required pick-up voltage, the wipe on the back contacts will be approximately 5/64 inch measured by the gap between the end of the moving contact damping brush and the moving contact.

The moving contact pigtail should be positioned to be as free as possible, the coils not touching the sides of the base, and exerting as little restraint on the motion of the armature as possible.

The pick-up value is adjusted by means of the control spring at the tail end of the armature. The control spring should be in the back hole of the spring post and in the fourth notch (from pivot edge) of the armature. If the pickup is too high (normally 60 percent of rated voltage), do not change the spring tension. Instead, check the pick-up times and make the adjustments described below.

The pick-up and drop-out times should be checked with millisecond timer. If it is found necessary to decrease the pick-up time or voltage, the armature gap is decreased by screwing in the adjustable fixed-contact screws. The contact gap should not be reduced below 9/32 inch to insure maximum contact interruption at 250 volts, d-c.

The adjustment of HGA26B is the same as that for HGA26A except that the pick-up and drop-out times are non-adjustable. The pick-up time should be approximately 1 cycle and the drop-out time should be approximately 2 cycles.

MAINTENANCE

Auxiliary relay equipment should be checked for operation at regular intervals, preferably at the same time that the associated protective devices are inspected. The relays should be checked for values of pick-up time and voltage and drop-out time. These settings should not require readjustment, but if changes are necessary the points discussed under ADJUSTMENT AND INSPECTION should be observed.

If it is found necessary to clean the contact buttons, do so with a clean, fine file. Never use emery or crocus cloth for this purpose because insulating particles may become embedded in the contact surface.

RENEWAL PARTS

When ordering renewal parts, address the nearest Sales Office of the General Electric Company, specifying the quantity required and describing the parts by catalogue numbers as shown in Renewal Parts Bulletin No. 2623.

It is recommended that sufficient quantities of renewal parts be carried in stock to enable the prompt replacement of any that are worn, broken, or damaged.

GENERAL ELECTRIC COMPANY, SCHENECTADY, N. Y.

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