INSTRUCTIONS

GEK-45482

AUXILIARY RELAY

TYPE NGA99AB(-)

GENERAL ELECTRIC

AUXILIARY RELAY

TYPE NGA99AB(-)

DESCRIPTION

The Type NGA99AB is an auxiliary relay with one normally open contact and having an extremely low pickup of 0.5 milliampere. The internal connections are shown in Figure 1. The relay is mounted in a small molded case suitable for either surface or semiflush mounting. The outline and panel drilling dimensions are shown in Figures 2 and 3.

APPLICATION

The Type NGA99AB is an auxiliary relay with an extremely low pickup of 0.5 milliampere. It is intended to be applied as a monitoring relay to detect open circuits in control wiring and other devices. The relay coil and internal resistor circuit is a very high resistance, 181,000 ohms for 125VDC rating. The relay will pick up reliably at 80 percent of nominal DC voltage and can be energized continuously at 110 percent of nominal DC voltage without damage. When this relay is used to monitor the circuits of a solid state DC timer, the monitoring current of approximately 0.8 milliampere at 110% rated DC voltage may affect the operation of the timer. Depending upon the circuitry of the timer the monitoring current may cause it to time out in a shorter time than what is indicated by its setting. Therefore this should be considered when making the application.

The normally open contact of the relay is intended to be connected into an alarm circuit. When the monitoring current decreases the relay will drop out to sound an alarm indicating an open circuit.

RATINGS

The Type NGA99AB relay has a continuous rating of 0.8 ma. DC

The relay contacts will close and carry 30 amperes DC momentarily for tripping duty at control voltages of 250 VDC or less. These contacts will carry 3 amperes continuously and have an interrupting rating as given in Table A.

VOLTS	CURRENT INDUCTIVE*	CURRENT NON-INDUCTIVE
48	1.0	3.0
125 VDC	0.5	1.5
250 VDC	0.25	0.75
115 V 60 Cyc.	0.75	2.0
230 V 60 Cyc.	0.5	1.0

TABLE A

* The inductive rating is based on the inductance of an average trip coil.

The resistance values of the telephone-type relay T and associated resistors are given in Fig. 1.

RECEIVING, HANDLING AND STORAGE

These relays, when not included as part of a control panel, will be shipped in cartons designed to protect them against damage. Immediately upon receipt of a relay, examine it for any damage sustained in transit. If injury or damage resulting from rough handling is evident, file a damage claim at once with the transportation company and promptly notify the nearest General Electric Apparatus Sales Office.

Reasonable care should be exercised in unpacking the relay. 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.

When the relay is received, check the nameplate stamping to insure that model number and rating of the relay received agree with the requisition. Check the operation manually and also check that the contact gap and wipe agree with values given under the section on ADJUSTMENTS AND INSPECTION.

ADJUSTMENTS AND INSPECTION

While the relay is deenergized, the normally open contact should have a gap of .010" - .015". The wipe on the normally open contact should be approximately .010". This can be checked by inserting a .010" shim between the residual screw and the pole piece and operating the armature by hand. The normally open contacts should make before the residual screw strikes the shim.

All pickup and dropout tests should be conducted with the armature end up, coil vertical. The pickup and dropout can be adjusted by changing the gram pressure on the moving contact spring. Increasing gram pressure by tensioning the moving contact spring against the operating arm will raise pickup and dropout current. Note that the residual screw must project through the armature at least. 002 inch. Be sure to tighten the locknut after any adjustment. The residual screw must never be removed completely.

After any adjustment, the contact gap and wipe must be rechecked. The contact pressure should never be less than 10 grams measured at the contact wipe.

Table B lists the settings for this relay.

TABLE B

NGA99AB FORM	CONTACT GAP	CONTACT WIPE	RESIDUAL SET	MAX. P.U. MA.	MIN. D.O. MA.
001	.010-.015"	.010"	.002" min.	0.5	0.125

INSTALLATION PROCEDURE

The location should be clean and dry, free from dust and vibration, and well lighted to facilitate inspection and testing. The relay should be mounted on a vertical surface with the coil vertical and armature end up. The outline and panel drilling for surface mounting is shown in Figure 2 while semi-flush mounting is shown in Figure 3.

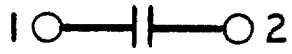
SERVICING

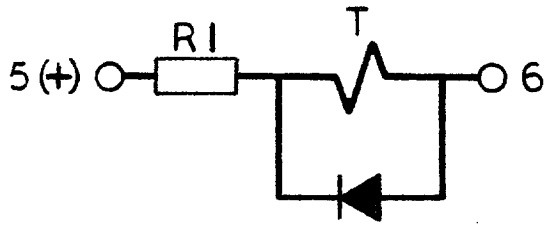
For cleaning fine silver contacts a flexible burnishing tool should be used. This consists of an etched roughened strip of flexible metal, resembling a superfine file which removes corroded material quickly without scratching the surface. The flexibility of the tool insures the cleaning of the actual points of contact. Never use knives, files, abrasive paper or cloth to clean fine silver contacts. A burnishing tool as described above can be obtained from the factory.

RENEWAL PARTS

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.

When ordering renewal parts, address the nearest Sales Office of the General Electric Company, specify quantity required, name of the part wanted, and give complete nameplate data. If possible, give the General Electric requisition number on which the relay was furnished.

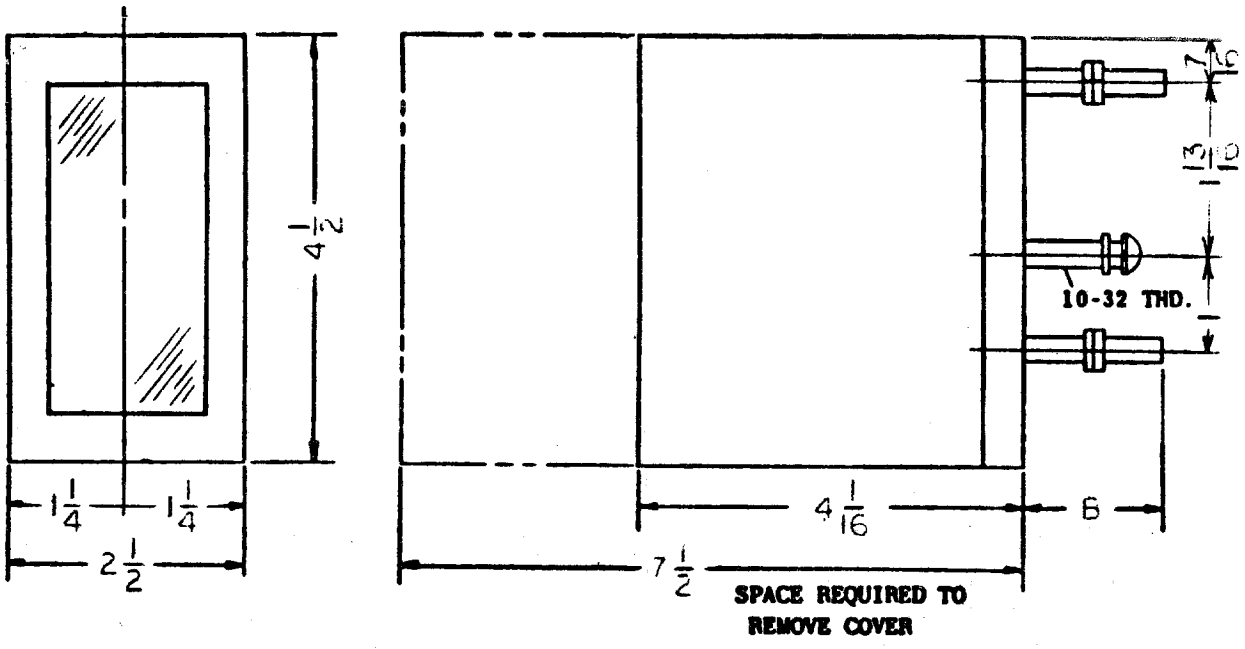




BACK VIEW

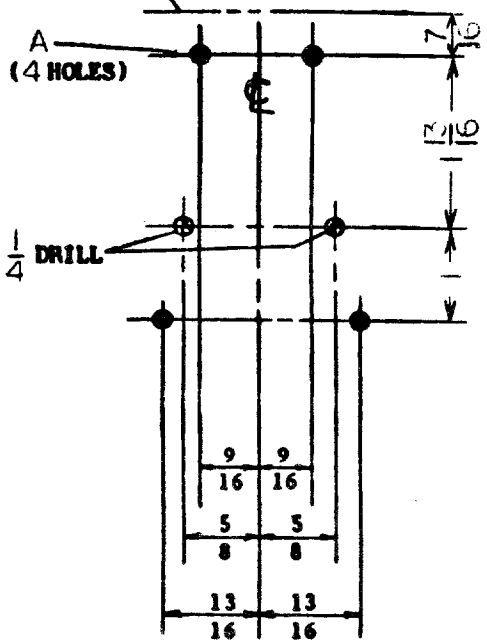
FORM	R1	T
001	120 KΩ	61 KΩ

FIGURE 1 (0257A9642-0) INTERNAL CONNECTIONS DIAGRAM FOR THE NGA99AB(-) RELAY.



TOP OF RELAY

OUTLINE



TYPE OF PANEL	A	B
INSULATING	7/16	2-13/16
STEEL	9/16	1- 3/8

PANEL DRILLING (FRONT VIEW)

FIGURE 2 (0269A1800-0) OUTLINE AND PANEL DRILLING DIMENSIONS FOR THE SURFACE MOUNTED NGA99AB(-) RELAY.

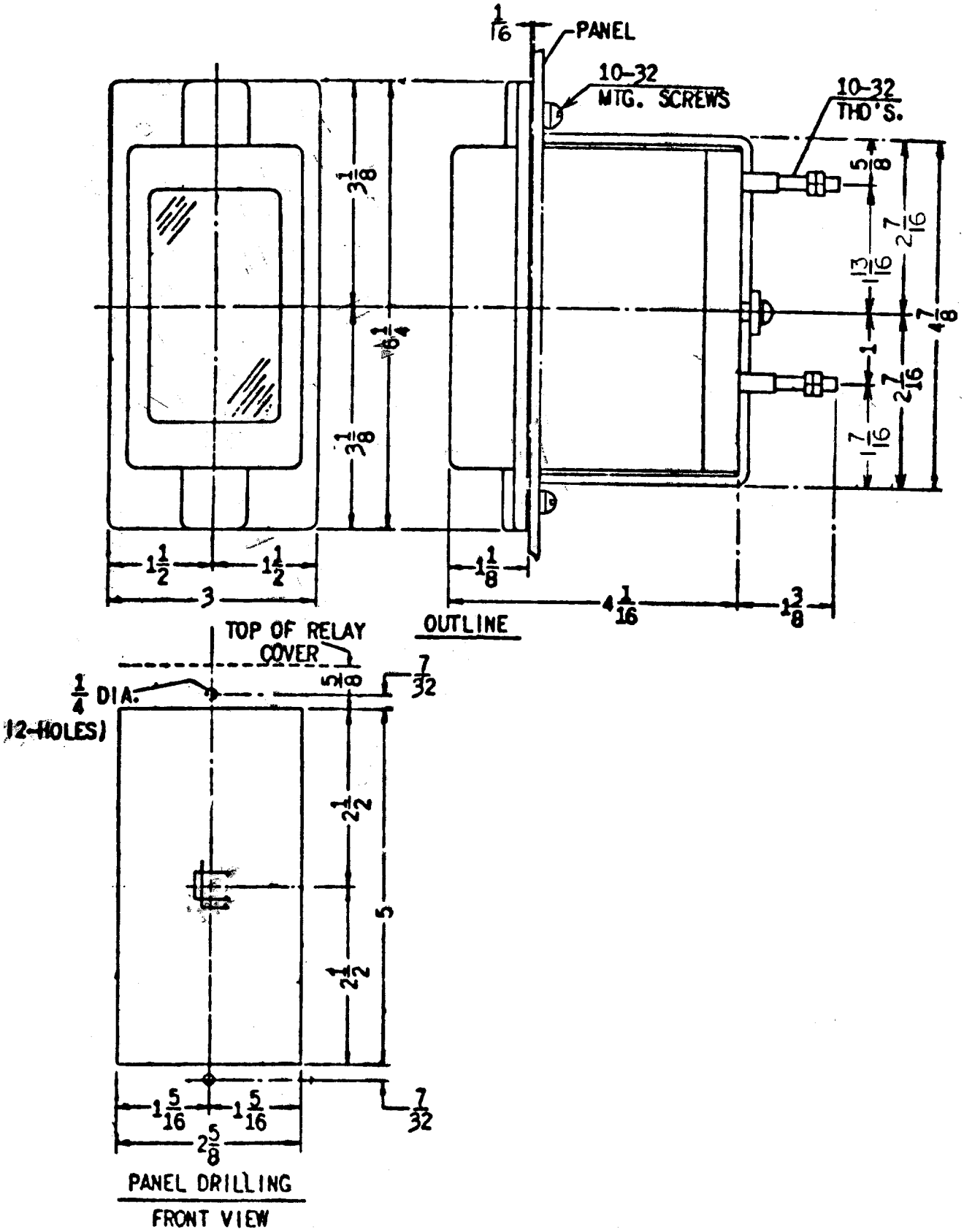


FIGURE 3 (0269A1799-0) OUTLINE AND PANEL DRILLING DIMENSIONS FOR THE SEMI-FLUSH MOUNTED NGA99AB(-) RELAY.

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