INSTALLATION • OPERATION • MAINTENANCE

INSTRUCTIONS

TYPE SG-2 AUXILIARY RELAY

INSTALLATION

Inspect the relay carefully after unpacking to see that no damage has been done in shipping. Operate the relay by hand several times to see whether the moving elements are properly aligned and free from friction. Check the nameplate rating to see that it agrees with conditions under which the relay will be used. The SG-2 for use on alternating current has rectangular copper loops clamped in the tops of the cores, over which the coils are placed. The d-c relay has no loops, but has small bronze buttons in the centers of the cores to prevent the armatures from being held closed by residual magnetism.

Mount the relay with the base against a vertical plane and with the contacts at the top.

Relays having a voltage rating which requires resistors in series with the coils are supplied with vitrified tube resistors which have heavy screw-type terminal lugs.

APPLICATION

The relay can be supplied for use on the following voltages without resistors by the use of suitable coils. The standard coils are --

6, 12, 24, 48, 125 volts d-c
115 and 230 volts, 25 cycles
115, 230, 440 and 575-50 or 60 cycles

and for higher d-c or 25-cycle voltages with resistors.

The relay is intended for use as an auxiliary relay for miscellaneous automatic and remote control switching. It is suitable for many industrial applications also.

Operating Time

Pickup: .033 - .05 second at d-c rating
.016 - .033 second at a-c rating

Dropout: less than .016 second on d-c or a-c

CONSTRUCTION

The standard relay is furnished front-connected, with cover. The operating elements consist of four parts: core, yoke, armature and coil.

The relay has two units each with two make and two break contacts, with the moving contacts common (form C). The relay has two mounting holes on the outside of the cover, and the grounding stud in the rear of the relay. The connection to the grounding stud is made by the use of a screw and shake-proof washer from the rear of the mounting panel.

Relays for use on a-c are assembled with a thin bronze washer between each core. A brass screw holds the yoke and core together. This washer helps to prevent the armature from being held closed by residual magnetism after the relay is de-energized. In case the relay should be dismantled, it is important that this washer be replaced on reassembling it.

CHARACTERISTICS

All relays will pickup on 80% of the nameplate voltage rating or less. No adjustments are provided for varying the pickup. The armature will open at 30% or less on direct current and at 60% or less on alternating current.

Burden

A-C	Closed Gap	60 Hz, 10 VA, .50 P.F.
	Open Gap	60 Hz, 16 VA, .50 P.F.
D-C	3.5 Watts	

Each contact will carry 12 amperes continuous and 30 amperes for one minute.

TABLE I

Contact Gap and Follow Adjustment

	Contact Gap	Contact Follow
Make	1/8-9/64''	3/64''
Break	3/64''	1/32''

The contact interrupting ratings are as follows. All values are non-inductive currents.

External connections may be made with the contacts in series if desired.

Interrupting Rating in Amperes

Volts	D-C 1 Contact	2 Contacts in Series	A-C 1 Contact
24	15	50	50
48	8	35	45
115	2.4	20	30
230	0.75	2.5	20
550	0.25	0.5	10

REPAIR AND RENEWAL PARTS

Major repairs can be most satisfactorily done at the factory. However, for customers equipped to do their own work, parts may be furnished on order. In ordering any part or requesting any other information always give entire nameplate reading.

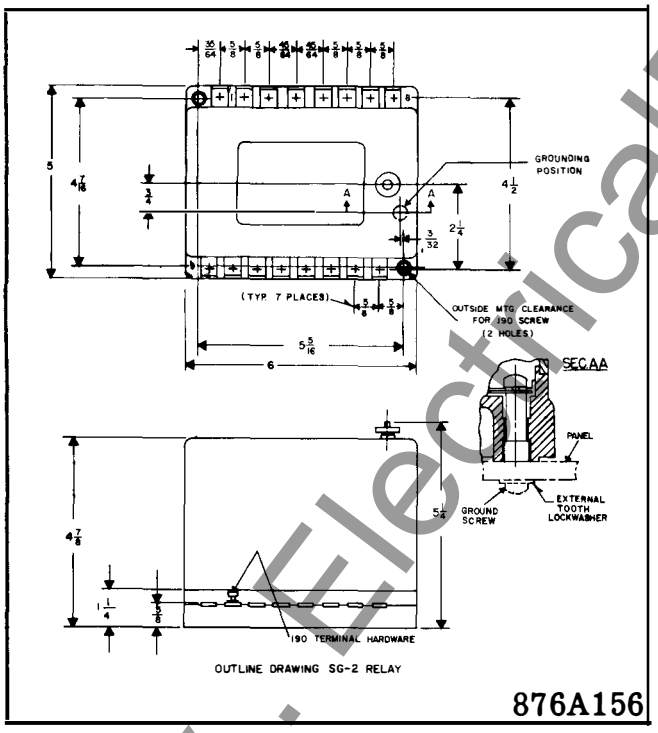

Figure 1. Outline and Drilling Plan for SG-2 Relay

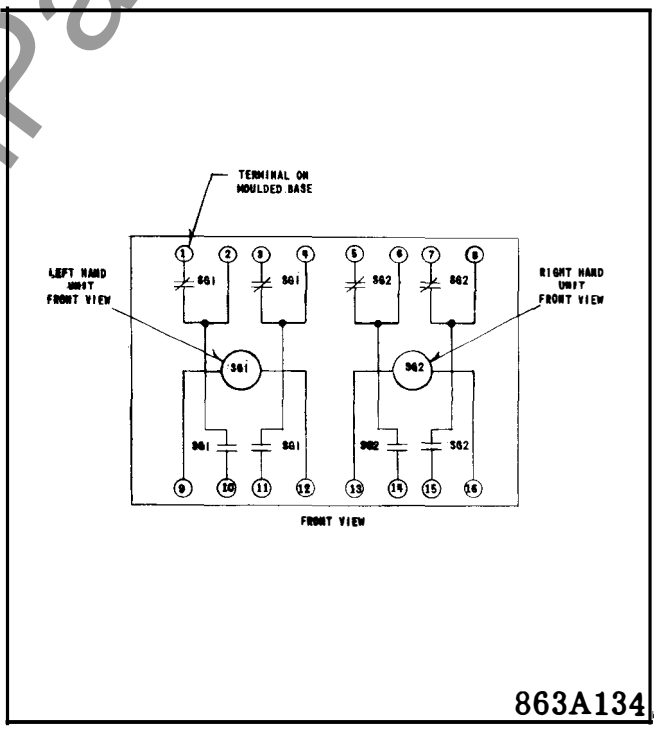

Figure 2. Internal Schematic for Type SG-2 Relay Two Make and Two Break Contacts

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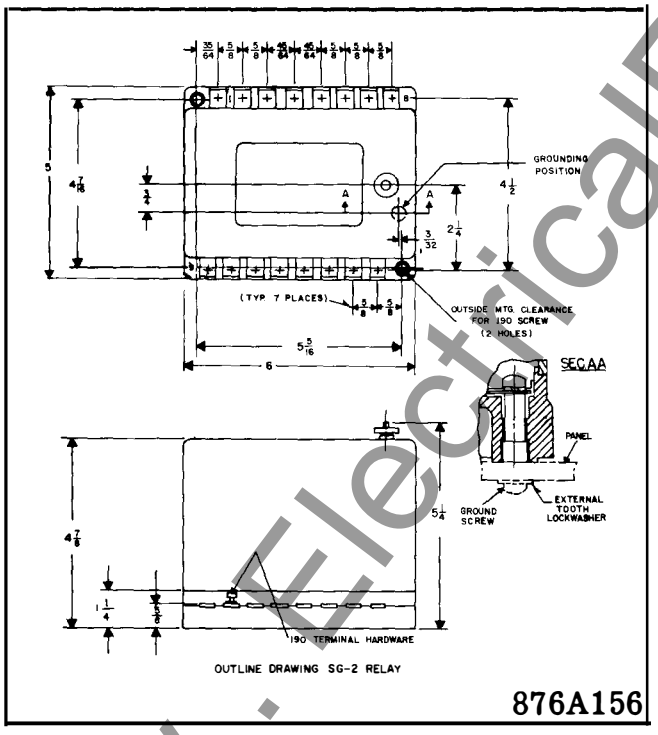

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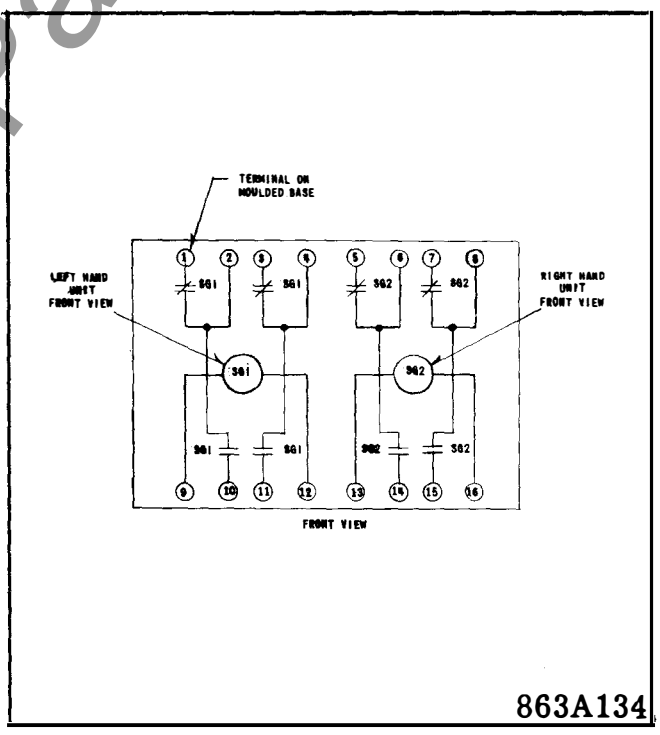

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