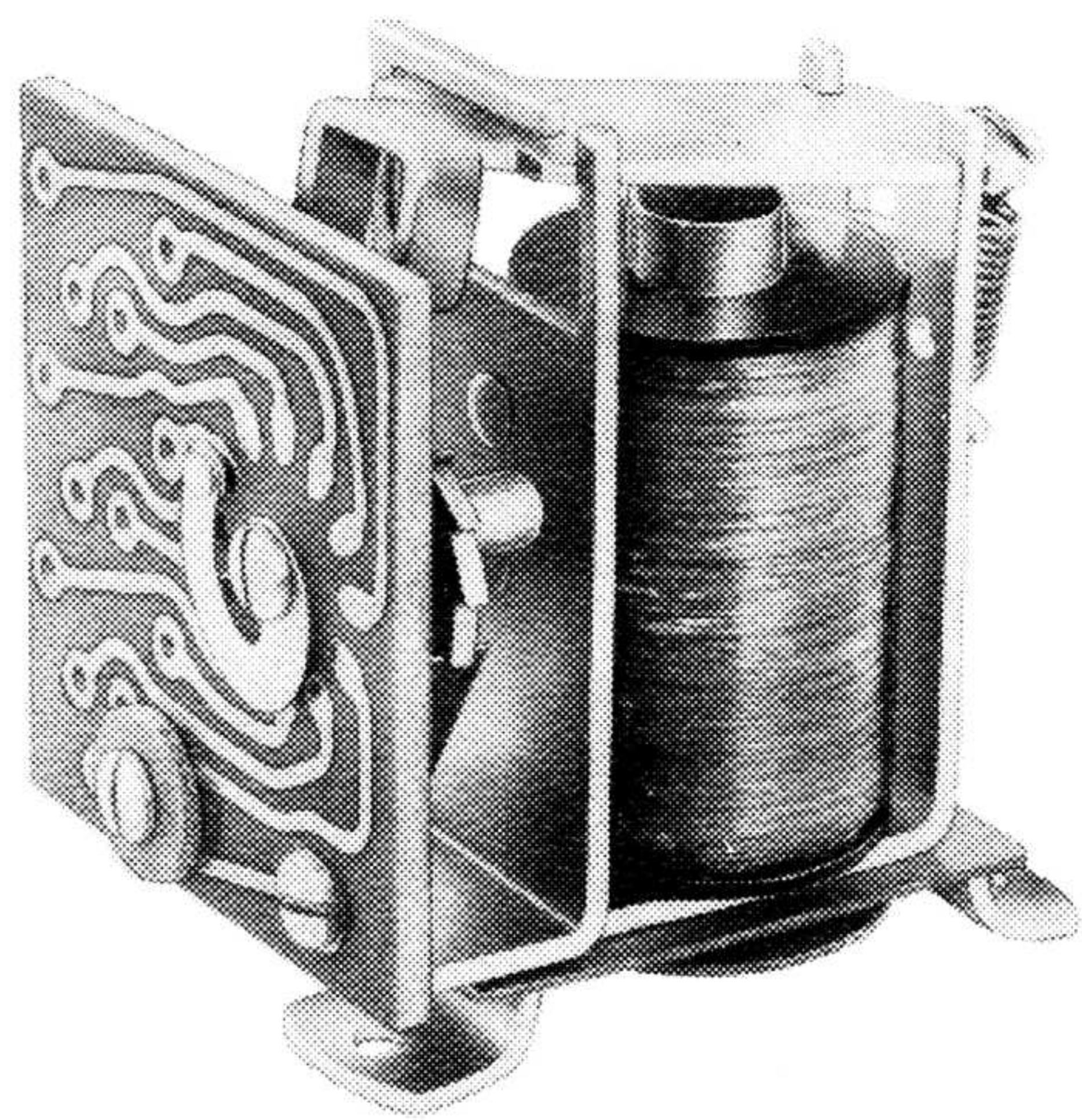


POTTER & BRUMFIELD'S RELAY SERIES



*12 position
stepping relay*

ENGINEERING DATA

The SA is a twelve position stepping relay that employs printed circuit strips to switch currents of up to 250 milliamperes at 115 volts.

This single coil stepping relay utilizes an armature-driven pawl to operate a ratchet wheel. The wheel drives a movable silver contact in steps of 30 degrees over the twelve rhodium plated switch positions on the printed circuit board. The copper circuit strips will conduct up to 5 amps if some method is provided to make and break the circuit. For special applications the printed circuit board can be modified to provide up to 6 additional stepping positions.

Coil voltages range from 6 to 230 volts AC, 50/60 cycles or 6 to 110 volts DC. Standard AC relays are designed for intermittent or pulsed operation. DC versions will withstand three watts continuously.

For applications requiring an enclosed relay, a steel can with a variety of terminals and mountings is available.

The inherent reliability of this relay has qualified it for use as an audio-level stepping device in the remote control unit of television receivers. This versatile relay has been used extensively in applications that require small voltages or currents switched in predetermined steps.

GENERAL:

Description: A 12 position stepping relay.

Insulating Material: Phenolic.

Insulation Resistance: 100 megohms minimum.

Expected Life: 500,000 mechanical operations.

Breakdown Voltage: 500 volts rms between all elements and ground.

Temperature Range: AC: -55° to $+85^{\circ}$ C. (Intermittent duty only)
DC: -55° to $+65^{\circ}$ C. (Continuous duty)

Pull-In: AC: 78% or less of nominal voltage at $+25^{\circ}$ C.
DC: 75% or less of nominal voltage at $+25^{\circ}$ C.

Operate Time: 30 milliseconds maximum.

Terminals: Coil: Pierced solder lugs for two 18 AWG wires.
Contacts: Printed circuit board with 12 holes that accept one 20 AWG wire each.

Enclosure: Hermetically sealed or dust covered in type "A" enclosure.

CONTACTS:

Arrangements: Single-pole with 12 non-shorting steps.

Material: Movable: Silver.
Stationary: Copper printed circuit form rhodium plated at the contact point.

Rating: .25 amp at 115 volts AC, 60 cycle resistive.
Printed circuit strips will conduct up to 5 amps if some means is provided to make or break the circuit.

POTTER & BRUMFIELD

DIVISION OF AMERICAN MACHINE & FOUNDRY COMPANY, PRINCETON, INDIANA

COILS:

Voltage: AC: To 230 volts, 50/60 cycle.
DC: To 110 volts.

Power: AC: 20 voltamps.
DC: 1.5 watts minimum. 5.5 watts maximum.

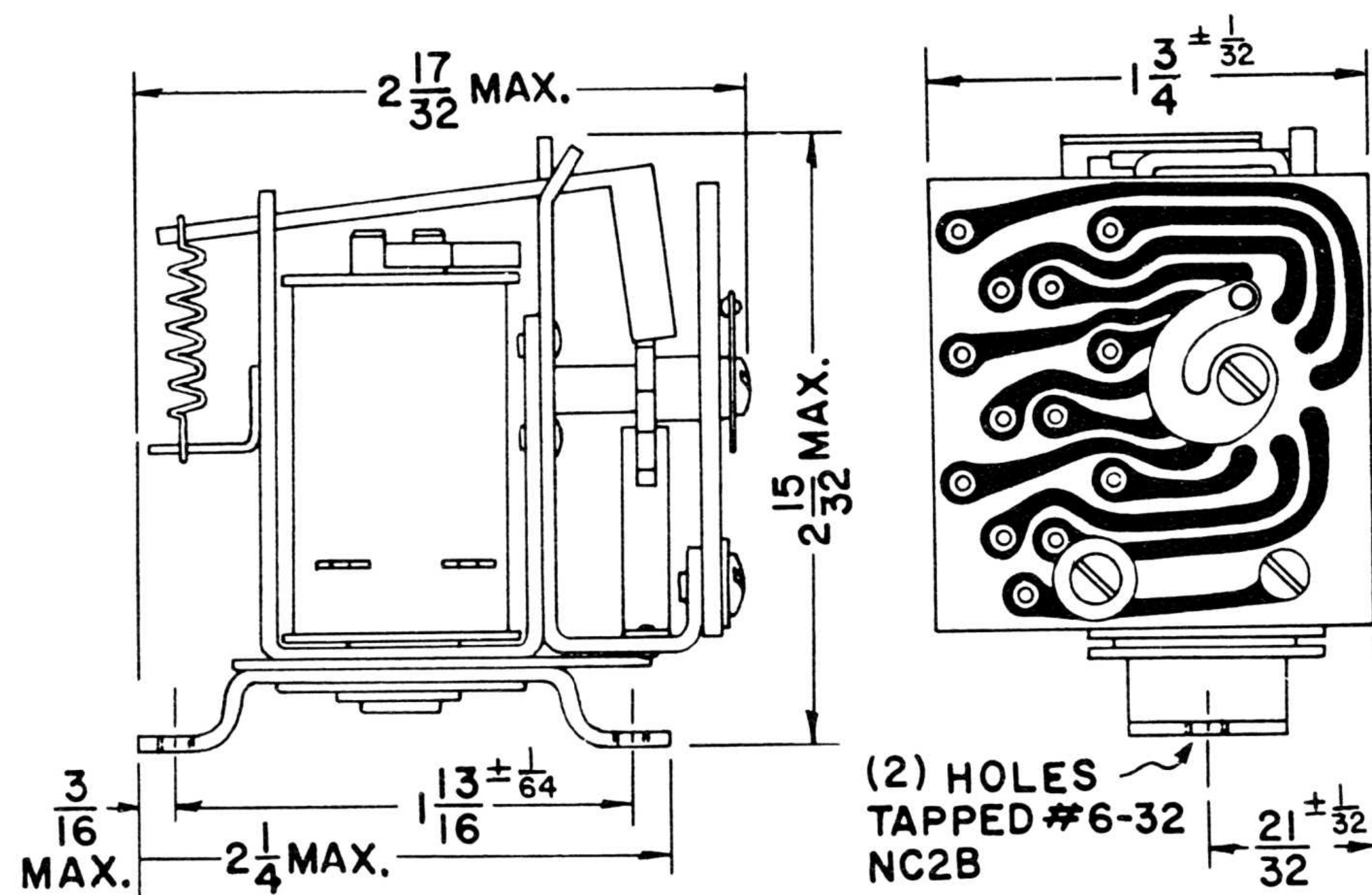
Resistance: DC: 58,000 ohms maximum.

Duty: AC: Intermittent duty only.
DC: Continuous duty.

Treatment: Coils are centrifugally impregnated with high quality electrical insulating varnish.

MOUNTING:

Standard for open relays: Two 6-32 tapped holes on 1-13/16" centers (see mounting).

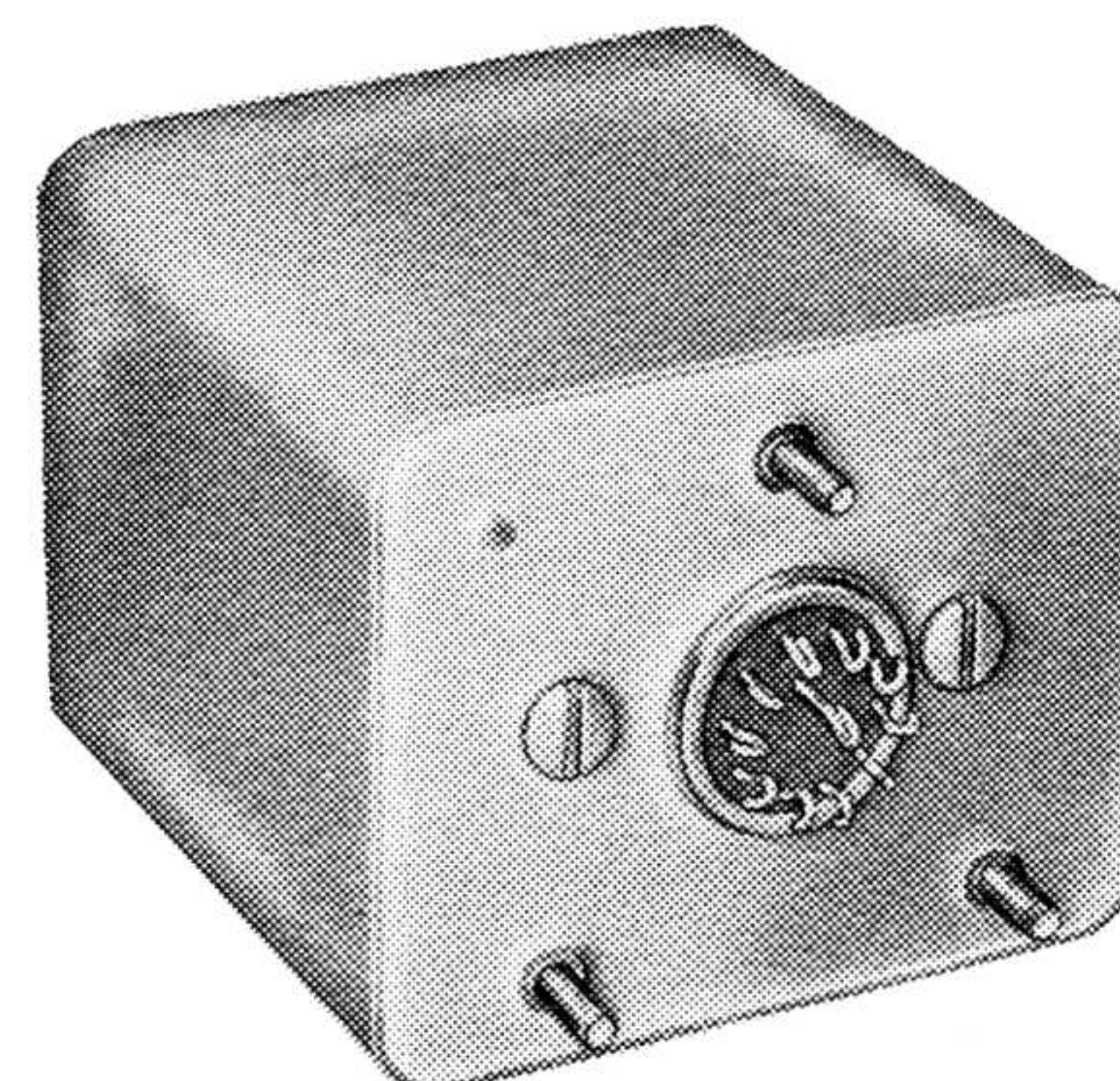
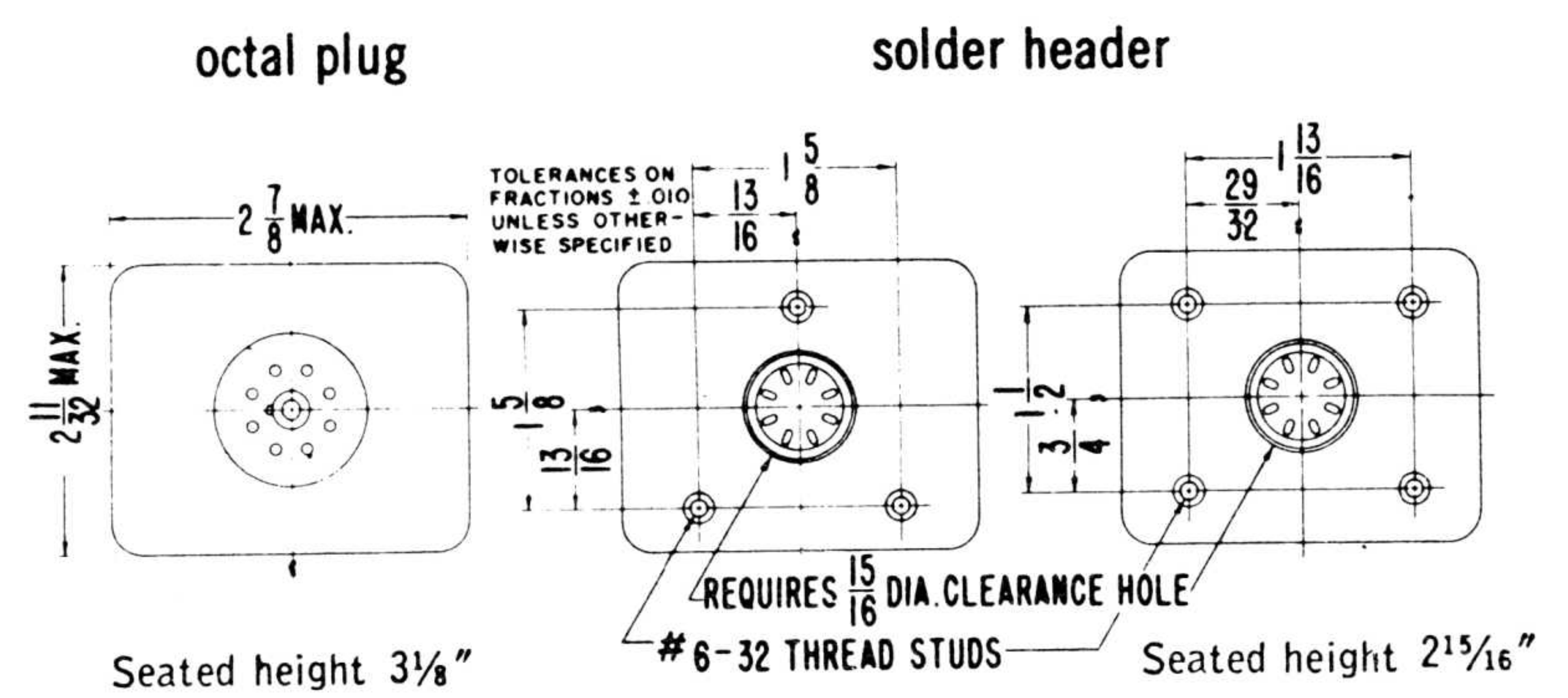


COIL DATA FOR SA RELAYS

DC COILS			AC COILS (50/60 Cycles)	
Nominal Voltage	DC Resistance In Ohms ±10% at +25°C.	Average Current In Milliamps	Nominal Voltage	DC Resistance In Ohms
6	11.2	535	6	0.32
12	47	255	12	1.30
24	192	125	24	4.7
110	4,400	25	115	140

Standard SA series relays are stocked by leading electronic parts distributors throughout the United States and Canada.

MOUNTING



Type A Can