INSTALLATION • OPERATION • MAINTENANCE

INSTRUCTIONS

Type TT-1 Carrier Alarm Relay

CAUTION Before putting relays into service, remove all blocking which may have been inserted for the purpose of securing the parts during shipment, make sure that all moving parts operate freely, inspect the contacts to see that they are clean and close properly, and operate the relay to check the settings and electrical connections.

APPLICATION

The type TT-1 relay is an auxiliary used with the type HKB relaying system as a carrier alarm relay. It is connected in the receiver plate supply circuit and operates upon the reception of carrier to complete an alarm bell circuit.

CONSTRUCTION

The type TT-1 relay consists of a telephone type relay element mounted in a small glass case. The relay has a single normally open silver contact brought out to two terminals. The relay coil is shunted by a resistor and a capacitor in parallel to cancel the effect of the inductance in the operation of the HKB relaying system. The relay is not polarized, and can be connected without regard to direction of current flow.

CHARACTERISTICS

The pickup current of the TT-1 relay is 10 milliamperes d.c. and the dropout is 4 to 6 milliamperes. The pickup current is set higher than the safe minimum receiver current for correct operation of the HKB relay. This allows a check on the carrier channel, and whenever the TT-1 relay pickup, there is sufficient carrier received for proper relay operation.

The coil circuit d.c. resistance is 285 ohms.

INSTALLATION

The relays should be mounted on switchboard panels or their equivalent in a location free from dirt, moisture, excessive vibration and heat. Mount the relay vertically by means of the two mounting studs. Either of these studs may be utilized for grounding the relay. The electrical connections may be made direct to the terminals by means of screws for steel panel mounting or to terminal studs furnished with the relay for ebony-asbestos or slate panel mounting. The terminal studs may be easily removed or inserted by locking two nuts on the studs and then turning the proper nut with a wrench.

ADJUSTMENTS AND MAINTENANCE

The proper adjustments to insure correct operation of this relay have been made at the factory and should not be disturbed after receipt by the customer. If the adjustments have been changed, the relay taken apart for repairs, or if it is desired to check the adjustments at regular maintenance periods, the instructions below should be followed.

The contacts should be periodically cleaned with a fine file. S#1002110 file is recommended for this purpose. The use of abrasive material for cleaning contacts is not recommended, because of the danger of embedding small particles in the face of the soft silver and thus impairing the contact.

The pickup current of the relay is affected by two factors: the armature gap, and the contact spring tension. The dropout current of

the relay is affected by the contact spring tension and the residual gap (armature set screw). The dropout of the relay can be increased by increasing the residual gap. When this is done, the contact gap and follow must be checked. The contact gap in the de-energized position should be at least 15 mils. After the contact closes, the stationary contact should deflect 5 to 10 mils.

RENEWAL PARTS

Repair work can be done most satisfactorily at the factory. However, interchangeable parts can be furnished to the customers who are equipped for doing repair work. When ordering parts, always give the complete nameplate data.

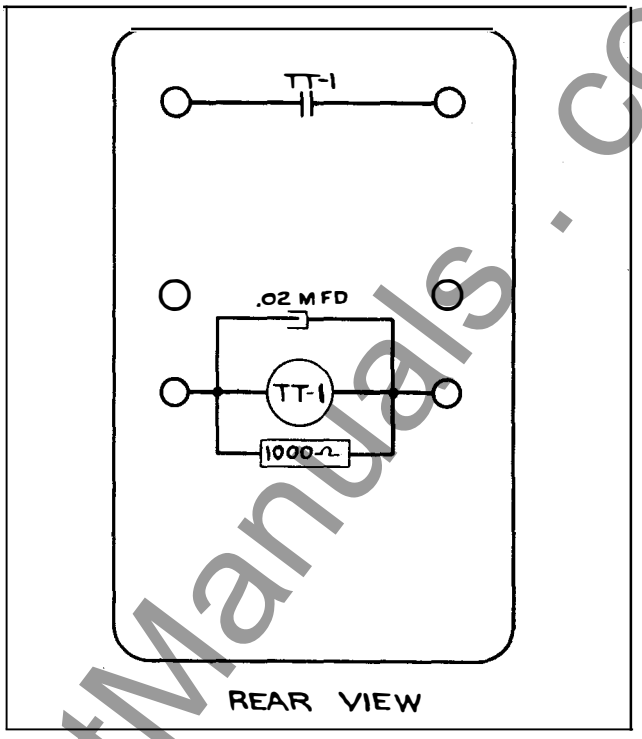

Fig. 1—Internal Schematic of the Type TT-1 Relay.

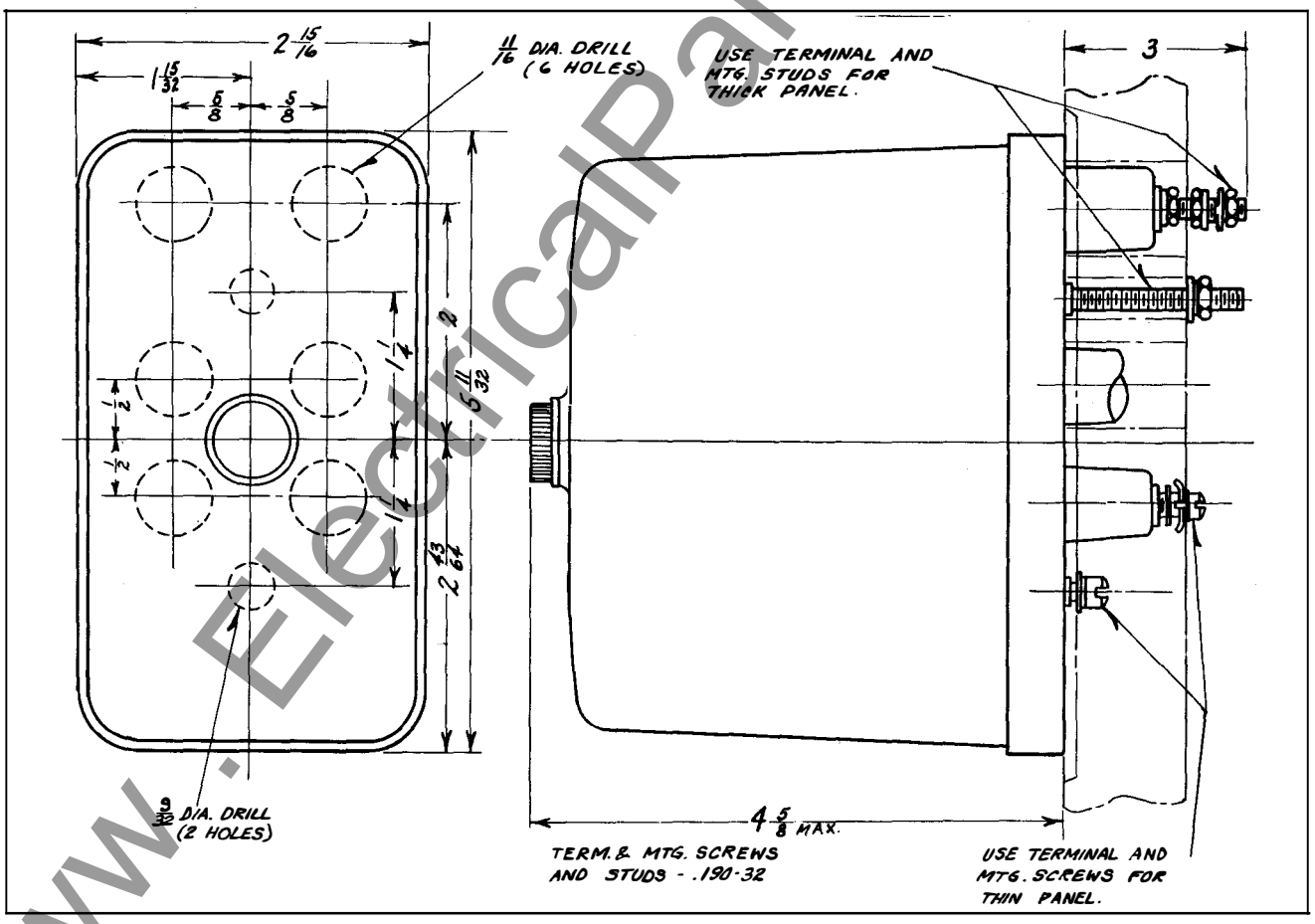

Fig. 2—Outline and Drilling Plan of the Type TT-1 Relay. For Reference Only.

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