INSTALLATION • OPERATION • MAINTENANCE

INSTRUCTIONS

TYPE TT-1 ALARM RELAY FOR TYPE TC CARRIER

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 and SKB relaying system as a carrier alarm relay. It is used with the type TC carrier.

CONSTRUCTION

The type TT-1 relay consists of a telephone type relay element mounted in a small semi-flush or projection moulded case. The relay has a single normally open silver contact brought out to two terminals. The relay coil is shunted by a resistor. The relay is not polarized, and can be connected without regard to to direction of current flow.

CHARACTERISTICS

* The pick-up current of the TT-1 relay is 160-170 milliamperes d.c. and the dropout is 70 to 85 milliamperes. The pick-up current is set higher than the safe minimum receiver current for correct operation of the HKB and SKB relay. This allows a check on the carrier channel, and whenever the TT-1 relay picks up, there is sufficient carrier received for proper relay operation.

* The coil d.c. resistance is 400 ohms, but note that there is a 25-ohms resistor in parallel with the coil.

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 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.

All contacts should be cleaned periodically. A contact burnisher S#182A836H01 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.

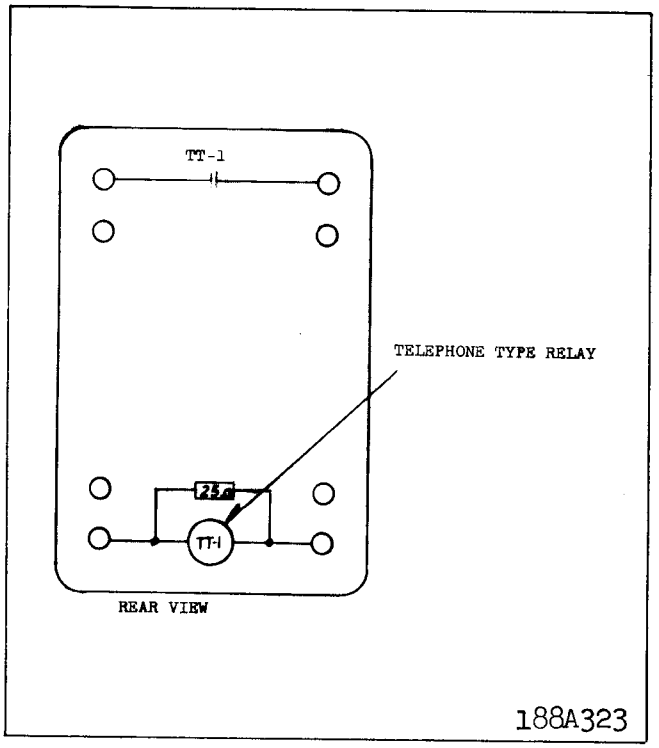
The pick-up current of the relay is affected by two factors: the armature gap, and the contact spring tension. The dropout current of the relay is affected by the contact spring tension and the residual gap (armature set screw). The dropout of the relay can be increased by increasing the residual gap. 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.

SUPERSEDES I.L. 41-953.1A
*Denotes change from superseded issue.

EFFECTIVE FEBRUARY 1968

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.*

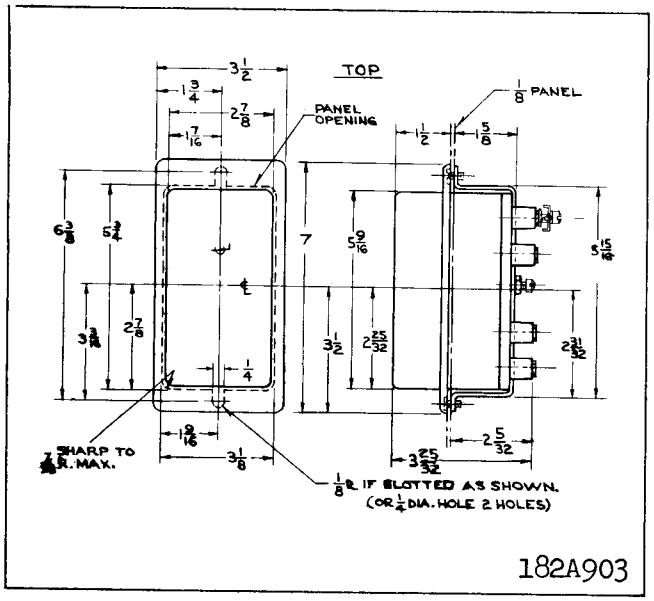


Fig. 2. Outline and Drilling Plan for Type TT-1 Relay in Semi-flush Case. For Reference Only.

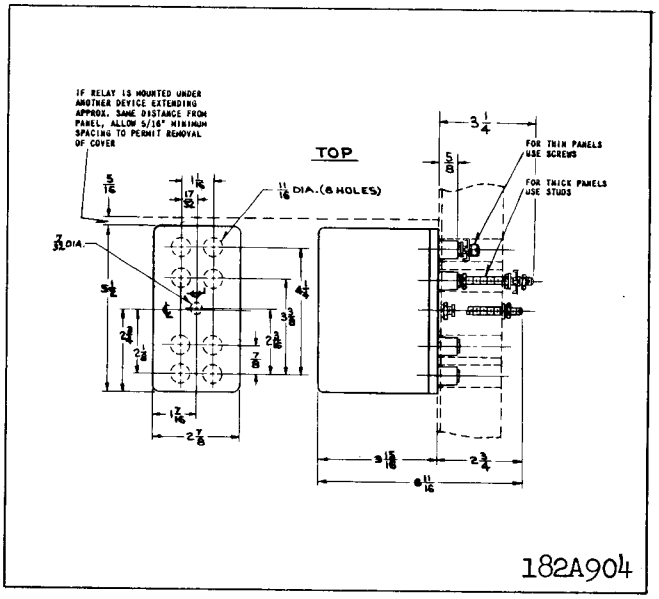


Fig. 3. Outline and Drilling Plan for the Projection Type TT-1 Relay. For Reference Only.

WESTINGHOUSE ELECTRIC CORPORATION
RELAY-INSTRUMENT DIVISION **NEWARK, N. J.**
Printed in U.S.A.

INSTALLATION • OPERATION • MAINTENANCE

INSTRUCTIONS

TYPE TT-1 ALARM RELAY FOR TYPE TC CARRIER

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 and SKB relaying system as a carrier alarm relay. It is used with the type TC carrier.

CONSTRUCTION

The type TT-1 relay consists of a telephone type relay element mounted in a small semi-flush or projection moulded case. The relay has a single normally open silver contact brought out to two terminals. The relay coil is shunted by a resistor. The relay is not polarized, and can be connected without regard to to direction of current flow.

CHARACTERISTICS

* The pick-up current of the TT-1 relay is 160-170 milliamperes d.c. and the dropout is 70 to 85 milliamperes. The pick-up current is set higher than the safe minimum receiver current for correct operation of the HKB and SKB relay. This allows a check on the carrier channel, and whenever the TT-1 relay picks up, there is sufficient carrier received for proper relay operation.

* The coil d.c. resistance is 400 ohms, but note that there is a 25-ohms resistor in parallel with the coil.

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 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.

All contacts should be cleaned periodically. A contact burnisher S#182A836H01 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.

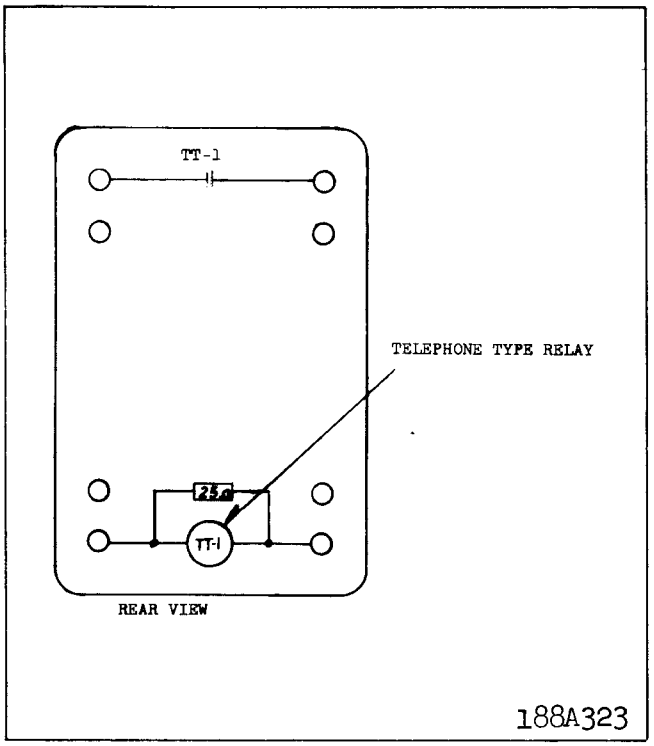
The pick-up current of the relay is affected by two factors: the armature gap, and the contact spring tension. The dropout current of the relay is affected by the contact spring tension and the residual gap (armature set screw). The dropout of the relay can be increased by increasing the residual gap. 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.

SUPERSEDES I.L. 41-953.1A
*Denotes change from superseded issue.

EFFECTIVE FEBRUARY 1968

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.*

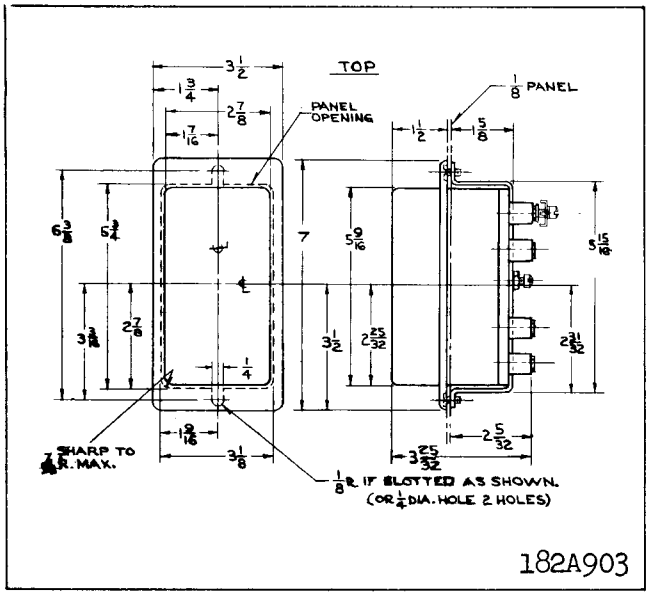


Fig. 2. Outline and Drilling Plan for Type TT-1 Relay in Semi-flush Case. For Reference Only.

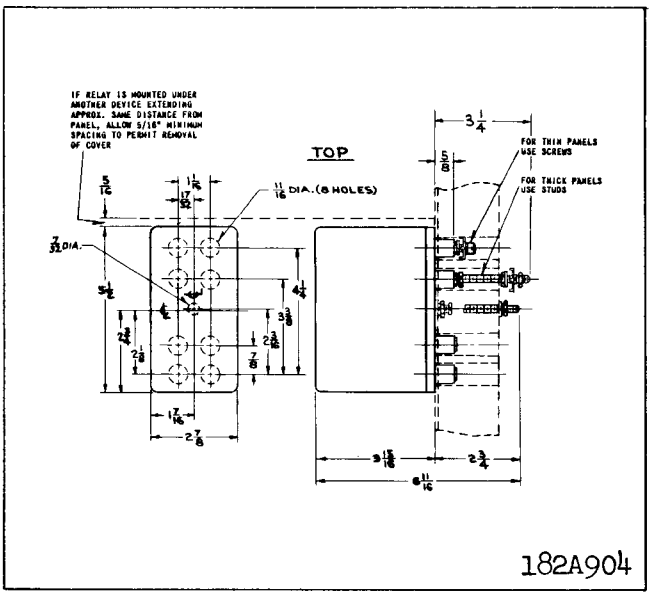


Fig. 3. Outline and Drilling Plan for the Projection Type TT-1 Relay. For Reference Only.

WESTINGHOUSE ELECTRIC CORPORATION
RELAY-INSTRUMENT DIVISION **NEWARK, N. J.**
Printed in U.S.A.