



INSTALLATION

198 4555K10-004A

Supersedes 4555K10-004

TYPE DB-30 AMMETERS AND VOLTMETERS

(THIS PUBLICATION FORMERLY IDENTIFIED AS GEH-1561)

Cut and drill the panel as indicated in Fig. 1. Complete all drilling and wiring on the switchboard before mounting the instruments.

Wires carrying heavy current should be kept as far as possible from the instruments. The instrument must be mounted in a level position; any deviation from zero should be corrected by means of the zero adjustment.

AMMETERS

D-c ammeters rated above 60 amperes necessitate the use of shunts which are to be connected to the ammeter by means of the leads provided (see Warning below). When leads are supplied by the purchaser, their resistance should agree with the value stamped on the instrument nameplate.

WARNING: Shunts should be connected in the grounded side of the line. When this is not possible, or the circuit cannot be grounded, avoid removing the cover since the instrument windings, as well as the scale and pointer, are at line potential. Use caution to avoid contacting this potential.

Rheostat Adjustment

As the resistance of the shunt leads used in certain applications cannot be predetermined at the factory, it has been found desirable to furnish some d-c ammeters with an internal rheostat which should be adjusted for non-standard lead resistances as follows:

Connect a resistance bridge across the shunt end of the leads (shunt disconnected) and the instrument across the opposite end. Set the resistance bridge for the **INSTRUMENT + LEAD RESIS.** value stamped on the nameplate. Loosen the locknut (located under the nameplate), and turn the rheostat shaft until a zero deflection is secured on the bridge galvanometer. Retighten the locknut.

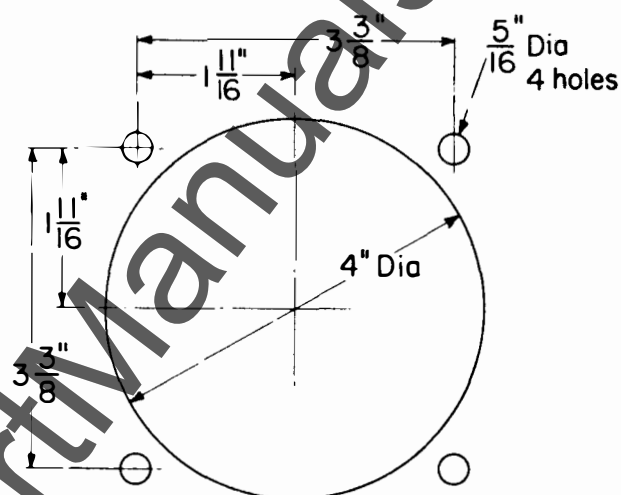


Fig. 1. Cut-out and panel-drilling dimensions

If a resistance bridge is not available, connect a standard millivoltmeter across the shunt end of the leads (shunt disconnected) and the instrument across the opposite end. Apply a low adjustable d-c voltage across the shunt end of the leads and adjust this voltage until the indication on the standard millivoltmeter agrees with the fullscale millivolts (marked **FULL SCALE MV**) on the instrument nameplate. Loosen the locknut (located under the nameplate), and turn the rheostat shaft (which projects through the nameplate) until the ammeter reads full scale. Retighten the locknut.

NOTE: The maximum lead resistance is about 1 ohm for a 100-millivolt instrument and about 0.26 ohm for a 50-millivolt instrument.

VOLTMETERS

D-c voltmeters rated above 750 volts, and all d-c ground detectors are furnished with external resistors.

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the General Electric Company.

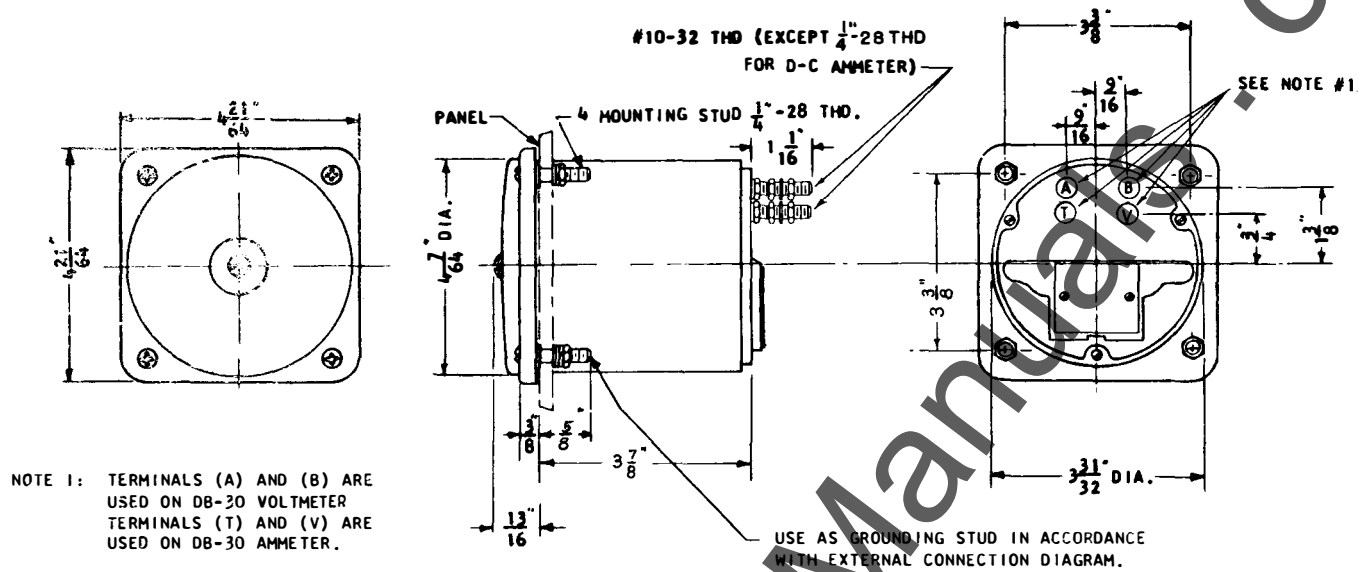


Fig. 2. Dimensions of Type DB-30 ammeters and voltmeters

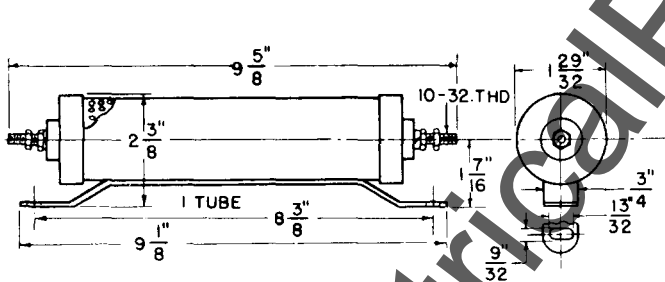


Fig. 3. Single-tube, Form-3 resistor

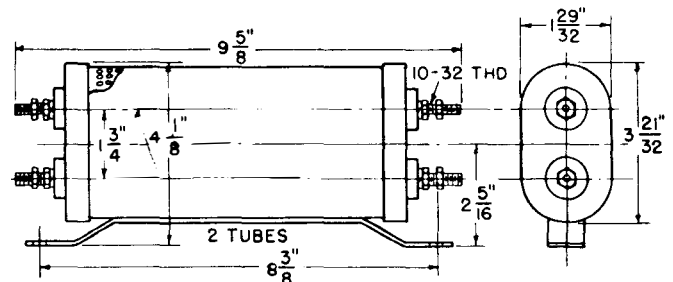


Fig. 4. Two-tube, Form-3 resistor

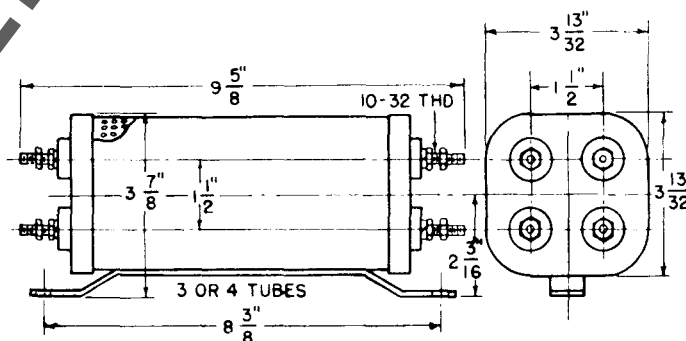


Fig. 5. Four-tube, Form-3 resistor

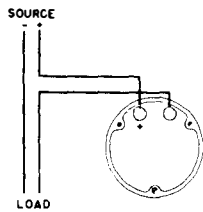


Fig. 6. Self-contained d-c ammeter

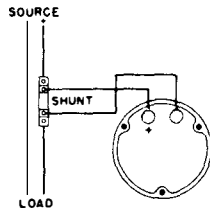


Fig. 7. D-c ammeter with external shunt

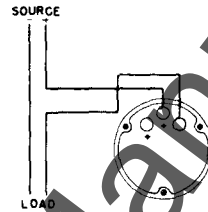


Fig. 8. Low range on double-rated d-c ammeter

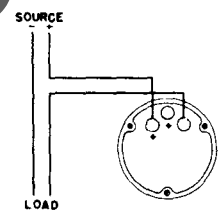


Fig. 9. High range on double-rated d-c ammeter

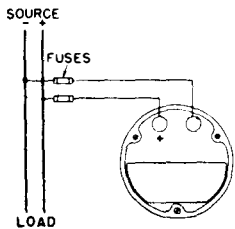


Fig. 10. Self-contained d-c voltmeter

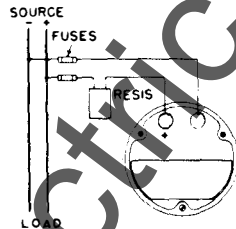


Fig. 11. D-c voltmeter rated above 750 volts (with external resistor)

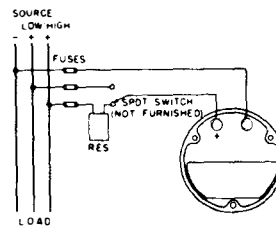


Fig. 12. Double-rated d-c voltmeter (illustrating use of switch to select range)

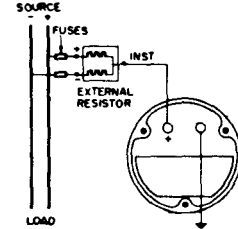


Fig. 13. D-c ground detector for voltages up to and including 750 volts (with external resistor)

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