



GR 1863



GR 1864

1863 and 1864 Megohmmeters

GR 1863

- 5 test voltages: 50 to 500 V
- 50 k Ω to 20 T Ω ($2 \times 10^{13}\Omega$)
- economical, simple operation
- direct reading, safe, stable

GR 1864

- 200 test voltages: 10 to 1090 V
- 50 k Ω to 200 T Ω ($2 \times 10^{14}\Omega$)
- direct reading, safe, stable
- simple operation

If one of these GR megohmmeters doesn't exactly suit your high-resistance measurement needs, the other one should. Although the instruments are similar in appearance and accuracy, their operating ranges differ to match differing needs in the laboratory and production area.

Choice for production and inspection The 1863 Megohmmeter will measure resistance at any of five common test voltages up to 500 V, has fewer controls, and is the lower priced model. It is, therefore, the best selection when several test stations are to be equipped, when the operators are inexperienced, or when specifications call for standard insulation-testing voltages.

Choice for laboratory investigations The 1864 is the more flexible of the two instruments. The test voltage can be set to any value from 10 to 109 volts in 1-volt steps and to 1090 volts in 10-volt steps. Thus, the 1864 can be set to any common, or uncommon, test voltage for ceramic, mica or paper capacitors, or other devices. The reverse resistance of rectifiers can be readily measured; the low test voltages available are especially useful in measuring solid-state diodes. An additional range permits measurements up to 2×10^{14} ohms (200 T Ω).

Both instruments are easy to use with direct-reading meter indication and lighted range switch that shows the multiplier for each range and voltage. The maximum current possible at the terminals is limited to a safe 5 milli-

amperes and a panel light near the terminals warns when voltage is present. Stable power supplies and feedback voltmeter circuit minimize drift and time-wasting adjustments. Guard and ground terminals permit measurement of grounded or ungrounded two- or three-terminal resistors. The instruments are supplied for rack mounting or in a convenient, portable Flip-Tilt case that is a stand for the meter in use and protects it in transit and storage.

— See **GR Experimenter** for March-April 1969.

SPECIFICATIONS

Voltage and Resistance Ranges:

| Voltage | R_{min} Full Scale | 10% of Scale | R_{max}^{\dagger} 2 1/2% of Scale | Useful Ranges | |
|-----------------|-------------------------|--------------|----------------------------------------|-----------------|----|
| 50, 100 V | 50 k Ω | Type 1863 | 2 T Ω | 7 | |
| 200, 250, 500 V | 500 k Ω | | | 20 T Ω | 7 |
| 10 to 50 V | 50 k Ω | Type 1864 | 2 T Ω^* | 7* | |
| 50 to 100 V | 200 k Ω | | | 20 T Ω | 8 |
| 100 to 500 V | 500 k Ω | | | 20 T Ω^* | 7* |
| 500 to 1090 V | 5 M Ω | | | 200 T Ω | 8 |

\dagger Note: Meter deflects to the left, so 2 1/2% is near the right; however, the meter scale reads naturally, from left to right.

* Recommended limit.

Resistance Accuracy: $\pm 2\%$ (meter reading + 1%) on lowest 5 ranges (min reading is 0.5). For 6th, 7th, 8th ranges, respectively, add $\pm 2\%$, $\pm 4\%$, $-$, for the 1863; $\pm 2\%$, $\pm 3\%$, $\pm 5\%$, for the 1864.

Voltage Accuracy (across unknown): $\pm 2\%$.

Short-Circuit Current: 5 mA approx.

Power: 100 to 125 or 200 to 250 V, 50 to 400 Hz, 13 W.

Supplied: Mounting hardware with rack models.

Mechanical: Flip-Tilt case and rack mount. DIMENSIONS (wxhxd): Portable, 6.63x10x6.75 in. (245x254x172 mm); rack, 19x7x4.63 in. (483x178x118 mm). WEIGHT: Portable, 9.5 lb (4.4 kg) net, 14 lb (7 kg) shipping; rack 11 lb (5 kg) net.

| Description | Catalog Number |
|-------------------------|----------------|
| 1863 Megohmmeter | |
| Portable Model | 1863-9700 |
| Rack Model | 1863-9701 |
| 1864 Megohmmeter | |
| Portable Model | 1864-9700 |
| Rack Model | 1864-9701 |