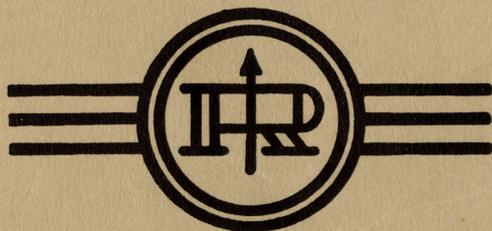


RADIOMETER

Spot Galvanometer

type GVM22

Elektriske måleapparater
til videnskabelig og
industriel anvendelse





858J

Spot Galvanometers type GVM

The RADIOMETER Spot Galvanometers constitute a series of self-contained, easily portable galvanometer outfits. They are provided with a taut-suspension d'Arsonval galvanometer system, the moving coil of which is thoroughly balanced so that the galvanometers will operate on a fairly level table. All galvanometers are aperiodically damped by means of a built-in shunt resistor. Measurements can be made even at high potentials without disturbance from leakage currents because the system is insulated from the case.

The instruments are provided with vibration absorbing rubber feet, and a clamping device effectively protects the moving coil system in transit. The protection is both mechanical and electrical because the clamp simultaneously locks and short-circuits the coil.

The light spot appears as a bright circular spot with a vertical central hair line. The light intensity is sufficient for good reading in daylight. The lamp can readily be replaced without disturb-

ing the system. In the standard model it is fed from a built-in line transformer, adjustable to the common line voltages. On request, however, the galvanometers can be provided with extra terminals for battery supply. The translucent scale of the standard model is provided with divisions from -5 to $+105$ (see the above illustration). Center zero scales with ± 55 divisions can be supplied on request. The scale is readily interchangeable from outside and the zero adjustment of the instrument completely covers the left half of the scale. Both calibrated and uncalibrated instruments are made. The calibrated types are direct reading in current and/or voltage and are provided with a range switch giving a series of measuring ranges. The uncalibrated types are provided with a switch by means of which the sensitivity can be reduced 10 times without changing the input resistance of the instrument. The exact sensitivity of these types is stated in the instructions supplied with each instrument. In all types the switch has a position in which the coil is short-circuited.

Calibrated types:

Type GVM21 (sensitive to voltage): full-scale deflection for 0.5–1–2–5–10–50 and 100 mV (40 Ω /mV). Coil resistance: about 12 Ω . Shunt resistance: 60 Ω . Oscillation time: 1 second.

Type GVM22 (universal): full-scale deflection for 1–2–5–10–20–50 and 100 mV (200 Ω /mV) and 5–10–20–50–100–200 and 500 μ A. In the 5 μ A position the voltage drop is 0.8 mV. In the other positions it is from 3 to 6 mV. Coil resistance: about 170 Ω . Shunt resistance: 1.2 k Ω . Oscillation time: 1 second.

Type GVM23 (sensitive to current): full-scale deflection for 2–5–10–20–50–100–200 and 500 μ A. In the 2 μ A position the voltage drop is 2 mV. In the other positions it is from 10 to 15 mV. Coil resistance: about 1 k Ω . Shunt resistance: 7.5 k Ω . Oscillation time: 1 second.

Uncalibrated types:

Type GVM11. Sensitivity: about 7×10^{-8} amps per division. Coil resistance: about 12 Ω . Shunt resistance: about 80 Ω . Oscillation time: 2.4 seconds.

Type GVM13. Sensitivity: about 0.7×10^{-8} amps per division. Coil resistance: about 1000 Ω . Shunt resistance: 10 k Ω . Oscillation time: 1.4 seconds.

The uncalibrated types are furnished with a

switch that provides for decreasing the sensitivity in the ratio 1:10 without changing the input resistance. They can be supplied with center zero. In this case the type designation will be GVM11M and GVM13M, respectively.

General:*Accuracy:*

The accuracy at 20° C is within 1% or 0.2 division, whichever is the greater. The temperature coefficient is negligible, except for the 0.5 mV range of the type GVM21 where it is -0.12% per degree centigrade, and the 1 and 2 mV ranges of the type GVM22 where it is -0.3% and -0.16% , respectively.

Power supply:

The built-in transformer can be set to 110–127–150–200–220 and 240 volts, 40–60 cycles a-c.

Extra terminals for battery supply can be provided on request.

Lamp:

6 volt 5 watt with swan socket type BA15S.

Mounting and finish:

Metal case finished in grey enamel.

Over-all dimensions:

H: 155 mm; W: 195 mm; D: 200 mm.

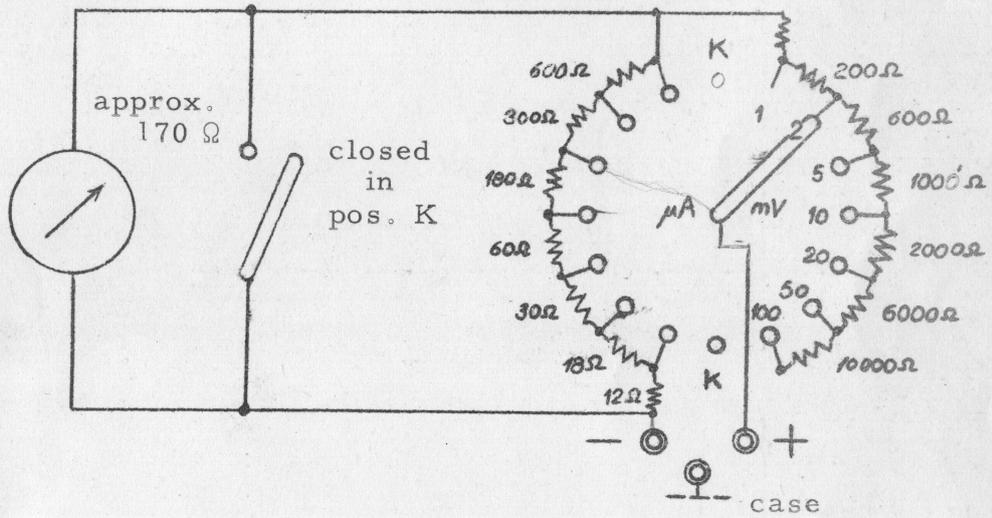
Weight:

2.5 kilos.

Data subject to change without notice.



SPOT GALVANOMETER
 Type GVM22
 (sensitive to both current and voltage)



The galvanometer has the measuring ranges 5, 10, 20, 50, 100, 200, and 500 microamps, and 1, 2, 5, 10, 20, 50, and 100 millivolts. The instrument will stand 50 times overload. At voltage measurements the consumption is 5 microamps at full-scale deflection (200 Ω/mV). At current measurements the voltage drop at full-scale deflection is as follows:

5 microamps	about 0.8 millivolts
10	- 3.4 -
20	- 4.7 -
50	- 5.5 -
100	- 5.7 -
200	- 5.9 -
500	- 6.0 -