



Turnkey Instruments Ltd
Tel: +44 (0)1606 330020 www.turnkey-instruments.com



g-meter vehicle brake tester

The **g-meter** instrument is designed for statutory annual MOT brake performance testing and are VOSA-approved for class III, IV, V, VI & VII vehicles.

It is also suitable for statutory testing of HGVs and are also TÜV-certified as brake efficiency measuring instruments.

- **Displays brake efficiency in %g or m s⁻²**
- **VOSA-certified for MOT testing on all classes of vehicle**
- **Self-aligning – automatically senses direction of travel**



The **g-meter** is designed to be used for statutory annual MOT brake performance testing of class III, IV, V, VI & VII vehicles in accordance with the Motor Vehicle (Tests) Regulations 1981, as amended. The **g-meter** can also be used for statutory MOT brake performance testing of Heavy Goods Vehicles in accordance with the Goods Vehicles (Plating and Testing) Regulations 1988, as amended.

The **g-meter** is an electronic decelerometer which works by comparing the deceleration of the vehicle under test with the local acceleration due to gravity. The reading is shown on a bright LED display as Brake Efficiency in percent. A Brake Efficiency of 0% represents no deceleration, a Brake Efficiency of 100% represents a deceleration equal to the acceleration due to gravity.

The electronic deceleration sensor used in **g-meter** gives it a number of advantages over older devices using mechanical pendulums, namely:

- It is self-aligning and will automatically sense the direction of travel. Precise alignment of the instrument with the direction is, therefore, not necessary.
- It is self levelling, enabling position on a seat or dashboard.
- It measures the peak deceleration with an electronically precise time constant on 0.3 seconds.
- It will only start to record the peak deceleration after braking has been sustained over 10% for 0.5 seconds drops back.
- It will retain the peak value once the deceleration drops back to less than 10% for at least 0.5 seconds.
- A computer generated calibration certificate with NAMAS traceability can be produced.



g-meter Features

Specification

Sensing principle	Proprietary temperature compensated multi-axis electronic decelerometer
Measurement range	0 to 2.0g g=9.81 metre/sec/sec
Accuracy	Better than $\pm 3\%$ g
Resolution	1%
Display	2 digit, 7 segment LED Readable in sunlight
Time constant	0.3 seconds
Start window	0.5 seconds
Stop window	0.5 seconds
Brake threshold	10% g
Tilt compensation	2.5 degrees per g

Temperature range	-10°C to +40°C
Humidity	Up to 100%. Electronics are fully encapsulated
Battery	9V PP3 alkaline MN1604 or 6LR61
Battery life	20 hours approx
Size	120mm diameter octagon 20mm deep
Weight	300 grams
Calibration	Annual Multipoint calibration, traceable to national physical standards

