



1007 DC Millivolt Potentiometer & Calibrator

Time Electronics

Calibration, Test & Measurement

- **3 Ranges up to 1V**
- **0.02% Accuracy**
- **20mA Output Current**
- **Short circuit and overload protected**
- **Safety terminals**
- **Removable protective boot**
- **Battery level indicator**



The **1007** can be used for potentiometric voltage measurement in addition to its operation as a millivolt source. The null zero and sensitivity are adjustable via front panel controls - maximum sensitivity enables null balance to resolve 3 microvolt.

The 1007 is suitable for calibration and simulation of thermocouples. Accurate voltages equivalent to the output from a thermocouple can easily be set on a 1007, enabling fast calibration of temperature measuring equipment. Alternatively, the 1007 can measure thermocouples output by operating as a potentiometer.

Power is provided by 6 AA batteries. Battery life is several months, depending on usage. The battery condition is monitored by an indicator, which is mounted on the top of the unit. The 1007 has up to 20mA drive current and is short circuit and overload protected. An off/normal/reverse output polarity switch is provided.

Safety Terminals: Fully compatible with 4mm shrouded plugs, as well as standard plugs, bare wires, and spade terminals.

Added Protection: The 1007 comes fitted with an ergonomic rubber boot (9028) providing increased protection and durability. The boot has a textured grip for comfortable handling and openings at the top and bottom to allow access to the battery meter and a position to place labels if required. The boot is easy to remove if the user prefers a stand-alone unit or to house the 1007 in the 9027 carry case.

Unit comes supplied with dry cell batteries. The source version of this instrument without null measuring facility is also available (TE 1006).

1007 Technical Specifications

Output:	0 – 1V in 100uV steps, 0 – 100mV in 10uV steps, 0 – 10mV in 1uV steps.
Accuracy:	± 0.02% of setting, ± 0.02% of range. ± 1uV.
Output Resistance:	Less than 0.2Ω on 1V and 100mV ranges. 1Ω on 10mV range.
Max Output Current:	1V and 100mV ranges - 20mA. 10mV range - limited by 1Ω output resistance.
Output Stability:	Less than 60 ppm/°C. Less than 100 ppm per 3 months (Non cumulative).
Output Polarity:	Positive or negative switch selected. A centre 'off' position is also provided.
Output Noise Level:	Less than 30 ppm of range.
Reference Source:	Precision zener diode selected for stability and low temperature coefficient.
Power Supply:	Six AA size batteries. A battery condition indicator is provided. Rechargeable NiCad cells may be used and charged without removal from the boot via the charging socket on the top of the instrument. Rechargeable batteries and mains charger are available as an optional extra.
Null Balance Display:	On a front panel meter, zero and sensitivity controls are provided: Maximum sensitivity: ± 20 uV f.s.d. (3uV resolution). Minimum sensitivity: ± 200 mV f.s.d. Input resistance: Greater than 1MΩ.

General Specification

Dimensions:	200 x 75 x 110mm (215 x 100 x 120mm including protective boot)
Weight:	0.8kg (1.2kg including protective boot)
Optional Extras:	Carry Case Rechargeable Battery Packs - 6 NiCad Cells plus mains charger. Calibration Certificates - UKAS or National Standard (NPL) traceable.
Country of Origin:	UK

Ordering Information

Code	Description
1007	DC Millivolt Potentiometer & Calibrator
1006	DC Millivolt Source
9027	Leatherette Carry Case
9529	Rechargeable Battery Pack – (6 NiCad Cells + 240V Mains Charger)
9528	Rechargeable Battery Pack – (6 NiCad Cells + 110V Mains Charger)
9150	Factory (NPL Traceable) Calibration Certificate
9101	UKAS Calibration Certificate (ISO 17025)

Due to continuous development Time Electronics reserves the right to change specifications without prior notice.