



1006 DC Millivolt Source Model 404S

- **3 Ranges up to 1V**
- **0.05% Accuracy**
- **20 mA Output Current**
- **Short circuit and overload protected**
- **Portable**



Introduction

The 1006 is an accurate low cost millivolt source suitable for voltage injection applications.

Three output ranges are provided to give adjustable output values from $1\mu\text{V}$ to 1V with a basic 0.05% accuracy.

The 1006 is suitable for operation by unskilled personnel and does not require standardisation or calibration prior to use.

For signal injection, the operator needs only to switch on, check the battery condition, select the range and set the required voltage using the thumb-wheel switches.

The 1006 uses a precision reference diode and low temperature co-efficient resistors to give a highly stable output.

Power is provided by 6-AA (penlight size) batteries. Battery life is several months, depending on usage. The battery condition is monitored by an indicator which is mounted on the end of the unit.

The 1006 has up to 20 mA drive current and is short circuit and overload protected. A normal /off / reverse output polarity switch is provided.

As an accurate millivolt source, the 1006 can be used for many applications including thermocouple simulation using appropriate lookup table, chart recorder calibration, A/D converter and DMM calibration and as a stable voltage for backing off DC offsets.

Supplied with dry cell batteries and sturdy carry case.



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Specifications

Output	0-999.9mV in 3 ranges 0-999.9mV in 0.1mV steps 0-99.99mV in 10 μ V steps 0-9.999mV in 1 μ V steps
Accuracy	$\pm 0.05\%$ of setting + $\pm 0.02\%$ of range + $\pm 1\mu$ V.
Output Resistance	Less than 0.2 Ω on 1 V and 100 mV ranges. 1 Ω on 10mV range.
Maximum Output Current	1V and 100mV ranges –20mA. 10mV range – Up to short circuit value although it should be noted that loads of less than 1k Ω will give greater than 0.1% error.
Output Voltage Stability	Less than 60 ppm/ $^{\circ}$ C. Less than 100 ppm per 3 months. (Non cumulative.)
Operative Temperature	- 10 $^{\circ}$ C to + 60 $^{\circ}$ C.
Output Polarity	Positive or negative switch selected. A centre 'off' position is also provided.
Output Noise Level	Less than 30 ppm of f.s.
Reference Source	Precision zener diode, selected for stability and low temperature coefficient.
Maximum Overload	The instrument can withstand continuous short circuit on the output for all ranges.
Power supply	6-AA size (51x14mm) batteries. A battery condition display indicates when the batteries should be changed. An alternative power source is 6 Ni-Cad cells of the same dimensions. These can be recharged via a socket on the side of the unit. The 6 rechargeable batteries and mains recharger are available as an optional extra.

General Information

Dimensions	200 x 107 x 74mm (Overall length height width)
Weight	1kg
Optional Extras	Rechargeable Battery Packs – 240V and 110V mains Calibration Certificates – traceable to N.P.L. and UKAS
Country of Origin	UK

Ordering Information

Description	Order Code
D.C. Millivolt Source Model 404S (0.05% Accuracy)	1006
Rechargeable Battery Pack – (6 Nicad Cells + 240V Mains Charger)	1008
Rechargeable Battery Pack – (6 Nicad Cells + 110V Mains Charger)	1009
N.P.L. Traceable Calibration Certificate	9150
UKAS Calibration Certificate	9100