



1030 MicroCal Voltage & Current Source

Time Electronics

Calibration, Test & Measurement

- 10mV, 100mV, 1V ranges
- 10mA, 100mA ranges
- 0.1% accuracy
- 0 - 8V available
- Precision 10-turn dial
- Battery Powered 9V PP3
- Battery level indicator



The **1030** is a compact, low cost, portable voltage and current calibrator for general purpose signal injection. It is suitable for voltage and current loop signal simulation as well as thermocouple simulation. The precision 10-turn dial provides a conventional feel to setting the output with a setting resolution of 1 part in a 1000 (0.1%)

Three voltage ranges give an adjustable output from 10uV to 1V and two current ranges for 10uA to 100mA.

An additional 0 to 8V output can be obtained by using a precision 1Kohm resistor that is supplied with the unit. The resistor is connected across the output terminals and the 10mA current range selected. This allows the output to be set between 0 and +/- 8V with a 10mV resolution and an accuracy of 0.3% of full scale.

The 1030 is simple to operate and does not require any standardisation prior to use. The operator needs only to switch on, check the battery condition, and set the required range and output value.

The 1030 is supplied with a leatherette carry case.

1030 Technical Specifications

Voltage Ranges:	0 – 1V (1mV resolution) 0 – 100mV (100uV resolution) 0 – 10mV (10uV resolution) 0 – 8V (10mV resolution), using external precision 1Kohm resistor (included)				
Current Ranges:	0 – 100mA (100uA resolution), 0 – 10mA (10uA resolution)				
Accuracy:	<table border="0"> <tr> <td>Voltage:</td> <td>10mV: 0.2% of full scale 100mV: 0.1% of full scale 1V: 0.1% of full scale 8V: 0.3% of full scale (using 1Kohm resistor & current o/p)</td> </tr> <tr> <td>Current:</td> <td>10mA: 0.2% of full scale 100mA: 0.2% of full scale</td> </tr> </table>	Voltage:	10mV: 0.2% of full scale 100mV: 0.1% of full scale 1V: 0.1% of full scale 8V: 0.3% of full scale (using 1Kohm resistor & current o/p)	Current:	10mA: 0.2% of full scale 100mA: 0.2% of full scale
Voltage:	10mV: 0.2% of full scale 100mV: 0.1% of full scale 1V: 0.1% of full scale 8V: 0.3% of full scale (using 1Kohm resistor & current o/p)				
Current:	10mA: 0.2% of full scale 100mA: 0.2% of full scale				
Linearity:	0.15%				
Temperature Coefficient:	150ppm per °C				
Noise:	30ppm of full scale (1V range)				
Battery:	PP3 size, 9V. Approx 60 hours life. An optional alternative power source is a NiCad or Ni-Mh rechargeable cell of the same type. This can be recharged via the socket on the top of the unit without removing the cell from the unit.				
Battery Condition:	Monitored by front panel indicator.				
Output Polarity:	Positive or negative, switch selected. A centre 'off' position is also provided.				
Maximum o/p Current:	1V, 100mV ranges: 20mA, 10mV, 8V ranges: Limited by output resistance.				
Maximum o/p Voltage:	8V (current ranges)				
Output Resistance:	0.2ohms on 1V and 100mV range 10ohms on 10mV range, 1Kohm on 8V range				
Maximum Overload:	The 1030 can withstand continuous open circuit or short circuit on all ranges.				

General Specification

Dimensions:	115mm x 62mm x 55mm. Complete with zip pouch carrying case
Weight:	0.5kg
Optional Extras:	Rechargeable Battery Pack: A mains re-charger and NiCad rechargeable battery are available. The battery can be recharged without being removed. Calibration Certificate traceable to NPL UKAS Calibration Certificate

Ordering Information

Code	Description
1030	MicroCal (Combined Voltage and Current Source)
1031	Rechargeable Battery Pack (NiCad Battery and 240V Mains Charger)
1032	Rechargeable Battery Pack (NiCad Battery and 110V Mains Charger)
9155	Factory (NPL Traceable) Calibration Certificate
9110	UKAS Calibration Certificate (ISO 17025)

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

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