



Time Electronics
Calibration, Test and Measurement

Portable Voltage and Current Test Instruments

Calibrators • Simulators • Sources

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Voltage and Current Test Equipment

Handheld and transportable Calibrators, Simulators, and Sources



1006 DC Millivolt Source

1007 DC Millivolt Potentiometer and Calibrator

High accuracy handheld millivolt sources primarily used for voltage injection or potentiometric voltage measurement (1007). Applications include thermocouple simulation and calibration of A/D converters and chart recorders.

- 3 ranges up to 1V
- Accuracy 0.02% of setting + 0.02% of rng
- 20mA output current
- Best resolution 1 μ V
- Short circuit and overload protected
- LED null measuring facility (1007)
- Safety terminals
- Removable protective boot
- Powered by 6 x AA batteries
- 100 hours typical battery life
- Optional carry case
- H215 x W100 x D120mm, weight 1.2kg



1010 DC Voltage Calibrator

A highly stable and accurate calibrator designed for applications requiring a precision voltage source of low internal resistance. Suitable for calibration, linearity, and gains stability measurements on DC amplifiers, voltmeters, data loggers, and chart recorders.

- 0.01 μ V to 10V in 5 ranges
- Accuracy 0.02% of setting
- 10ppm/hr stability
- 30mA output current
- Safety terminals
- Battery or mains operation
- 40 hours typical use between charges
- Battery level indicator
- Optional carry case
- W217 x H160 x D193mm, weight 3.3kg



1024 DC Current Calibrator

A portable benchtop DC current source for calibration and test applications from nanoamp levels to 100mA. Applications include current transducer testing and calibration and linearity tests on digital and electronic current meters.

- 0 to 100mA output in 5 ranges
- Accuracy 0.02% of setting
- 10ppm/hr stability
- 30ppm/ $^{\circ}$ C temperature coefficient
- Up to 15V output drive
- Null meter measures to 1 μ A resolution
- Safety terminals
- Battery or mains operation
- 12 hours typical use between charges
- Battery level indicator
- Optional carry case
- W217 x H160 x D193mm, weight 3.3kg



1021 Milliamp Source with Null Indicator

A precision DC current source suitable for calibration and test applications from micro-amp levels up to 100mA. The 1021 is used to calibrate current sensitive transducers and their associated indicating and recording instruments.

- 0 to 100mA output in 3 ranges
- Accuracy 0.02% of setting + 0.02% of rng
- 25ppm/hr stability
- Up to 40V output drive
- LED null measuring facility
- Short circuit overload protected
- Safety terminals
- Removable protective boot
- 10 hours typical use between charges
- Battery charger supplied
- Optional carry case
- H215 x W100 x D120mm, weight 1.4kg



1077 Milliamp Transducer Simulator

A multi-purpose handheld test instrument that can be used as an adjustable current load, adjustable power supply, or precision current source. The 1077 is commonly used for the testing and simulation of milliamp transducer systems.

- 3 operating modes
- Accuracy 0.02% of setting + 0.02% of rng
- 100mA source and load in 3 ranges
- 24V line mode
- Variable drive source 14 to 40V
- Short circuit and overload protected
- Safety terminals
- Removable protective boot
- 10 hours typical use between charges
- Battery charger supplied
- Optional carry case
- H215 x w100 x D120mm, weight 1.5kg



1017 Voltage/Current/Resistance Calibrator

A portable multifunction calibrator with voltage, current, and resistance ranges. The 1017 is suitable for calibrating a wide range of instruments including thermocouples, transducers, transmitters, and platinum resistance thermometers.

- DC Voltage 10nV to 100V
- DC Current 100nA to 100mA
- Resistance 10mΩ to 10kΩ
- Accuracy 0.005% of setting + 0.002% of rng
- 1ppm setting resolution
- Noise <2ppm (0.1 to 1Hz)
- Stability <5ppm/day, <25ppm/yr
- Residual resistance <200mΩ
- Deviation control – Voltage and Current
- Battery or mains operation
- 12 hours typical use between charges
- W250 x H119 x D314mm, weight 2.4kg



1030 Voltage/Current Source

A simple operation pocket-sized calibrator suitable for voltage and current loop signal simulation as well as thermocouple simulation. A cost-effective and popular instrument used in various applications across industries.

- 10mV, 100mV, 1V ranges
- 10mA, 100mA ranges
- Accuracy 0.1% of range
- Linearity 0.15%
- Up to 8V output (using 1kΩ resistor)
- Precision 10-turn dial
- 1kΩ resistor supplied
- Battery level indicator
- Battery powered 9V PP3
- 60 hours typical battery life
- Supplied with carry case
- H115 x w62 x D55mm, weight 0.24kg



1044 Voltage/Current Calibrator

A precision handheld calibrator that can be used as a general purpose current and voltage source. High performance and ease of use make it suitable for test engineers, R&D, service, and calibration technicians.

- Measure voltage and current
- Source voltage and current
- 3 voltage ranges 0 to 20V
- 3 current ranges 0 to 20mA
- Accuracy 0.05% of range
- 4.5 digit LCD display
- Battery powered 9V PP3
- 28 hours typical battery life
- Optional mains power supply
- Supplied with carry case
- H142 x w78 x D50mm, weight 0.30kg
- Voltage/Current/Loop version 1048





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Portable V & I Instruments Ordering Information

1006	DC MILLIVOLT SOURCE - 0.02% ACCURACY
9027	Carrying Case
9529	Rechargeable Battery Pack (8 Cells + 230V Mains Charger)
9528	Rechargeable Battery Pack (8 Cells + 110V Mains Charger)
C150	Factory Calibration Certificate (NPL traceable)
C100	UKAS Calibration Certificate (ISO 17025)
1007	DC MILLIVOLT POTENTIOMETER AND CALIBRATOR - 0.02% ACCURACY
9027	Carrying Case
9529	Rechargeable Battery Pack (8 Cells + 230V Mains Charger)
9528	Rechargeable Battery Pack (8 Cells + 110V Mains Charger)
C150	Factory Calibration Certificate (NPL traceable)
C101	UKAS Calibration Certificate (ISO 17025)
1010	DC VOLTAGE CALIBRATOR - 0.02% ACCURACY
9021	Carrying Case
C151	Factory Calibration Certificate (NPL traceable)
C102	UKAS Calibration Certificate (ISO 17025)
1017	DC MULTIFUNCTION V/I/R CALIBRATOR - 0.005% ACCURACY
C152	Factory Calibration Certificate (NPL traceable)
C109	UKAS Calibration Certificate (ISO 17025)
1021	DC CURRENT SOURCE WITH NULL METER - 0.02% ACCURACY
9027	Carrying Case
9529	Rechargeable Battery Pack (8 Cells + 230V Mains Charger)
9528	Rechargeable Battery Pack (8 Cells + 110V Mains Charger)
C153	Factory Calibration Certificate (NPL traceable)
C105	UKAS Calibration Certificate (ISO 17025)
1024	DC CURRENT CALIBRATOR WITH NULL MEASURING - 0.02% ACCURACY
9021	Carrying Case
C154	Factory Calibration Certificate (NPL traceable)
C106	UKAS Calibration Certificate (ISO 17025)
1030	COMBINED VOLTAGE AND CURRENT SOURCE (MICROCAL) - 0.1% ACCURACY
1031	Rechargeable Battery Pack (Battery + 230V Mains Charger)
1032	Rechargeable Battery Pack (Battery + 110V Mains Charger)
C155	Factory Calibration Certificate (NPL traceable)
C110	UKAS Calibration Certificate (ISO 17025)
1044	DC VOLTAGE AND CURRENT CALIBRATOR - 0.05% ACCURACY
7643	230V Mains Power Supply (not charger)
7652	110V Mains Power Supply (not charger)
C156	Factory Calibration Certificate (NPL traceable)
C133	UKAS Calibration Certificate (ISO 17025)
1048	VOLTAGE / CURRENT / LOOP CALIBRATOR - 0.02% ACCURACY
7643	230V Mains Power Supply (not charger)
7652	110V Mains Power Supply (not charger)
C176	Factory Calibration Certificate (NPL traceable)
C138	UKAS Calibration Certificate (ISO 17025)
1077	MILLIAMPERE TRANSDUCER SIMULATOR (TRANSIM) - 0.02% ACCURACY
9027	Carrying Case
9529	Rechargeable Battery Pack (8 Cells + 230V Mains Charger)
9528	Rechargeable Battery Pack (8 Cells + 110V Mains Charger)
C158	Factory Calibration Certificate (NPL traceable)
C108	UKAS Calibration Certificate (ISO 17025)

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