



Time Electronics

5025E Multifunction Calibrator



- 0 to 1050V AC/DC voltage
- 0 to 22A AC/DC current
- 10Ω to 1GΩ resistance
- Thermocouple simulation
- Digital frequency
- Capacitance
- PT100 simulation
- Optional clamp meter calibration
- RS-232 and USB interfaces
- PC Virtual Control Software included
- Supplied with 5 piece test lead set

CALIBRATION AT AN AFFORDABLE PRICE

A precision multi-product calibrator designed for wide calibration workload coverage at an affordable cost. Accurately test and verify both traditional and new test equipment with a calibrator that meets both technical and budget requirements. The 5025E is ideal for companies requiring a calibrator that can be implemented quickly and easily, providing immediate return on investment.

The 5025E is fitted with AC/DC voltage to 1050V, AC/DC current to 22A, digital frequency to 10MHz, decade resistance to 1GΩ, simulated variable resistance from 40Ω to 40kΩ, conductance, capacitance, thermocouple and PT100 simulation.

In addition external adaptors are available for clamp meter calibration (up to 1100A) and optical tachometer calibration. Also available is a power amplifier which increases the 5025E's AC/DC voltage output drive capabilities to 100mA. This addition allows even the most demanding analogue instruments to be tested.

MULTI INSTRUMENT CALIBRATION

The 5025E can calibrate various instruments and devices; bench and handheld multimeters, frequency meters, ohm meters, AC/DC millivoltmeters, thermocouple and PT100 meters, clamp meters, and many other measurement devices.

SIMPLE OPERATION

Functions and ranges are easily accessed from the front panel. Increase and decrease keys per digit, are used to quickly set the output value. Deviation control then enables the user to finely adjust the output value as a percentage (+/- 9.999%). All this information is shown on a clear, easy to read LED display.

VIRTUAL CONTROL SOFTWARE

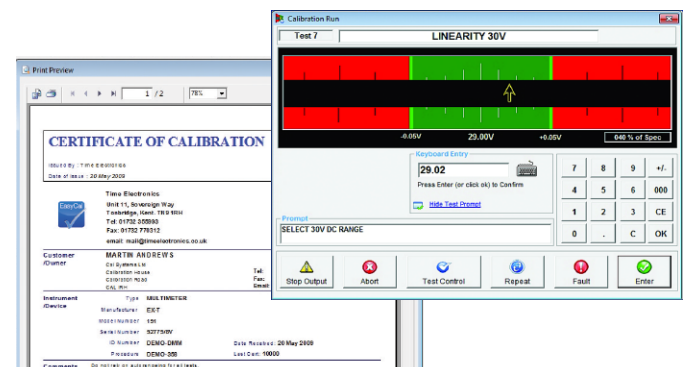
The 5025E is supplied as standard with Time Electronics' windows based Virtual Control software. It allows quick and direct input of any value required. The remote SCPI command is displayed to help users develop custom applications.



EASYCAL SOFTWARE

Connect the 5025E to a PC/Laptop (via RS-232 or USB) installed with Time Electronics' EasyCal software and automate the calibration process. This provides increased speed of calibration and consistency of results.

Produce calibration certificates and reports to ISO 9001, ISO 17025, and other international quality standards.



5025E Specifications

TECHNICAL SPECIFICATIONS

Function	Range / Values	Best 1 year Specification
Voltage DC	0 to \pm 1050V	\pm 40ppm of setting
Current DC	0 to \pm 22A 1100A with clamp meter adaptor (option 9780)	\pm 120ppm of setting
Voltage AC	1mV to 1050V (10Hz to 20kHz, sine-wave)	\pm 0.04% of setting
Current AC	10 μ A to 22A (20Hz to 1kHz, sine-wave) 100A with current transformer (option 9790) 1100A with clamp meter adaptor (option 9780)	\pm 0.07% of setting
Decade Resistance	10 Ω , 100 Ω , 1k Ω , 10k Ω , 100k Ω , 1M Ω , 10M Ω , 100M Ω & 1G Ω	\pm 60ppm of setting
Conductance	100ms to 1ns (Fixed values, decade steps)	\pm 60ppm of setting
Simulated Resistance	40 Ω to 40k Ω (Variable)	\pm 0.02% of setting
Thermocouple Simulation	-200 to 1800°C (Type J, K, R, T, S, B, E, N)	\pm 0.3°C
PT100 Simulation	-140°C to 850°C	\pm 0.15°C
Capacitance	10nF, 20nF, 50nF, 100nF, 1 μ F(100V Max)	\pm 0.25%
10MHz Digital Frequency/Period	0.1Hz to 10MHz / 100ns to 10s	\pm 20ppm of setting

OPTIONS (option code in brackets)

Power Calibration (9797)	22A, 1050V, 23kW, 45 to 400Hz	ACV: 0.03%, DCV: 0.01%. ACI: 0.1%, DCI: 0.03%
Phase/Power Factor	\pm 90.00°/ 0.00 to 1.00PF	\pm 0.3°
Oscilloscope Calibration (9770)		
Amplitude	10mV to 200mV and 5mV to 200mV 50 Ω (square-wave or DC)	\pm 0.05%
Frequency/Period	0.1Hz to 100MHz / 100ns to 10s in 1, 2, 5, 10 sequenced steps	\pm 20ppm (\pm 0.1ppm with option 9783)
Duty Cycle	3 frequencies: 100Hz, 1kHz, 10kHz, settable from 0 to 100%	
Fast-Rise	<850ps. Bandwidth checking up to 400MHz	

GENERAL SPECIFICATIONS

Warm up.....	30 minutes to full accuracy
Settling Time	Less than 5 seconds
Interfaces.....	RS-232 and USB
Temperature Performance	Operating: 5 to 40°C, Full Spec: 23°C +/- 5°C, Storage: -10°C to 50°C
Operating Humidity/Altitude	< 80% non condensing / Altitude: 0 to 3km. Non operating: 3km to 12km
Line Power.....	100 to 230V AC 50/60 Hz. 200W maximum
Dimensions / Weight	W455 x H155 x D480mm. Weight: 16.5kg
Supplied With.....	Basic test lead set, virtual control software, operation manual, and RS-232 cable

ORDERING INFORMATION

5025E	Entry Level Multifunction Calibrator	9760	Power Amplifier (60V AC, 90V DC 100mA)
9797	Power Calibration (0 to 20kW AC and DC)	9085	Soft Carry Case for 5025
9770	Oscilloscope Calibration (1mV to 200V, 0.1Hz to 100MHz)	9728	19" Universal Rack Mount Kit
9783	Oven-Controlled Frequency Reference (9770 option required)	9796	Premium Test Lead Set
9773	Optical Tacho Adaptor	C159.....	Factory Calibration Certificate (NPL traceable)
9780	Clamp Meter Adaptor (1 & 50 turn coil)	C103.....	UKAS Calibration Certificate (ISO 17025)
9790	100 Amp AC Current Transformer	ECFLA.....	EasyCal Software (see separate datasheet for options)

Full specifications are available on request. Due to continuous development Time Electronics reserves the right to change specifications without prior notice.

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