



5025 Multifunction Calibrator

Time Electronics

Calibration, Test & Measurement

- 0 - 1050 V AC/DC voltage
- 0 - 22 A AC/DC current
- 1Ω - 1GΩ resistance
- Thermocouple simulation
- Digital Frequency
- Oscilloscope Calibration
- PT100 simulation
- Capacitance & Inductance
- Power Calibration
- Clamp Meter Calibration
- GPIB, RS232 & USB Interface



EasyCal
Software Compatible

Multi Instrument Calibration

A calibrator with a wide range of capabilities to cover multiple functions is a modern day necessity. The 5025 is the ultimate multi-product calibrator, designed for both traditional and new measurement equipment.

The 5025 can calibrate, bench and handheld multi-meters, frequency meters, ohm meters, ac/dc millivoltmeters, thermocouple indicators, clamp meters, temperature indicators, timer counters, oscilloscopes 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.

Flexible Options

The 5025 can be equipped to specific requirements. The standard unit is fitted with AC/DC voltage to 1050V, AC/DC current to 22A, digital frequency to 10MHz, decade resistance to 1GΩ, conductance and thermocouple simulation.

Individual options include; capacitance and inductance, full range resistance (incorporating PT100 simulation), and oscilloscope calibration. These options can be specified at time of order or fitted at a later date by an authorised service agent.

In addition external adaptors are available for clamp meter calibration (up to 1000A), optical tachometer calibration and low noise attenuation.

Calibration Made Easy

Connect the 5025 to a PC/Laptop (via RS233, GPIB or USB) installed with Time Electronics EasyCal and automate the calibration process. Increase speed of calibration and consistency of results, produce calibration certificates and reports to ISO 9001 quality standards.

5025 Technical Specifications		
Voltage DC	Range:	0 to $\pm 1050V$
	Best 1 Year Specification:	$\pm 15ppm$ of setting
Current DC	Range:	0 to $\pm 22A$. 1100A with Clamp Meter Adaptor
	Best 1 Year Specification:	$\pm 80ppm$ of setting
Voltage AC	Range:	1mV to 1050V (10Hz to 20kHz, Sine-wave)
	Best 1 Year Specification:	$\pm 300ppm$ of setting
Current AC	Range:	10uA to 22A (20Hz to 1kHz, Sine-wave)
	Best 1 Year Specification:	100A AC with CT. 1100A with Clamp Meter Adaptor $\pm 0.05\%$ of setting
Resistance	Range:	1 Ω to 1G Ω (Fixed Values, decade steps)
	Best 1 Year Specification:	$\pm 20ppm$ of setting
Conductance	Range:	1 S to 1n S (Fixed Values, decade steps)
	Best 1 Year Specification:	$\pm 20ppm$ of setting
Thermocouple Simulation	Range:	-270 to 1800 $^{\circ}C$ (Type J,K,R,T,S,B,E,N)
	Best 1 Year Specification:	$\pm 0.3^{\circ}C$
10MHz Digital Frequency/Period	Range:	0.1Hz to 10MHz / 100nS to 10S
	Best 1 Year Specification:	$\pm 20ppm$ of setting

Options

Hi Frequency AC V	Range/Max Freq:	20 to 200mV/300kHz. 0.2 to 2V/1MHz. 2 to 20V/100kHz
	Best 1 Year Specification:	0.05% + 0.1mV
Capacitance	Values:	1nF, 10nF, 100nF, 1uF, 10uF & 100uF (100V Max)
	Best 1 Year Specification:	$\pm 0.25\%$
Inductance	Values:	1, 1.9, 5, 10, 19, 50, 100, 190, 500mH - 1H & 10H
	Best 1 Year Specification:	$\pm 0.1\%$
Full Range Resistance	Range:	1 Ω to 120M Ω (Variable)
	Best 1 Year Specification:	$\pm 0.01\%$ of setting
PT100	Range:	-200 to 850 $^{\circ}C$
	Best 1 Year Specification:	$\pm 0.1^{\circ}C$
Power Calibration	Range:	22A, 1050V. Phase $\pm 90^{\circ}$ 100A AC with CT. 1100A with Clamp Meter Adaptor
	Best 1 Year Specification:	ACV: 0.03%, DCV: 0.01%. ACI: 0.1%, ACV: 0.03% Phase: 0.3 $^{\circ}$
Oscilloscope Frequency/Period	Range:	0.1Hz to 100MHz / 100ns to 10s
	Best 1 Year Specification:	$\pm 0.1ppm$ of setting
Oscilloscope Duty Cycle	Values:	3 frequencies, 100Hz, 1kHz, 10kHz. Settable from 0 to 100%
Oscilloscope Amplitude	Range:	0mV to 200V & 0mV to 2V 50 Ω (Square-wave)
	Best 1 Year Specification:	$\pm 0.05\%$
Oscilloscope Fast-Rise	Values:	< 300ps. Bandwidth Checking up to 600 MHz
2.2 GHz Sweep	Range:	100MHz - 2.2GHz levelled sine-wave (0.5, 1, 1.5V pk-pk).
	Best 1 Year Specification:	Amplitude $\pm 1\%$, Frequency $\pm 20ppm$.

General Specification

Warm up	1 Hour to full accuracy
Settling Time	Less than 5 seconds
Standard Interfaces	GPIB (IEEE-488), RS-232, USB
Operation Environment	Temperature: Operating: 15 - 25 $^{\circ}C$, Full Spec: 22 $^{\circ}C$ +/- 3 $^{\circ}C$, Storage: -10 $^{\circ}C$ to 50 $^{\circ}C$ Humidity: Operating < 80% non condensing. Altitude 0 - 3km. Non Operating 3Km - 12km
Line Power	100 - 230V AC 50/60 Hz. Power Consumption 200W max
Dimensions	W 430mm, D 480mm, H 155mm, (17x18x6") 16.5Kg (36.4lbs)

Ordering Information

Code	Description	Code	Description
9798	Capacitance and Inductance	9771	High Frequency AC Voltage
9774	Simulated Resistance (10 Ω - 40 M Ω)	9747	EasyCal Software
9787	Full Range Resistance (1 Ω - 120 M Ω)	9743	PCI GPIB Interface Card
9770	Oscilloscope Calibration	9794	USB to GPIB Interface
9761	2 GHz Sweep	9765	USB Interface
9790	100A AC Current Option	9597	GPIB Interface Cable
9780	Clamp Meter Adaptor 1 and 50 Turns	9728	19" Rack Mount Kit
9773	Optical Tachometer Calibration Adaptor	9796	Test Lead Set
9767	External Low Noise Attenuator 100:1	9159	Factory (NPL Traceable) Calibration Certificate
9766	External Low Noise Attenuator 1000:1	9103	UKAS Calibration Certificate (ISO 17025)
9797	Power Calibration (0-20KW AC and DC)	9113	Extended Certificate (UKAS - ISO 17025)
5065	6.5 Digit Bench Multimeter (external)	9085	Carry Case

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