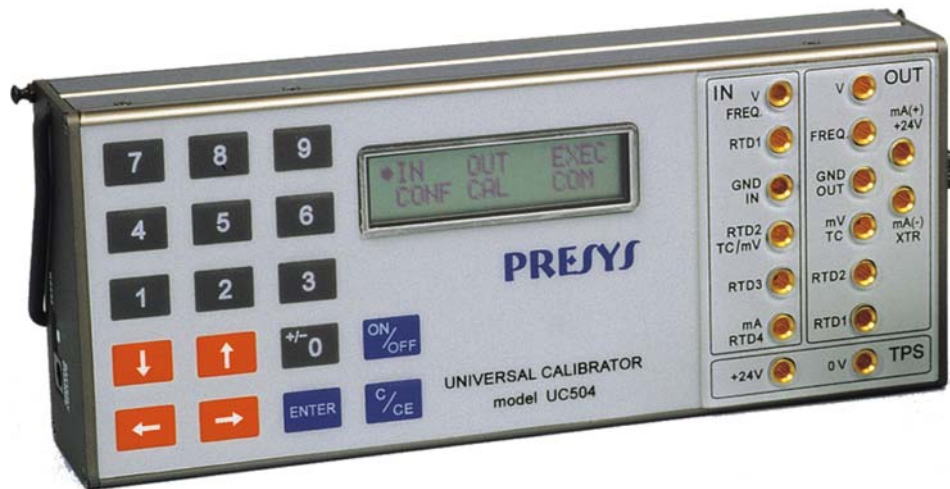

Universal Calibrator UC-504



MODEL UC-504
MULTI-FUNCTION UNIVERSAL CALIBRATOR FOR INSTRUMENTATION

- Measures / Generates mA, mV, Volts, Ohms, RTD, T/C and Hz.
- Simultaneous input and output operation.
- Small, battery-operated, portable.
- Pressure modules optional.
- Interfaces with a Windows-based Calibration Software to provide a true Computer-Aided Calibration System.

UC-504 Universal Calibrator enables measurement and generation of signals used in Instrumentation and Process Control. It is a high-accuracy instrument, having high stability features in temperature changes and long-term aging conditions. It contains useful items allowing its on-field and workbench use. The calibrator also incorporates concepts of automatic checking and calibration via computer, such as report and certificate issues, automatic work management, data sorting and storage, for an overall coverage of quality procedure requirements. Additionally, various optional modules are available, intended to perform pressure and temperature measurements.

Universal Calibrator UC-504

Specifications - Inputs

	Input Ranges	Resolution	Accuracy	Remarks
millivolt	-150 mV to 150 mV	0.001mV	± 0.01% FS	R _{input} > 10MΩ
	-500 mV to -150 mV	0.01mV	± 0.02% FS	auto-ranging
	150 mV to 2450 mV	0.01mV	± 0.02% FS	
volt	-10V to 45 V	0.0001 V	± 0.02% FS	R _{input} > 1M5
	11V to 45V	0.0001 V	± 0.02% FS	
mA	-5 mA to 24.5 mA	0.0001 mA	± 0.02% FS	R _{input} = 100 R
Frequency	0 to 600 Hz	0.01Hz	± 0.02Hz	R _{input} > 50KΩ
	600 to 1300Hz	0.1Hz	± 0.2Hz	Voltage dc _{max} = 30V
	1300 to 10000Hz	1Hz	± 2Hz	AC Signal from 0.3 to 30V auto-ranging
Counter	0 to 10 ⁸ - 1 count	1 count	—	The same remark as frequency Pulses Frequency < 9000Hz
Counter with programmable time	0 to 10 ⁸ - 1 count	1 count	—	The same remark as counter input
Resistance	0 to 2500 Ω	0.01Ω	± 0.008% FS	Excitation current 0.9 mA
Pt 100	-200 to 850°C / -328 to 1562°F	0.01°C / 0.01°F	± 0.2°C / ± 0.4°F	IEC 751
Pt 1000	-200 to 400°C / -328 to 752°F	0.1°C / 0.1°F	± 0.1°C / ± 0.2°F	IEC 751
Cu 10	-200 to 260°C / -328 to 500°F	0.1°C / 0.1°F	± 2.0°C / ± 4.0°F	Minco 16-9
Ni 100	-60 to 250°C / -76 to 482°F	0.1°C / 0.1°F	± 0.2°C / ± 0.4°F	DIN 43760
Probe *	-200 to 850°C / -328 to 1562°F	0.01°C / 0.01°F	± 0.2°C / ± 0.4°F	IEC 751
TC-J	-210 to 1200°C / -346 to 2192°F	0.1°C / 0.1°F	± 0.2°C / ± 0.4°F	IEC 584
TC-K	-270 to -150°C / -454 to -238°F	0.1°C / 0.1°F	± 0.5°C / ± 1.0°F	IEC 584
TC-K	-150 to 1370°C / -238 to 2498°F	0.1°C / 0.1°F	± 0.2°C / ± 0.4°F	
TC-T	-260 to -200°C / -436 to -328°F	0.1°C / 0.1°F	± 0.6°C / ± 1.2°F	IEC 584
TC-T	-200 to -75°C / -328 to -103°F	0.1°C / 0.1°F	± 0.4°C / ± 0.8°F	
TC-T	-75 to 400°C / -103 to 752°F	0.1°C / 0.1°F	± 0.2°C / ± 0.4°F	
TC-B	50 to 250°C / 122 to 482°F	0.1°C / 0.1°F	± 2.5°C / ± 5.0°F	IEC 584
TC-B	250 to 500°C / 482 to 932°F	0.1°C / 0.1°F	± 1.5°C / ± 3.0°F	
TC-B	500 a1200°C / 932 to 2192°F	0.1°C / 0.1°F	± 1.0°C / ± 2.0°F	
TC-B	1200 to 1820°C / 2192 to 3308°F	0.1°C / 0.1°F	± 0.7°C / ± 1.4°F	
TC-R	-50 to 300°C / -58 to 572°F	0.1°C / 0.1°F	± 1.0°C / ± 2.0°F	IEC 584
TC-R	300 to 1760°C / 572 to 3200°F	0.1°C / 0.1°F	± 0.7°C / ± 1.4°F	
TC-S	-50 to 300°C / -58 to 572°F	0.1°C / 0.1°F	± 1.0°C / ± 2.0°F	IEC 584
TC-S	300 to 1760°C / 572 to 3200°F	0.1°C / 0.1°F	± 0.7°C / ± 1.4°F	
TC-E	-270 to -150°C / -454 to -238°F	0.1°C / 0.1°F	± 0.3°C / ± 0.6°F	IEC 584
TC-E	-150 to 1000°C / -238 to 1832°F	0.1°C / 0.1°F	± 0.1°C / ± 0.2°F	
TC-N	-260 to -200°C / -436 to -328°F	0.1°C / 0.1°F	± 1.0°C / ± 2.0°F	IEC 584
TC-N	-200 to -20°C / -328 to -4°F	0.1°C / 0.1°F	± 0.4°C / ± 0.8°F	
TC-N	-20 to 1300°C / -4 to 2372°F	0.1°C / 0.1°F	± 0.2°C / ± 0.4°F	
TC-L	-200 to 900°C / -328 to 1652°F	0.1°C / 0.1°F	± 0.2°C / ± 0.4°F	DIN 43710
TC-C	0 to 1500°C / 32 to 2732°F	0.1°C / 0.1°F	± 0.5°C / ± 1.0°F	W5Re / W26Re
	1500 to 2320°C / 2732 to 4208°F	0.1°C / 0.1°F	± 0.7°C / ± 1.4°F	W5Re / W26Re

(*) Probe is a spare input for a reference RTD in order to use as standard thermometer. The accuracy is related to UC-504 Calibrator only.

Specifications - Outputs

	Output Ranges	Resolution	Accuracy	Remarks
millivolt	-15 mV to 75 mV	0.001 mV	± 0.02% FS	R _{out} < 0.3Ω
Volt	-1 V to 11V	0.0001 V	± 0.02% FS	R _{out} < 0.3Ω
mA	0 to 24mA	0.0001 mA	± 0.02% FS	R _{max} = 700Ω
2-wire Transmitter (XTR)	4 mA to 24mA	0.0001 mA	± 0.02 % FS	V _{max} = 60V
Frequency	0 to 100 Hz	0.01Hz	± 0.02 Hz	Peak value: -1 to 11V
	0 to 10000 Hz	1Hz	± 2 Hz	
Pulse	0 to 10 ⁵ - 1 pulses	1 pulse	—	Peak value: -1 to 11V Pulses frequency up to 10000Hz
Resistance	0 to 2500Ω	0.01 Ω	± 0.008% FS	For external excitation current of 1.0 mA
Pt 100	-200 to 850°C / -328 to 1562°F	0.01°C / 0.01°F	± 0.2°C / ± 0.4°F	IEC 751
Pt 1000	-200 to 400°C / -328 to 752°F	0.1°C / 0.1°F	± 0.1°C / ± 0.2°F	IEC 751
Cu 10	-200 to 260°C / -328 to 500°F	0.1°C / 0.1°F	± 2.0°C / ± 4.0°F	Minco 16-9
Ni 100	-60 to 250°C / -76 to 482°F	0.1°C / 0.1°F	± 0.2°C / ± 0.4°F	DIN 43760
TC-J	-210 to 1200°C / -346 to 2192°F	0.1°C / 0.1°F	± 0.4°C / ± 0.8°F	IEC 584
TC-K	-270 to -150°C / -454 to -238°F	0.1°C / 0.1°F	± 1.0°C / ± 2.0°F	IEC 584
TC-K	-150 to 1370°C / -238 to 2498°F	0.1°C / 0.1°F	± 0.4°C / ± 0.8°F	
TC-T	-260 to -200°C / -436 to -328°F	0.1°C / 0.1°F	± 1.2°C / ± 2.4°F	IEC 584
TC-T	-200 to -75°C / -328 to -103°F	0.1°C / 0.1°F	± 0.8°C / ± 1.6°F	
TC-T	-75 to 400°C / -103 to 752°F	0.1°C / 0.1°F	± 0.4°C / ± 0.8°F	
TC-B	50 to 250°C / 122 to 482°F	0.1°C / 0.1°F	± 5.0°C / ± 10.0°F	IEC 584
TC-B	250 to 500°C / 482 to 932°F	0.1°C / 0.1°F	± 3.0°C / ± 6.0°F	
TC-B	500 a1200°C / 932 to 2192°F	0.1°C / 0.1°F	± 2.0°C / ± 4.0°F	
TC-B	1200 to 1820°C / 2192 to 3308°F	0.1°C / 0.1°F	± 1.4°C / ± 2.8°F	
TC-R	-50 to 300°C / -58 to 572°F	0.1°C / 0.1°F	± 2.0°C / ± 4.0°F	IEC 584
TC-R	300 to 1760°C / 572 to 3200°F	0.1°C / 0.1°F	± 1.4°C / ± 2.8°F	
TC-S	-50 to 300°C / -58 to 572°F	0.1°C / 0.1°F	± 2.0°C / ± 4.0°F	IEC 584
TC-S	300 to 1760°C / 572 to 3200°F	0.1°C / 0.1°F	± 1.4°C / ± 2.8°F	
TC-E	-270 to -150°C / -454 to -238°F	0.1°C / 0.1°F	± 0.6°C / ± 1.2°F	IEC 584
TC-E	-150 to 1000°C / -238 to 1832°F	0.1°C / 0.1°F	± 0.2°C / ± 0.4°F	
TC-N	-260 to -200°C / -436 to -328°F	0.1°C / 0.1°F	± 2.0°C / ± 4.0°F	IEC 584
TC-N	-200 to -20°C / -328 to -4°F	0.1°C / 0.1°F	± 0.8°C / ± 1.6°F	
TC-N	-20 to 1300°C / -4 to 2372°F	0.1°C / 0.1°F	± 0.4°C / ± 0.8°F	
TC-L	-200 to 900°C / -328 to 1652°F	0.1°C / 0.1°F	± 0.4°C / ± 0.8°F	DIN 43710
TC-C	0 to 1500°C / 32 to 2732°F	0.1°C / 0.1°F	± 1.0°C / ± 2.0°F	W5Re / W26Re
	1500 to 2320°C / 2732 to 4208°F	0.1°C / 0.1°F	± 1.4°C / ± 2.8°F	W5Re / W26Re