Temperature Calibrator

Portable/Handheld

Nagman 14+

Capability to Measure & Simulate DC Voltages, Resistances, Thermocouples & RTD

Basic Accuracy : ±0.02% Reading

Typical Photo.
Final Product Look
May Vary.

SALIENT FEATURES

Compact, Light Weight Unit with Holster	
Capability to Measure & Simulate DC Voltages, Resistances, Thermocouples and RTD	
5 digits display of Measurement & 6 digits display for Simulation	
Dual LCD with white LED for backlight	
Measurement & Simulation of :	
Thermocouple types	R, S, B, E, K, J, T, N, L & U
RTD Types	PT100, Pt200, Pt500, Pt1000, Cu10 & Cu50
Resistances	500 Ω & 5 KΩ in Measurement Mode
	400 Ω & 4 KΩ in Simulation Mode
DC Voltages	50 mV & 500 mV in Measurement Mode
	100 mV & 1000 mV in Simulation Mode

SPECIFICATIONS

Measuring Functions

Functions	Reference	Ranges	Resolution	Accuracy	Remarks
DC Voltage	50 mV	-5 to 55 mV	1 µV	0.02 + 0.02	Input Resistance 100 MΩ
	500 mV	- 50 to 550 mV	10 µV	0.02 + 0.01	
Resistance (Ohm)	500 Ω	0 to 550 Ω	0.01 Ω	0.05 + 0.02	500 Ω : Excitation current : Approx. 1 mA
	5 KΩ	0 KΩ to 5.5 KΩ	0.1 Ω	0.05 + 0.02	5 KΩ : Excitation current : Approx. 0.1 mA Open Circuit Voltage : about 2.5V; Does not include lead resistance.
Thermocouple	R	0 to 1767°C	1°C	0 to 500°C : 1.8°C	By using ITS-90 temperature scale; The accuracy does not include the error of internal temperature compensation caused by a sensor.
	S	0 to 1767°C		500 to 1767°C : 1.5°C	
	K	-100 to 1372°C	0.1°C	-100 to 0°C : 1.2°C	
				0 to 1372°C : 0.8°C	
	E	-50 to 850°C		-50 to 0°C : 0.9°C	
				0 to 850°C : 1.5°C	
	J	-60 to 1120°C		-60 to 0°C : 1°C	
				0 to 1120°C : 0.7°C	
	T	-100 to 400°C		-100 to 0°C : 1°C	
				0 to 400°C : 0.7°C	
	N	-200 to 1300°C		-200 to 0°C : 1.5°C	
				0 to 1300°C : 0.9°C	
	B	600 to 1820°C	1°C	600 to 800°C : 2.2°C	
				800 to 1000°C : 1.8°C	
				1000 to 1820°C : 1.4°C	
	L	-60 to 900°C	0.1°C	-60 to 0°C : 0.7°C	
				0 to 900°C : 0.5°C	
	U	-100 to 600°C	0.1°C	-100 to 0°C : 0.7°C	
				0 to 600°C : 0.5°C	

Functions	Reference	Ranges	Resolution	Accuracy	Remarks
RTD	Pt100 385	-200 to 800°C	0.1°C	-200 to 0°C : 0.5°C 0 to 400°C : 0.7°C 400 to 800°C : 0.8°C	By using temperature scale ITS-90. Does not include lead resistance. Assuming all three RTD leads are matched for 3-w input.
	Pt1000 385	-200 to 630°C		-200 to 100°C : 0.8°C 100 to 300°C : 0.9°C 300 to 630°C : 1.0°C	
	Pt200 385	-200 to 630°C		-200 to 100°C : 0.8°C 100 to 300°C : 0.9°C 300 to 630°C : 1°C	
	Pt500 385	-200 to 630°C			
	Cu10	-100 to 260°C		1.8°C	
	Cu50	-50 to 150°C		0.7°C	
Continuity	500 Ω	≤50 Ω round	0.01 Ω		Excitation Current approx. 1 mA

Output Functions

Functions	Reference	Ranges	Resolution	Accuracy	Remarks
DC Voltage	100 mV	-10 to 110 mV	1 μV	0.02 + 0.01	Maximum Output : 0.5 mA Maximum Output : 2 mA
	1000 mV	-100 to 1100 mV	10 μV	0.02 + 0.01	
Resistance	400 Ω	0 to 400 Ω	0.01 Ω	0.02 + 0.02	Excitation current : ±0.5 – 3 mA; if ±0.1 – 0.5, add 0.1 Ω; Accuracy does not include lead resistance.
	4 KΩ	0 KΩ to 4 KΩ	0.1 Ω	0.05 + 0.025	Excitation current : ±0.05 – 0.3 mA; Does not include lead resistance.
Thermocouple	R	0 to 1767°C	1°C	0 to 100°C : 1.5°C 100 to 1767°C : 1.2°C	By using ITS-90 temperature scale; The accuracy does not include the error of internal temperature compensation caused by a sensor.
	S	0 to 1767°C		0 to 100°C : 1.5°C 100 to 1767°C : 1.2°C	
	K	-200 to 1372°C	0.1°C	-200 to -100°C : 0.6°C -100 to 400°C : 0.5°C 400 to 1200°C : 0.7°C 1200 to 1372°C : 0.9°C	
	E	-200 to 1000°C		-200 to 100°C : 0.6°C -100 to 600°C : 0.5°C 600 to 1000°C : 0.4°C	
	J	-200 to 1200°C		-200 to -100°C : 0.6°C -100 to 800°C : 0.5°C 800 to 1200°C : 0.7°C	
	T	-250 to 400°C		-250 to 400°C : 0.6°C	
	N	-200 to 1300°C		-200 to -100°C : 1.0°C -100 to 900°C : 0.7°C 900 to 1300°C : 0.8°C	
	B	600 to 1820°C	1°C	600 to 800°C : 1.5°C 800 to 1820°C : 1.1°C	
	L	-200 to 900°C	0.1°C	-200 to 0°C : 0.7°C 0 to 900°C : 0.5°C	
	U	-200 to 600°C	0.1°C	-200 to 0°C : 0.7°C 0 to 600°C : 0.5°C	

Functions	Reference	Ranges	Resolution	Accuracy			Remarks
RTD	Pt100 385	-200 to 800°C	0.1°C	-200 to 0°C	:	0.3°C	By using temperature scale ITS-90 Excitation current: ±0.5 ~ ±3mA for Pt100. Cu10, Cu50 and 0.5°C when excitation current is ±0.1 mA – 0.5 mA; Excitation current : ±0.05 mA ~ ±0.3 mA for Pt200, Pt500, Pt1000; Does not include lead resistance.
				0 to 400°C	:	0.5°C	
				400 to 800°C	:	0.8°C	
	Pt200 385	-200 to 630°C		-200 to 100°C	:	0.8°C	
				100 to 300°C	:	0.9°C	
				300 to 630°C	:	1.0°C	
	Pt500 385	-200 to 630°C		-200 to 100°C	:	0.4°C	
				100 to 300°C	:	0.5°C	
				300 to 630°C	:	0.7°C	
	Pt1000 385	-200 to 630°C		-200 to 100°C	:	0.2°C	
				100 to 300°C	:	0.5°C	
				300 to 630°C	:	0.7°C	
	Cu10	-100 to 260°C		1.8°C			
	Cu50	-50 to 150°C		0.6°C			

** Accuracy expressed as ± (percentage of reading + percentage of range)*

STANDARD INCLUSIONS

- Temperature Calibrator – Model : Nagman 14+
- 1.5V 'AAA' Alkaline Batteries (4 Nos.)
- Operation Manual
- Test Leads
- Traceable Calibration Certificate

OPTIONAL (ADD-ON) ITEMS

- Calibration Certificates are issued in Accordance with our Scope as granted by NABL per ISO/IEC 17025:2017 Standards

Manufactured by

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