

Temperature

Nagman Temperature Calibrator

**Portable, Handy, Easy to carry
& Sturdy Case with Grip**

Basic Accuracy : $\pm 0.02\%$

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

Model : Nagman 14 +

- 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 Liquid Crystal Display with white LED for backlight
- Measurement & Simulation of

Thermocouple Types :
R, S, B, E, K, J, T, N, L & U

RTD Types :
Pt 100, Pt 200, Pt 500, Pt 1000, Cu 10 & Cu 50

Resistances :
500 Ω & 5 K Ω in Measurement mode
400 Ω & 4 K Ω in Simulation mode

DC Voltages :
50 mV & 500 mV in Measurement mode
100 mV & 1000 mV in Simulation mode



Product of

NAGMAN INSTRUMENTS & ELECTRONICS (P) LTD.

- Comprehensive Calibration Solutions (Standards / Systems / Packages / Software / Services)
"Nagman Complex", At 27th KM Stone, Chennai-Bangalore NH-4, Nazarathpet (Via.), Chennai – 602 103. INDIA.

Phone (Board) +91-44-26811700, 26811702
Email nagman@md2.vsnl.net.in

Phone (Exports) 26811704, 26811708
Site www.nagman.com

Fax 26811703.

Phone (Domestic) 044-26492126

Fax 044 - 26492125

Email nagman.sales@airtelmail.in



PHYSICAL SPECIFICATIONS

MEASURING FUNCTIONS

Function	Reference	Ranges	Resolution	Accuracy	Remarks
DC Voltage	50 mV	-5 to 55 mV	1 μ V	0.02 + 0.02	Input Resistance approximately 100 M Ω
	500 mV	-50 to 550 mV	10 μ V	0.02 + 0.01	
Resistance	500 Ω	0 to 550 Ω	0.01 Ω	0.05 + 0.02	Test current for 500 Ω ; approximately 1 mA; Test current for 5 K Ω ; Approximately 0.1 mA; Open circuit Voltage; About 2.5 V; Does not include Lead Resistance
	5 K Ω	0 K Ω to 5.5 K Ω	0.1 Ω	0.05 + 0.02	
Thermocouple	R	0 to 1767 $^{\circ}$ C	1 $^{\circ}$ C	0 to 500 $^{\circ}$ C : 1.8 $^{\circ}$ C	ITS-90
	S	0 to 1767 $^{\circ}$ C		500 to 1767 $^{\circ}$ C : 1.5 $^{\circ}$ C	
	K	-100 to 1372 $^{\circ}$ C	0.1 $^{\circ}$ C	-100 to 0 $^{\circ}$ C : 1.2 $^{\circ}$ C	
	E	-50 to 850 $^{\circ}$ C		0.0 to 1372 $^{\circ}$ C : 0.8 $^{\circ}$ C	
				-50 to 0 $^{\circ}$ C : 0.9 $^{\circ}$ C	
	J	-60 to 1120 $^{\circ}$ C		0 to 85 $^{\circ}$ C : 1.5 $^{\circ}$ C	
				-60 to 0 $^{\circ}$ C : 1.0 $^{\circ}$ C	
	T	-100 to 400 $^{\circ}$ C		0 to 1120 $^{\circ}$ C : 0.7 $^{\circ}$ C	
			-100 to 0 $^{\circ}$ C : 1.0 $^{\circ}$ C		
	N	-200 to 1300 $^{\circ}$ C	0 to 400 $^{\circ}$ C : 0.7 $^{\circ}$ C		
			-200 to 0 $^{\circ}$ C : 1.5 $^{\circ}$ C		
	B	600 to 1820 $^{\circ}$ C	0 to 1300 $^{\circ}$ C : 0.9 $^{\circ}$ C		
			600 to 800 $^{\circ}$ C : 2.2 $^{\circ}$ C		
L	-60 to 900 $^{\circ}$ C	800 to 1000 $^{\circ}$ C : 1.8 $^{\circ}$ C			
		1000 to 1820 $^{\circ}$ C : 1.4 $^{\circ}$ C			
U	-100 to 600 $^{\circ}$ C	0.1 $^{\circ}$ C	-60 to 0 $^{\circ}$ C : 0.7 $^{\circ}$ C		
		0.1 $^{\circ}$ C	0 to 900 $^{\circ}$ C : 0.5 $^{\circ}$ C		
RTD Continuity	Pt100 385	-200 to 800 $^{\circ}$ C	0.1 $^{\circ}$ C	-200 to 0 $^{\circ}$ C : 0.5 $^{\circ}$ C	ITS-90
				0 to 400 $^{\circ}$ C : 0.7 $^{\circ}$ C	
	Pt1000 385	-200 to 630 $^{\circ}$ C		400 to 800 $^{\circ}$ C : 0.8 $^{\circ}$ C	
				-200 to 100 $^{\circ}$ C : 0.3 $^{\circ}$ C	
	Pt200 385	-200 to 630 $^{\circ}$ C		100 to 300 $^{\circ}$ C : 0.5 $^{\circ}$ C	
				300 to 630 $^{\circ}$ C : 0.7 $^{\circ}$ C	
	Pt500 385	-200 to 630 $^{\circ}$ C		-200 to 100 $^{\circ}$ C : 0.8 $^{\circ}$ C	
100 to 300 $^{\circ}$ C : 0.9 $^{\circ}$ C					
Cu10	-100 to 260 $^{\circ}$ C	300 to 630 $^{\circ}$ C : 1.0 $^{\circ}$ C			
		-200 to 100 $^{\circ}$ C : 0.4 $^{\circ}$ C			
Cu50	-50 to 150 $^{\circ}$ C	-100 to 300 $^{\circ}$ C : 0.5 $^{\circ}$ C			
		300 to 630 $^{\circ}$ C : 0.7 $^{\circ}$ C			
	500 Ω	<50 Ω Sound	0.01 Ω		500 Ω Approximately 1 mA test Current

OUTPUT FUNCTIONS

Output	Ranges / Types	Output Range	Resolution	Accuracy	Remarks
DC Voltage	100 mV	-10 to 110 mV	1 μ V	0.02 + 0.01	Maximum Output : 0.5 mA Maximum Output : 2 mA
	1000 mV	-100 to 1100 mV	10 μ V	0.02 + 0.01	
Resistance	400 Ω	0 to 400 Ω	0.01 Ω	0.02 + 0.02	Excitation Current : $\pm 0.5 - 3$ mA if ± 0.1 $- 0.5$ mA add 0.1 Ω ; does not include lead resistance
	4 K Ω	0 K Ω to 4 K Ω	0.1 Ω	0.05 + 0.025	Excitation current : $\pm 0.05 - 0.3$ mA; does not include lead resistance
Thermocouple	R	0 to 1767 $^{\circ}$ C	1 $^{\circ}$ C	0 to 100 $^{\circ}$ C : 1.5 $^{\circ}$ C	ITS 90
	S	0 to 1767 $^{\circ}$ C		100 to 1767 $^{\circ}$ C : 1.2 $^{\circ}$ C	
	K	-200 to 1372 $^{\circ}$ C	0.1 $^{\circ}$ C	0 to 100 $^{\circ}$ C : 1.5 $^{\circ}$ C	
				100 to 1767 $^{\circ}$ C : 1.2 $^{\circ}$ C	
				-200 to -100 $^{\circ}$ C : 0.6 $^{\circ}$ C	
				-100 to 400 $^{\circ}$ C : 0.5 $^{\circ}$ C	
	E	-200 to 1000 $^{\circ}$ C	0.1 $^{\circ}$ C	400 to 1200 $^{\circ}$ C : 0.7 $^{\circ}$ C	
				1200 to 1372 $^{\circ}$ C : 0.9 $^{\circ}$ C	
	J	-200 to 1200 $^{\circ}$ C	0.1 $^{\circ}$ C	-200 to 100 $^{\circ}$ C : 0.6 $^{\circ}$ C	
				-100 to 600 $^{\circ}$ C : 0.5 $^{\circ}$ C	
	T	-250 to 400 $^{\circ}$ C	0.1 $^{\circ}$ C	600 to 1000 $^{\circ}$ C : 0.4 $^{\circ}$ C	
				-200 to -100 $^{\circ}$ C : 0.6 $^{\circ}$ C	
	N	-200 to 1300 $^{\circ}$ C	0.1 $^{\circ}$ C	-100 to 800 $^{\circ}$ C : 0.5 $^{\circ}$ C	
				800 to 1200 $^{\circ}$ C : 0.7 $^{\circ}$ C	
B	600 to 1820 $^{\circ}$ C	1 $^{\circ}$ C	-250 to 400 $^{\circ}$ C : 0.6 $^{\circ}$ C		
			-200 to -100 $^{\circ}$ C : 1.0 $^{\circ}$ C		
L	-200 to 900 $^{\circ}$ C	0.1 $^{\circ}$ C	-100 to 900 $^{\circ}$ C : 0.7 $^{\circ}$ C		
			900 to 1300 $^{\circ}$ C : 0.8 $^{\circ}$ C		
U	-200 to 600 $^{\circ}$ C	0.1 $^{\circ}$ C	600 to 800 $^{\circ}$ C : 1.5 $^{\circ}$ C		
			800 to 1820 $^{\circ}$ C : 1.1 $^{\circ}$ C		
RTD	Pt 100 385	-200 to 800 $^{\circ}$ C	0.1 $^{\circ}$ C	-200 to 0 $^{\circ}$ C : 0.3 $^{\circ}$ C	Its-90 Excitation Current : $\pm 0.5 - \pm 3$ mA for PT100, Cu10, Cu50, add 0.5 $^{\circ}$ C when excitation current is ± 0.1 mA $- 0.5$ mA; Excitation Current : ± 0.05 mA to ± 0.3 mA for PT200, Pt 500, Pt 1000; does not include lead resistance.
				0 to 400 $^{\circ}$ C : 0.5 $^{\circ}$ C	
	Pt 1000	-200 to 630 $^{\circ}$ C		400 to 800 $^{\circ}$ C : 0.8 $^{\circ}$ C	
				-200 to 100 $^{\circ}$ C : 0.2 $^{\circ}$ C	
	Pt 200 385	-200 to 630 $^{\circ}$ C		100 to 300 $^{\circ}$ C : 0.5 $^{\circ}$ C	
				300 to 630 $^{\circ}$ C : 0.7 $^{\circ}$ C	
	Pt 500 385	-200 to 630 $^{\circ}$ C		-200 to 100 $^{\circ}$ C : 0.8 $^{\circ}$ C	
				100 to 300 $^{\circ}$ C : 0.9 $^{\circ}$ C	
	Cu 10	-10 to 260 $^{\circ}$ C		300 to 630 $^{\circ}$ C : 1 $^{\circ}$ C	
				-200 to 100 $^{\circ}$ C : 0.4 $^{\circ}$ C	
Cu 50	-50 to 150 $^{\circ}$ C	100 to 300 $^{\circ}$ C : 0.5 $^{\circ}$ C			
		300 to 630 $^{\circ}$ C : 0.7 $^{\circ}$ C			
				-10 to 260 $^{\circ}$ C : 1.8 $^{\circ}$ C	
				-50 to 150 $^{\circ}$ C : 0.6 $^{\circ}$ C	

STANDARD DELIVERY

- Temperature Calibrator – Model : Nagman 14+
- 4 x 1.5 AAA Type Alkaline Batteries
- Operation Manual
- Test Leads
- Test Certificate

OPTIONALS

- NABL Traceable Calibration Certificate