

Signal

Nagman

Multifunction Process Calibrator

Portable, Handy
& Sturdy case with grip

Basic Accuracy : $\pm 0.02\%$ F.S.

**Capability to Measure & Simulate
DC Voltages, DC Current, Frequency, Resistance,
Thermocouples & RTD**

Model

NAGMAN 25

- Compact, Light Weight Unit with Holster
- Capability to Measure & Simulate DC Voltages, DC Current, Frequency, Resistance, Thermocouples & RTDs
- 5 digits display of Measurement & 6 digits display for Simulation
- Dual LCD with white LED for backlight
- Measurement & Simulation of :

DC Voltages :

50 mV & 500 mV, 5 V & 50 V in Measurement Mode
100 mV, 1 V & 10 V in Simulation Mode

DC Current :

50 mA in Measurement Mode
20 mA in Simulation Mode

Resistance :

500 Ω & 5 K Ω in Measurement Mode
400 Ω , 4 K Ω & 40 K Ω in Simulation Mode

Thermocouples :

R, S, B, E, K, J, T & N

RTDs :

Pt100, Pt1000 & Cu50

Frequency :

100 Hz, 1 KHz & 10 KHz in Measurement Mode
100 KHz, 1 KHz, 10 KHz & 100 KHz in Simulation Mode

Capability to perform Switch Test & Continuity Test



(P.T.O)

SPECIFICATIONS

MEASURING FUNCTIONS

Functions	Range / Type	Ranges	Resolution	Accuracy	Remarks	
DC Voltage	50 mV	-5 to 55 mV	1 μV	0.02% + 10	impedance : about 100 MΩ	
	500 mV	-10 to 550 mV	10 μV	0.02% + 2		
	5 V	-0.1 to 5.5 V	0.1 mV	0.02% + 5	impedance : 1 MΩ	
	50 V	0 to 55 V	10 mV	0.02% + 5		
DC Current	50 mA	-5 to 50 mA	1 μV	0.02% + 2	impedance : 10 MΩ	
Resistance	500 Ω about 1 mA exciting	0 to 550 Ω	0.01 Ω	0.02% + 0.1 Ω	Plough voltage about 2.5 V not including the accuracy of down-lead resistance	
	5 KΩ about 0.1 mA exciting	0 to 5.5 KΩ	0.1 Ω	0.02% + 0.5 Ω		
Frequency	100 Hz	2 to 110 Hz	0.1 Hz	±2	impedance : 100 kΩ or more Square wave atleast 1Vp-p 50% duty cycle	
	1 KHz	0.1 KHz to 1.1 KHz	1 Hz			
	10 KHz	0.1 KHz to 10 KHz	0.1 KHz			
Thermoco uples	R	0 to 1767°C	1°C	0 to 500°C : 1.8°C	Adopt ITS-90 Thermostatic scale not including the accuracy of inner temperature compensatory error	
	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 1000°C		-50 to 0°C : 0.9°C		
				0 to 1000°C : 1.5°C		
	J	-60 to 1200°C		-60 to 0°C : 1°C		
				0 to 1200°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		
				600 to 800°C : 2.2°C		
	B	600 to 1820°C	1°C	800 to 1000°C : 1.8°C		
				1000 to 1800°C : 1.4°C		
RTD	Pt100	-200 to 800°C	0.1°C	-200 to 0°C : 0.5°C	Pt100-385 Thermometric scale not including the accuracy of down-lead resistance	
				0 to 400°C : 0.7°C		
				400 to 850°C : 0.8°C		
	Pt1000	-200 to 630°C		-200 to 100°C : 0.22°C		
				100 to 300°C : 0.3°C		
				300 to 630°C : 0.4°C		
	Cu50	-50 to –150°C		-50 to 0°C : 0.5°C		
				0 to 150°C : 0.7°C		
Switch Meter Measure	About 1 mA exciting	Close / open				
Continuity Test	500 Ω about 1 mA exciting	<50 Ω vocalism	0.01°C			

OUTPUT FUNCTIONS

Functions	Range / Type	Ranges	Resolution	Accuracy	Remarks
DC Voltage	100 mV	-10 to 110 mV	1 μV	0.02% + 10	Max output current 5 mA Output resistance <0.1Ω
	1 V	-0.1 to 1.10 V	10 μV	0.02% + 10	
	10 V	-1 to 11 V	0.1 mV	0.02% + 10	
DC Current	20 mA	0 to 22 mA	1 μA	0.02% + 10	Inside power supply 24 V, 1 KΩ resistance at 20 mA
Analog Transducer	-20 mA	-0 to 22 mA	1 μA	0.02% + 10	Outside power supply 5 to 28 V, 1 KΩ resistance at 20 mA
Resistance	400 Ω	0 to 400 Ω	0.01 Ω	0.02% + 0.1 Ω	±0.1 to 3 mA exciting current
	4 KΩ	0 to 4 KΩ	0.1 Ω	0.05% + 1 Ω	±0.05 to 0.3 mA exciting current
	40 KΩ	0 to 40 KΩ	1 Ω	0.1% + 10 Ω	±0.01 to 0.03 mA exciting current
Thermocouple	R	0 to 1767	1°C	0 to 100°C : 1.5°C	ITS-90
	S	0 to 1767		100 to 1767°C : 1.2°C	
				0 to 100°C : 1.5°C	
				100 to 1767°C : 1.2°C	
			-200 to -100°C : 0.6°C		
	K	-200 to 1372	0.1°C	-100 to 400°C : 0.5°C	
				400 to 1200°C : 0.7°C	
				1200 to 1372°C : 0.9°C	
				-200 to -100°C : 0.6°C	
	E	-200 to 1000		-100 to 600°C : 0.5°C	
				600 to 1000°C : 0.4°C	
				-200 to -100°C : 0.6°C	
				-100 to 800°C : 0.5°C	
	J	-200 to 1200		800 to 1200°C : 0.7°C	
				-250 to 400°C : 0.6°C	
-200 to -100°C : 1°C					
-100 to 900°C : 0.7°C					
T	-250 to 400	900 to 1300°C : 0.8°C			
		400 to 600°C : 2°C			
		600 to 800°C : 1.5°C			
		800 to 1820°C : 1.1°C			
N	-200 to 1300	1°C	-200 to 0°C : 0.3°C		
			0 to 400°C : 0.5°C		
			400 to 850°C : 0.8°C		
			-200 to 100°C : 0.22°C		
B	400 to 1820	100 to 300°C : 0.3°C			
		300 to 630°C : 0.4°C			
		-50 to 150°C : 0.6°C			
RTD	Pt100	-200 to 850	0.1°C		Pt100-385 thermometric scale Pt100, Cu50 ±0.1 mA excitation current. Accuracy does not contain lead resistance
	Pt1000	-200 to 630			
	Cu50	-50 to 150			
Frequency	100 Hz	1 to 110 Hz	0.1 Hz	±2	1 to 11Vp-p square wave Accuracy ±10% 50% duty cycle load >100 KΩ
	1 KHz	0.1 to 11. KHz	1 Hz		
	10 KHz	1 to 11 KHz	0.1 KHz		
	100 KHz	1 to 110 KHz	1 KHz		
Pulse	100 Hz	10 to 100000 cycles	1 cycle	±2	1 to 11 Vp-p square wave Accuracy ±10% 50% duty cycle load > 100 KΩ
	1 KHz				
	10 KHz				
	100 KHz				
Switch	100 Hz		0.1 Hz	±2	Max switch current voltage / current : +28 V / 50 mA
	1 KHz		1 Hz		
	10 KHz		0.1 KHz		
	100 KHz		1 KHz		
Loop	24 V				Max output current about 25 mA short circuit protection

STANDARD DELIVERY

- Multifunction Process Calibrator - Nagman 25
- 1.5V x 4 Nos. Alkaline Batteries
- Operation Manual
- Test Leads
- Traceable Calibration Certificate

OPTIONAL

- Calibration Certificate from NABL Accredited – as per ISO/IEC 17025:2005 Laboratory

Product of

Nagman Instruments & Electronics (P) Ltd.

- Comprehensive Calibration Solutions (Standards / Systems / Packages / Software / Services)

Chennai – 600 123. INDIA.



Domestic Sales 044 – 2252 2800, 2252 3240
International Sales +91-44-26811704, 26811708

Fax 044 – 2252 3240
Fax +91-44-26811703

E-Mail mktgchennai@nagman.com
E-Mail exports@nagman.com

www.nagman.com



Specifications subject to change owing to continuous development

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