

Dry Block Temperature Calibrator

Portable/Benchtop

NICAL Series

Advanced

Precision Dry Block Calibrator with Multi-hole Interchangeable Thermowells

Ideal for quick / fast Site Calibration of RTDs / TCs / Bi-Metal Thermometers, Temperature Switches / Indicators etc. in Industrial & Marine Applications

Covering Wide Temperature Ranges : -30°C to 1200°C (NICAL 50 / 650 / 1200)

Measuring Accuracy : $\pm 0.025\%$ of rdg.

High Accuracy, Resolution & Stability with Measurement Capability for mV / V / mA, Resistance TC (ISA Types : J, K, R, S, N, E, B, T), RTD (Pt100, Pt200, Pt500, Pt1000 : IEC Standard) Signals

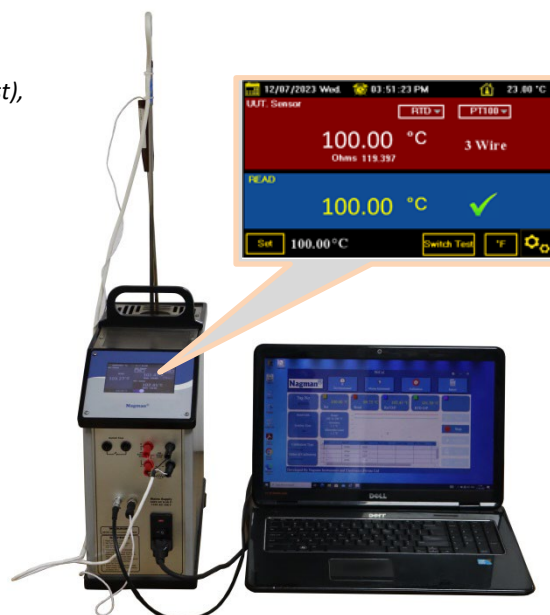
Full color display makes users easy to read.

The main temperature indications are SET, READ, UUT (Unit Under Test), Stability Status etc.

Inbuilt Readout for PRT

SALIENT FEATURES

- Informative Color Display with feather touch
- Heavy Duty Portable / Bench-top Model
- Rugged Field Use & for Calibration at Site
- Auto-tune PID Control
- Stability Indicator
- Switch Test facility
- Fast & Reliable
- Improved Accuracy, Resolution & Stability
- Interchangeable Thermowell Inserts, Single / Multihole



SPECIFICATIONS

MODEL	NICAL 50	NICAL 650	NICAL 1200
Operating Range	-30°C to 140°C	50°C to 650°C	150°C to 1200°C
Resolution	0.01°C	0.01°C	0.1°C
Accuracy	$\pm 0.2^\circ\text{C}$	$\pm 0.4^\circ\text{C}$	$\pm 2^\circ\text{C}$
Stability	$\pm 0.02^\circ\text{C}$	$\pm 0.04^\circ\text{C}$	$\pm 0.2^\circ\text{C}$
Radial Uniformity	$\pm 0.02^\circ\text{C}$	$\pm 0.04^\circ\text{C}$	$\pm 0.2^\circ\text{C}$
Axial uniformity	$\pm 0.2^\circ\text{C}$ (40 mm)	$\pm 0.4^\circ\text{C}$ (40 mm)	$\pm 0.6^\circ\text{C}$ (20 mm)
Heating Time	33 to 140°C -- 20 min	50 to 650°C---- 30min	200 to 1200°C----1.5h
Cooling Time	33 to -30°C -- 25 min	650 to 100°C----75min	1200 to 200°C----3h
Time to Stability (typical)	7 min	15 min	15 min
Well Diameter x Depth	Ø30mm x 150mm	Ø30mm x 150mm	Ø30mm x 105 mm
Weight	9 Kg	11 Kg	12.6 Kg
Size (L x D x H)	160 x 365 x 450 mm		
Computer Interface	USB Interface		
Mains Power	230V AC 50HZ - Optional 115V AC , 60HZ		

(P.T.O.)

Technical Datasheet

MEASUREMENT : RANGE, RESOLUTION & ACCURACY

Type	Range	Resolution	Accuracy (% of reading)
mV (Low)	0 to 200	0.001	$\pm(0.025\%+2\mu\text{V})$
mV (High)	0 to 2000	0.01	$\pm(0.025\%+10\mu\text{V})$
Volts	0 to 20	0.0001	$\pm(0.025\%+0.08\text{mV})$
mA	0 to 25	0.0001	$\pm(0.025\%+0.4\mu\text{A})$
Ohms	0 to 500	0.001	$\pm(0.025\%+12\text{m}\Omega)$
K Ohms	0 to 5	0.00001	$\pm(0.025\%+120\text{m}\Omega)$
RTD Pt100	-100 to 800	0.01	$\pm(0.025\%+0.1^\circ\text{C})$
RTD Pt200	-100 to 600	0.01	$\pm(0.025\%+0.15^\circ\text{C})$
RTD Pt500	-100 to 530	0.01	$\pm(0.025\%+0.1^\circ\text{C})$
RTD Pt1000	-100 to 650	0.01	$\pm(0.025\%+0.1^\circ\text{C})$

Type	Range	Resolution	Accuracy (% of reading)
TC Type J	-100 to 1200	0.1	$\pm(0.025\%+0.1^\circ\text{C})$
TC Type K	-60 to 1260	0.1	$\pm(0.025\%+0.1^\circ\text{C})$
TC Type R	150 to 1700	0.1	$\pm(0.025\%+0.2^\circ\text{C})$
TC Type S	170 to 1700	0.1	$\pm(0.025\%+0.2^\circ\text{C})$
TC Type N	0 to 1300	0.1	$\pm(0.025\%+0.1^\circ\text{C})$
TC Type B	920 to 1820	0.1	$\pm(0.025\%+0.2^\circ\text{C})$
TC Type T	0 to 400	0.1	$\pm(0.025\%+0.1^\circ\text{C})$
TC Type E	-100 to 1000	0.1	$\pm(0.025\%+0.1^\circ\text{C})$

CALIBRATION SOFTWARE

- The NICAL Series Dry Block Calibrator is supplied with Nagman calibration software NICal
- All calibrations can be documented with a certificate, given that the NICAL Series Dry block Calibrator is controlled from a PC.
- Auto calibration
- Semi-automatic / Manual
- When the calibrator has reached the desired temperature and stability it will prompt you to type in the UUT temperature.



STANDARD INCLUSIONS

- Basic Instrument
- Test Leads
- Mains Cable
- Multi-hole Insertion Tubes (to suit 2 x 6 mm & 1 x 8 mm probes)
- Tool for Insertion Tubes
- Spare Fuses
- "NICAL" Calibration Software
- Calibration Certificates are issued in Accordance with our Scope as granted by NABL per ISO/IEC 17025:2017 Standards
- Instruction Manual
- Carrying Case

OPTIONAL

- Additional Thermowells / Insertion Tubes & Multihole - Contact us
- Reference Indicator (Accuracy $\pm 0.015\%$ Rdg.) & Reference Sensor - Contact us

Manufactured by



Since 1972

NAGMAN INSTRUMENTS AND ELECTRONICS PRIVATE LIMITED

AN ISO 9001:2015 CERTIFIED COMPANY

170/1a2, Chennai Bangalore Highway Road, Sembarambakkam, Chennai – 600 123. INDIA.

Phone - Domestic Sales

044-6677 7024, 044-6677 7005

Email : mktgchennai@nagman.com

Phone - Export Sales

+91-44-6677 7025.

Email : exports@nagman.com

www.nagman.com



Specifications subject to change owing to continuous development. Contact us for latest Datasheet.

NIE/TDS/NICAL/0925/00