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 : -100°C to 1200°C (NICAL 100 / 50 / 660 / 1200)

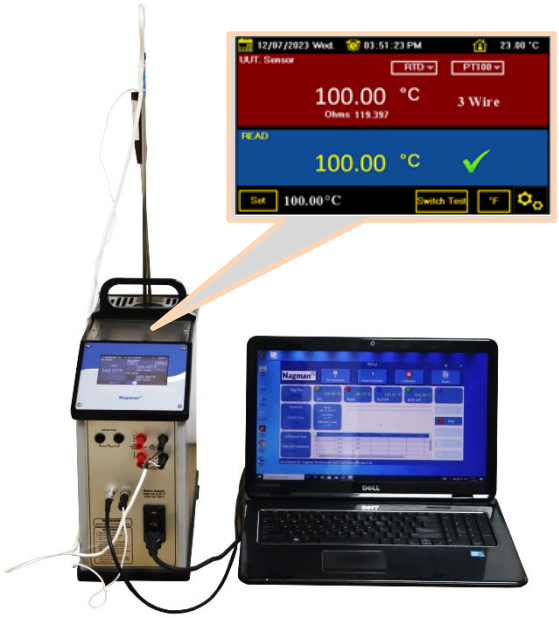
Measuring Accuracy : ±0.025% of rdg.

High Accuracy, Resolution & Stability with Measurement Capability for mV / V / mA, Resistance TC (ISA Types : J, K, R, S, N, E, B, T, E), 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/TC



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
- Count down timer (Shows when unit is stable)

SPECIFICATIONS

MODEL	NICAL 100	NICAL 50
Operating Range	-100°C to 25°C	-30°C to 140°C
Resolution	0.01°C	0.01°C
Accuracy	± 0.3°C	± 0.2°C
Stability	± 0.05°C	± 0.02°C
Radial Uniformity	± 0.02°C	± 0.02°C
Axial uniformity	± 0.2°C (40 mm)	± 0.2°C (40 mm)
Heating Time	-100°C to 25°C -- 50 min	33 to 140°C -- 20 min
Cooling Time	25 to -60°C -- 40 min -60 to -100°C -- 50 min	33 to -30°C -- 25 min
Time to Stability (typical)	15 min	7 min
Well Diameter x Depth	Ø30mm x 100mm	Ø30mm x 150mm
Weight	15 Kg	9 Kg
Reference Probe	PT 100	
Size (L x D x H)	210 x 365 x 500 mm	160 x 365 x 450 mm
Computer Interface	USB Interface	
Mains Power	230V AC 50HZ - Optional 115V AC , 60HZ	

Technical Datasheet

MODEL	NICAL 660	NICAL 1200
Operating Range	33°C to 660°C	150°C to 1200°C
Resolution	0.01°C	0.1°C
Accuracy	± 0.4°C	± 2°C
Stability	± 0.04°C	± 0.2°C
Radial Uniformity	± 0.04°C	± 0.2°C
Axial uniformity	± 0.4°C(40 mm)	± 0.6°C (20 mm)
Heating Time	50 to 660°C---- 30min	200 to 1200°C----1.5h
Cooling Time	660 to 100°C----75min	1200 to 200°C----3h
Time to Stability (typical)	15 min	15 min
Well Diameter x Depth	Ø30mm x 150mm	Ø30mm x 105 mm
Weight	11 Kg	12.6 Kg
Reference Probe	PT 100	"R"-Type TC
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	

MEASUREMENT : RANGE, RESOLUTION & ACCURACY

Type	Range	Resolution	Accuracy (% of reading)
mV (Low)	0 to 200	0.001	±(0.025%+2µV)
mV (High)	0 to 2000	0.01	±(0.025%+10µV)
Volts	0 to 20	0.0001	±(0.025%+0.08mV)
mA	0 to 25	0.0001	±(0.025%+0.4µA)
Ohms	0 to 500	0.001	±(0.025%+12mΩ)
K Ohms	0 to 5	0.00001	±(0.025%+120mΩ)
RTD Pt100	-100 to 800	0.01	±(0.025%+0.1°C)
RTD Pt200	-100 to 600	0.01	±(0.025%+0.15°C)
RTD Pt500	-100 to 530	0.01	±(0.025%+0.1°C)
RTD Pt1000	-100 to 650	0.01	±(0.025%+0.1°C)

Type	Range	Resolution	Accuracy (% of reading)
TC Type J	-100 to 1200	0.1	±(0.025%+0.1°C)
TC Type K	-60 to 1260	0.1	±(0.025%+0.1°C)
TC Type R	150 to 1700	0.1	±(0.025%+0.2°C)
TC Type S	170 to 1700	0.1	±(0.025%+0.2°C)
TC Type N	0 to 1300	0.1	±(0.025%+0.1°C)
TC Type B	920 to 1820	0.1	±(0.025%+0.2°C)
TC Type T	0 to 400	0.1	±(0.025%+0.1°C)
TC Type E	-100 to 1000	0.1	±(0.025%+0.1°C)

REFERENCE SENSOR

NICAL 100	PT100	Range: -100°C to 50°C	Accuracy: ± 0.06%, IEC DIN class A @ 0 °C
NICAL 50	PT100	Range: -30°C to 140°C	Accuracy: ± 0.06%, IEC DIN class A @ 0 °C
NICAL 660	PT100	Range: 33°C to 660°C	Accuracy: ± 0.06%, IEC DIN class A @ 0 °C
NICAL 1200	R-Type TC	Range: 150°C to 1200°C	Accuracy: ± 0.5 °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 6.5 mm & 1 x 8.5 mm probes)
- Tool for Insertion Tubes
- Spare Fuses
- Reference Sensor
- "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

Manufactured by

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