

Metrological Dry Block Medium Temperature Calibrator

Portable/Benchtop

Metcal 650

Lab Standard

Precision Dry Block Calibrator with Multihole Interchangeable Thermowells

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

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, B, T), RTD (Pt100, Pt200, Pt500, Pt1000 : IEC Standard) Signals

SALIENT FEATURES

Advanced – Micro-controller based Technology

Heavy Duty Portable / Bench-top Model

High Accuracy, Resolution & Stability

128 x 64 Graphic Display

Measurement Capability for TC, RTD, mV / mA / V & Resistance Signals

Touch Membrane Keypad

Switch Test Contact Measurement

Multi-hole Thermowell Inserts

Computer Interface & Calibration Software

Count down timer (Shows when unit is stable)

Stability Indicator



SPECIFICATIONS

Range	50°C to 650°C			
Resolution	0.01°C			
Accuracy	$\pm 0.4^\circ\text{C}$			
Stability	$\pm 0.04^\circ\text{C}$			
Stabilisation Time	15 Minutes			
Temperature Readout	°C / °F Selectable			
Radial Uniformity	$\pm 0.04^\circ\text{C}$			
Well Diameter	30 mm			
Immersion Depth	150 mm			
Heating Time (50 to 650°C)	36 Minutes approx.			
Cooling Time (650 to 100°C)	75 Minutes approx.			
Switch Test facility	Provided			
Interchangeable Thermowells	Multihole to suit 2 x ¼" & 1 x ½" Probes. Other Sizes available as optional			
Housing / Mounting	Bench-top			
Power Supply	230V AC, 50 Hz			
Instrument Dimensions (L x D x H)	160 x 365 x 450 mm			
Instrument Weight (approx.)	11 Kg.			
Measurement Capability	Thermocouples	ISA Types J, K, R, S, N, B, T	RTD	Pt100, 200, 500, 1000 IEC Std.
	mA	0 to 25 mA	mV	0 to 100 / 1000 mV
	Volt	0 to 10 V	Resistance	0 to 500Ω / 3.5 KΩ

MEASUREMENT : RANGE, RESOLUTION & ACCURACY

Type	Range	Resolution	Accuracy (% of reading)
mV (Low)	0 to 100	0.001	$\pm(0.025\%+2\mu\text{V})$
mV (High)	0 to 1000	0.01	$\pm(0.025\%+10\mu\text{V})$
Volts	0 to 10	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	$\pm(0.025\%+12\text{m}\Omega)$
KOhms	0 to 3.5	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	$\pm(0.025\%+0.1^\circ\text{C})$

STANDARD INCLUSIONS

- Basic Instrument
- Test Leads
- Mains Cable
- Multihole Insertion Tubes (to suit 2 x ¼" & 1 x ½" probes)
- Tool for Insertion Tubes
- Spare Fuses
- Computer Interface & "METCAL" 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 (ADD-ON) ITEMS

- Additional Thermowells/Insertion Tubes & Multihole - Contact us
- Power Supply 110V AC, 60 Hz

Manufactured by

Since 1972

NAGMAN INSTRUMENTS AND ELECTRONICS PRIVATE LIMITED**AN ISO 9001:2015 CERTIFIED COMPANY**

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

NIE/TDS/Metcal 650/01/01

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