

PRECISION ULTRA COOL Dry Block Temperature Calibrator

MODEL 1503 / -100



ABOUT MODEL



Precision Ultra Cool Dry Block Temperature Calibrator

Sansel model TCAL 1503/-100 Dry Block Temperature Calibrator incorporate the best cooling (FPSC) Technology. This dry well has an advantage of wide temperature range from -100 to 40°C, CFC Free, high efficiency, Fast cooling & Heating, Energy saving & Fluid free. Hence it is a great alternative to Fluidized bath and best suitable for clean room environment.

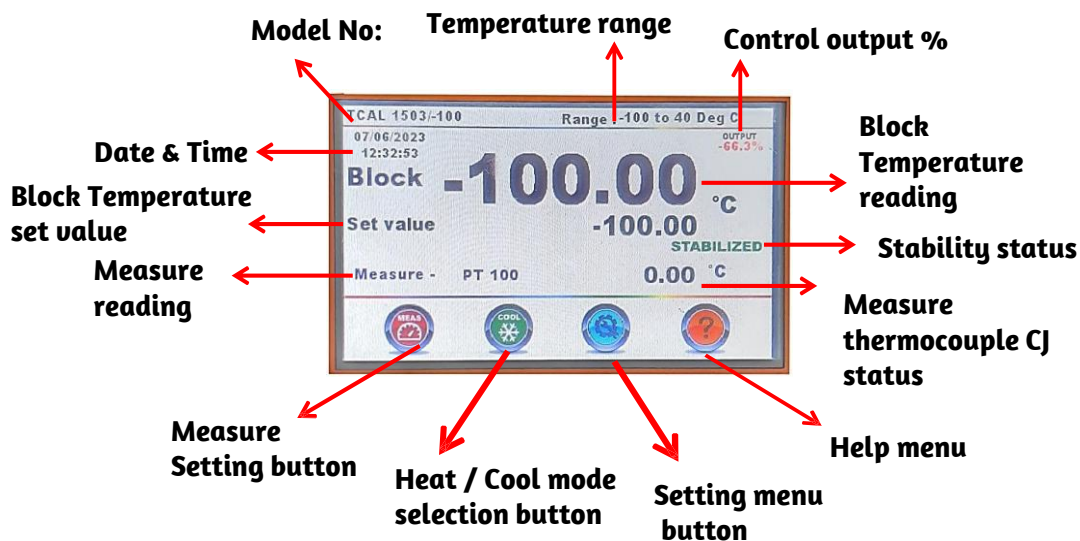
This Portable Dry Block Calibrator is a high precision, more resolution, better stability, Uniformity, big well dia and depth to calibrate more number of temperature sensors at a time. This model can meet any calibration requirement in laboratories or in Onsite applications. It has inbuilt measuring facility of thermocouples, RTD, Resistance, millivolt, Volt, milliamps and to directly read the signals from most of the temperature sensors, indicator with sensors and transmitters.

This Dry well calibrator model is using 4.3" True colour display with touch screen, easy to read multi parameter at the same time like, Block temperature, Set temperature, Measure value, real time clock with date & time, Control output %, Stability time & Status, Range of the equipment with necessary unit of measurement and three Touch panel keys are used for measure Configuration, Settings, Calibration etc.,. It has one more advantage of help menu for operating instruction of the equipment via the same display screen, Hence no need of hard copy of Instruction manual.

Applications

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|--|---|
| ☐ Bio-Technology | ☐ Calibration Laboratories |
| ☐ Food Industries | ☐ Chemical |
| ☐ Medical | ☐ Energy |
| ☐ Pharmaceutical | ☐ Bio-Science |

DISPLAY FEATURES



Features

- ✓ 4.3" true colour TFT display with touch screen
- ✓ Wide temperature range from -100 to 40°C
- ✓ More resolution 0.01°C
- ✓ Better stability $\pm 0.03^\circ\text{C}$
- ✓ Improved Axial & Radial uniformity
- ✓ Inbuilt DUC measurement facility for RTD, TC, mV, V, mA & ohms
- ✓ Inter changeable insert to suit different diameter of sensor up to 30mm
- ✓ Stabilization time & Status indication
- ✓ Metrology level performance
- ✓ Portable, Rugged & light weight
- ✓ Easy Onsite carriageable
- ✓ Low power consumption
- ✓ Optional PC Interface with automatic Calibration Software
- ✓ ISO/IEC 17025 Accredited Calibration Certificate.

Technical Specifications

Model	TCAL 1503/-100
Display	4.3" True colour TFT display with touch screen
Temperature Readout	°C / °F (selectable)
Temperature Range	-100°C to 40°C
Resolution	0.01°C
Block Stability (30 min)	$\pm 0.05^\circ\text{C}$
Block Radial uniformity	$\pm 0.05^\circ\text{C}$
Heating time	25°C to 40°C : 30 min -100 to 25°C : 80 min
Cooling time	25°C to -100°C : 90 min 40 to 25°C : 12 min
Stabilization time	10 min
Well Dimension(dia. x height)	30 x 120 mm
Test sensor immersion depth	115 mm
Standard well holes in mm	Insert No. 1 : 5.1, 6.2, 6.2 & 8.1, Insert No. 2 : 6.2, 6.2 & 10.2

Measure inputs	RTD – PT 100, PT 1000, TC – J, K, R, S, T, E, B, N , Analog – mA, mV, Ohms		
Measure (Range, Resolution, Accuracy)	Range	Resolution	Accuracy
mV-	0 to 75mV	0.001	$\pm(0.025\%rdg + 2\mu V)$
V-	0 to 10V	0.0001	$\pm(0.025\%rdg + 0.1mV)$
mA-	0 to 25mA	0.0001	$\pm(0.025\%rdg + 2\mu A)$
Ohms-	0 to 4000 Ω	0.01	$\pm(0.025\%rdg + 0.05\Omega)$
PT 100-	-200 to 800°C	0.01	$\pm(0.025\%rdg + 0.1^{\circ}C)$
PT 1000-	-200 to 630°C	0.01	$\pm(0.025\%rdg + 0.1^{\circ}C)$
J-	-200 to 1200°C	0.1	$\pm(0.025\%rdg + 0.1^{\circ}C)$
K-	-200 to 1370°C	0.1	$\pm(0.025\%rdg + 0.1^{\circ}C)$
R-	0 to 1760°C	0.1	$\pm(0.025\%rdg + 0.3^{\circ}C)$
S-	0 to 1760°C	0.1	$\pm(0.025\%rdg + 0.3^{\circ}C)$
N-	-200 to 1200°C	0.1	$\pm(0.025\%rdg + 0.1^{\circ}C)$
B-	600 to 1800°C	0.1	$\pm(0.025\%rdg + 0.3^{\circ}C)$
T-	-200 to 400°C	0.1	$\pm(0.025\%rdg + 0.1^{\circ}C)$
E-	-200 to 1000°C	0.1	$\pm(0.025\%rdg + 0.1^{\circ}C)$
Cold junction Accuracy	$\pm 0.3^{\circ}C$		
PC Interface	RS 232		
Switch Test	Provided		
UUC Sensor supply output	24V DC $\pm 10\%$ / 50mA max.		
Power supply	110–240V AC ($\pm 10\%$) 50/60 Hz		
Power Consumption	500 VA		
Overall Dimension in mm	356 x 210 x 534 (L x B x H)(Approx.)		
Instrument Weight	16.6 kg (with well insert)(Approx.)		
Calibration software	Optional (on request)		

SANSELSoft Calibration software (optional)

Optional fully automatic documentation calibration software “SANSELSoft” is provided with TCAL 1503/-100 to calibrate different variety of UUC automatically from your PC or Laptop and generate the calibration report with exact results without your presence always near. TCAL 1503/-100 will save your time to concentrate in various jobs. The SANSELSoft calibration software having easy following steps makes your calibration easy , effective & time saver.

Step 1

- ❖ Create tag of Device / Unit under calibration (DUC/ UUC)
- ❖ Select tag of Device / Unit under calibration (DUC/ UUC) (if already tag created)

Step 2

- ❖ Create / Specify calibration procedure

Step 3

- ❖ Select source of calibrator
- ❖ Select measurement calibrator (If different measurement equipment available)

Step 4

- ❖ Select mode of Calibration
- ❖ Select mode of measurement (If different measurement equipment available)

Step 5

- ❖ Initialize source / Measurements calibrators

Step 6

- ❖ Perform calibration

Step 7

- ❖ Specify Report number, Conclusion & Remarks

Step 8

- ❖ Print / Export Report

SANSELSOFT designed for perform calibration on field instruments with the use of standards and software communication. This software designed in the way, user can easily perform calibration. **SANSEL**SOFT has powerful database support to maintain complete track records of each device calibration for long time. **SANSEL**SOFT supports communication interface standards RS 485 or USB and provides facility to add new standard/DUC instrument library. **SANSEL**SOFT can be adopted for various types of instruments like electronic, electrical, temperature, pressure and optical measurement devices. **SANSEL**SOFT increases Standard's Life-time by eliminating key operations and saves maintenance cost.

Standard Delivery

1. Basic Instruments
2. Spares fuses
3. Standard well insert – 2nos
4. Instruction Manual
5. Well tool
6. Mains card

Optional

1. Master indicator with sensor
2. Additional well insert
3. ISO/IEC 17025 Accredited calibration certificate
4. Carrying case



Carrying case



SANSEL INSTRUMENTS AND CONTROLS

SANSEL CALIBRATION LABORATORIES LLP

ISO/IEC 17025 Accredited Calibration Laboratory by NABL CC - 2879
(Thermal, Mechanical, Electro-Technical, Dimension Parameters)

1 / 46 , 3rd Main road, Ganga Nagar, MMDA Colony , Maduravoyal , Chennai - 600 095. INDIA
☎ +91 44 2378 3951, ☎ +91 72999 72085 / 86 / 93, ☎ +91 98401 49928 ✉ enquiry@ sansel.net

🌐 www.sansel.net 🌐 www.sansel.in 🌐 www.sansel.co.in 🌐 www.calibrators.in

