HIGH PRECISION SUB ZERO
DRY BLOCK TEMPERATURE CALIBRATOR
MODEL : TCAL 1503 / - 35

INTRODUCTION

Sansel model TCAL 1503/-35 Dry Block Temperature Calibrator incorporate the best cooling (FPSC) Technology. This dry well has an advantage of wide temperature range from -35 to 120°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.

The TCAL 1503/-35 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, millivolts & milliamps to directly read the signals from most of the temperature sensors, indicator with sensors and transmitters.

TCAL 1503/-35 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

- ❑ **Bio-Technology**
- ❑ **Food Industries**
- ❑ **Medical**
- ❑ **Pharmaceutical**
- ❑ **Calibration Laboratories**

FEATURES

- ✓ **4.3 inch True colour TFT DISPLAY with touch screen**
- ✓ **Wide temperature**
- ✓ **Range from -35 to 120°C**
- ✓ **Resolution 0.01 °C**
- ✓ **Metrology level performance**
- ✓ **Improved radial & axial uniformity up to 40mm height**
- ✓ **Meet the EURAMET Cg-13 requirement**
- ✓ **Stabilization time & status indication provided**
- ✓ **Fast heating & cooling**
- ✓ **Quick settling , Portable & Rugged**

- ✓ **Solid state heating and cooling technology**
- ✓ **Interchangeable 30mm dia x 150mm length insert to suit different diameter of sensor**
- ✓ **Inbuilt DUC measurement facility RTD, TC, mV, mA & ohms**
- ✓ **Light weight – less than 16kg**
- ✓ **Easy onsite carriable**
- ✓ **Low power consumption – less than 500w**
- ✓ **ISO/IEC 17025 Accredited calibration certificate**
- ✓ **Optional PC Interface with automatic calibration software**

Technical Specifications

Model	TCAL 1503 / -35
Display	4.3 inch True TFT LCD Display with Touch screen
Temperature Readout	°C / °F (selectable)
Temperature Range*	-35 to 120°C
Resolution	0.01°C
Block Stability	± 0.01°C at full range
Block Radial uniformity	± 0.03°C at full range
Block Axial uniformity (40mm)	± 0.06°C at -35°C ± 0.05°C at 0°C ± 0.1°C at 120°C
Loading effect	Better than ± 0.08°C
hysteresis	Better than ± 0.03°C
Heating time	25 mins (25 to 130 °C) 75 mins (-35 to 130 °C) 52 mins (-35 to 25 °C)
Cooling time	25 mins (25 to -35 °C) 15 mins (25 to -30 °C) 65 mins (130 to 25 °C)
Stabilization Time	10 minutes
Insert Dia. x Height	30 x 160 mm (dia X height)

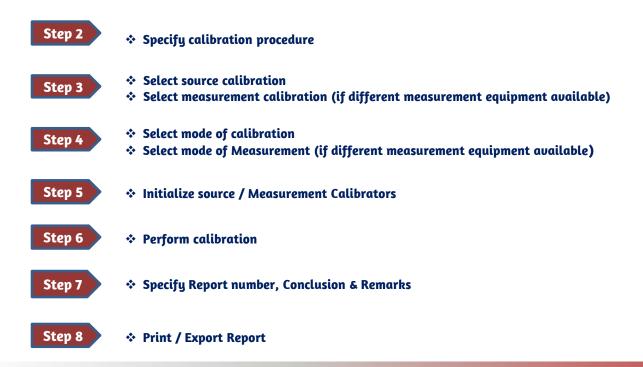|	
Test sensor immersion depth	**130 mm**
Standard well holes in mm	**Insert No. 1 →5.1, 6.2, 6.2 & 8.1, Insert No. 2 →6.2, 6.2 & 10.2**
Measure inputs	**RTD-PT 100, PT 1000 / TC - J, K, R, S, T, E, B , N , Analog – mA, mV, ohms**
Measure Range / Resolution / Accuracy (RTD, TC, Analog)	
PT 100-	
PT 1000-	
J-	
K-	
R-	
S-	
T-	
B-	
N-	
E-	
mA-	
mV-	
Ohms-	
UUC Sensor supply input	**24V DC ± 10% / 50mA max.**
Power supply	**230V AC ± 10% / 50Hz (optional 110V AC)**
Power Consumption	**500 VA**
Switch test	**Provided**
Overall Dimension in mm	**390 x 185 x 356 (L x B x H) (Approx.)**
Weight	**17.3 kg (with well insert) (Approx.)**

Note: Due to continuous product improvements, Published specifications may change with out notice. Temperature range covers @ 23°C Ambient.

SANSELSOFT Calibration software (optional)

Optional fully automatic documentation calibration software "SANSELSOFT" is provided with TCAL 1503 / -35 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 1501 / -35 , 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 ❖ Specify calibration procedure

Step 3
❖ Select source calibration
❖ Select measurement calibration (if different measurement equipment available)

Step 4
❖ Select mode of calibration
❖ Select mode of Measurement (if different measurement equipment available)

Step 5 ❖ Initialize source / Measurement 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. SANSELSOFT has powerful database support to maintain complete track records of each device calibration for long time.

SANSELSOFT supports communication interface standards RS 232 and provides facility to add new standard/DUC instrument library. SANSELSOFT can be adopted for various types of instruments like electronic, electrical, temperature, pressure and optical measurement devices. SANSELSOFT increases Standard's Life-time by eliminating key operations and saves maintenance cost.

Standard Delivery

1. Basic Instrument
2. Instruction Manual
3. Traceable Calibration Certificate
4. Mains Card
5. Spare Fuses
6. Well tool
7. Standard well insert – 2 nos

Optional

1. Master Indicator with sensor
2. Additional well insert
3. Carrying case

Carrying case

QS

ISO 9001