

One of the World's  
Smallest with most  
advanced Features

# MINIATURE DRY BLOCK (TEMPERATURE CALIBRATOR)

For Thermocouple & RTD Sensor Calibration

MODEL : TCAL 1404/300

Right Product for  
your Calibration  
need

Rugged & Most compact Ideal  
for On-site Deployment.



World class performance

Light weight



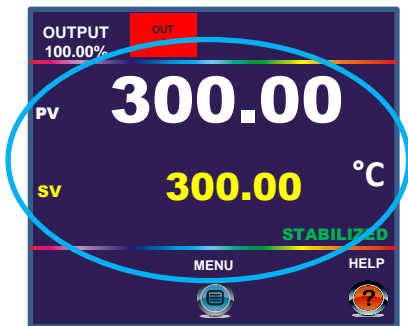
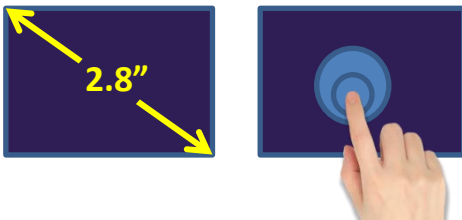
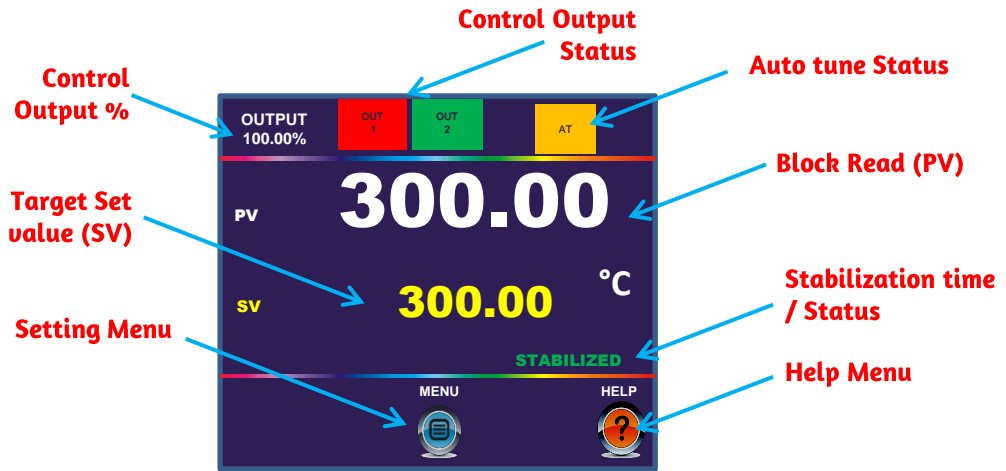
Simple, Convenient & Easy  
Operation



## INTRODUCTION

It is one of the smallest dry block with rich features and is highly competitive in price. SANSEL Model TCAL 1404/300, (Dry Block Miniature Temperature Calibrator) sets a new benchmark in temperature calibration with advanced features that deliver unmatched precision, ease of use, and operational stability. Temperature range of the TCAL 1404 /300 covers from Amb. +5 to 300°C. Our Drywell Calibrators are ideally suited for fast calibration in process industries to calibrate Thermocouple, RTD, Indicator with sensors & transmitters with sensors, this compact yet powerful calibrator is designed to meet the stringent demands of today's laboratories and field operations.

# Key Features



## 2.8" True Colour TFT Display with Touchscreen

Equipped with a high-definition 2.8-inch true colour display, the calibrator provides a vibrant and intuitive user interface. The touchscreen capability ensures easy navigation and quick access to settings, making operation simpler, more efficient and has a benefit of Enhanced visibility, effortless control and reducing the need of extensive training for both seasoned technicians and new users.

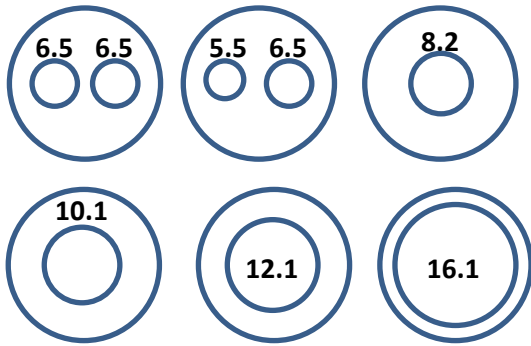
## Block Read (PV) & Target Set Value (SV) with 0.01°C Resolution

Achieve highly accurate temperature readings and set precise target values with a remarkable 0.01°C resolution. This feature ensures that your measurements are exact, helping you maintain stringent control over your calibration processes and has a benefit of Greater accuracy for critical calibration tasks, ensuring reliability and trust in your results.

## Safety Cutoff for Over Temperature

Built-in safety features automatically shut off the system if the temperature exceeds safe operating limits, protecting both the device and the user from potential hazards and has a benefit of Peace of mind with automatic safety measures that prevent overheating, ensuring long-term durability and safe operation.

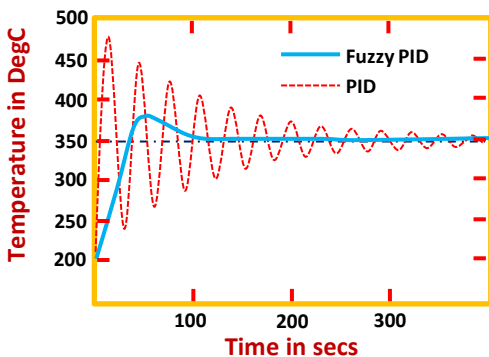
## STANDARD



## Interchangeable Insert to Suit Different Diameter Sensors (up to 20mm)

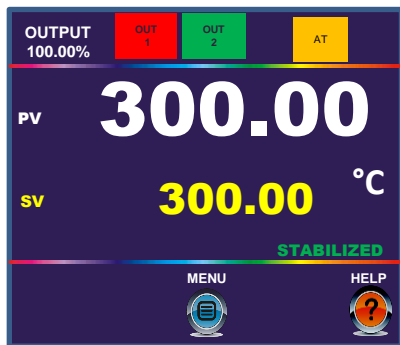
The dry block comes with interchangeable inserts, making it adaptable to a wide variety of sensor sizes up to 20mm in diameter. This flexibility enables users to calibrate multiple types of sensors with a single device and has a benefit of Versatile, multi-functional design that caters to different sensor types, saving time and increasing operational efficiency.

**Note : Standard 6.5 x 2nos supplied as standard accessories. Other than standard insert additional cost as per customer requirement**



## Fuzzy Logic PID Control

Fast-tracking performance is achieved using an advanced fuzzy logic with self tuned PID control system. This smart algorithm ensures rapid heating or cooling to the desired temperature, reducing downtime while maintaining excellent stability, accuracy throughout the process and has a benefit of Quick temperature adjustment and stabilization, minimizing the wait time while ensuring consistent and reliable results.



## Stability Time Indicator

The calibrator is equipped with a "Stability Time" feature, which measures and displays the time taken for the system to stabilize at the target temperature. Only after achieving complete stability will the "Stabilized" status appear, ensuring that your calibration is conducted in the most controlled environment possible and has a benefit of Assurance of accurate and stable readings, with real-time feedback on stabilization time, providing confidence in calibration processes.



See the actual size  
(Comparison with  
pencil)

## Compact, Portable and Durability

The device's lightweight design allows for easy transportation, ideal for both field and lab use. Engineered with robust materials to withstand harsh environments, ensuring long-term reliability.

## Technical Specifications

<b>Model</b>	<b>TCAL 1404/300</b>
<b>Display</b>	<b>2.8" True TFT with Touch screen</b>
<b>Temperature Range</b>	<b>Amb. + 5 to 300 °C</b>
<b>Radial uniformity (Better than)</b>	<b>±0.03°C</b>
<b>Resolution</b>	<b>0.01 °C</b>
<b>Stability</b>	<b>±0.04 °C</b>
<b>Temperature readout</b>	<b>°C</b>
<b>Heating time</b>	<b>Amb to 300 --&gt;23 min</b>
<b>Cooling time</b>	<b>300 to 50--&gt;30 min</b>
<b>Stabilization time</b>	<b>15 mins</b>
<b>Well Dimension(dia. x height)</b>	<b>20 x 100 mm</b>
<b>Well immersion depth</b>	<b>90 mm</b>
<b>Standard well holes in mm</b>	<b>6.2 x 2nos</b>
<b>Power supply</b>	<b>230V AC ± 10% / 50Hz (Optional 110V AC)</b>
<b>Power consumption</b>	<b>250 w</b>
<b>Overall Dimension in mm</b>	<b>170 x 95 x 183 mm</b>
<b>Instrument Weight</b>	<b>2.75 Kg</b>

Note: Due to continuous product improvements, Published specifications may change with out notice

### Standard Delivery

- |                     |                                      |
|---------------------|--------------------------------------|
| 1. Basic Instrument | 5. Instruction manual                |
| 2. Spare fuses      | 6. Mains card                        |
| 3. Carry bag        | 7. Standard well insert              |
| 4. Well tool        | 8. Traceable calibration certificate |

### Optional

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

Carry bag



## SANSEL INSTRUMENTS AND CONTROLS SANSEL CALIBRATION LABORATORIES LLP

ISO/IEC 17025 Accredited Calibration Laboratory by NABL CC - 2879

( Thermal, Mechanical, Electro-Technical, Dimension Parameters )

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