

Liquid Calibration Bath

-80°C to 50°C

Wide Temperature Range

The CALsys -80/50 & Autocal -80/50 offer a wide temperature range from -80 °C to 50 °C

Large immersion depth

The CALsys -80/50 & Autocal -80/50 is ideal for Industrial/ laboratory field use. It has large immersion depth of 230mm with 90x90 sq. mm access opening and wide operating range

CFC free refrigerants

The CALsys -80/50 & Autocal -80/50 extremely highly accurate liquid stirrer bath free from CFC refrigerants.

Accuracy and performance

The CALsys -80/50 & Autocal -80/50 is an easily portable unit that also provides excellent calibration accuracy with stability $\pm 0.04^{\circ}\text{C}$ at -80°C.

Computer Interface

The communication port (RS- 232/ USB) enables communication with selected CALsys -80/50 & Autocal -80/50 calibrator.

CALsys -80/50

Autocal -80/50



Calibration bath



Autocal -80/50



CALsys -80/50

CALsys -80/50 & Autocal -80/50 offers easy to use liquid temperature calibrator with wide temperature range from -80 to 50°C. It is a highly stable standard bath for calibrating thermocouples & RTD. It provides superior thermal environment for probe immersion as no air gap exists between the probe and the medium, thermal coupling is therefore much better and the stirring results in even heat distribution throughout the medium. Methanol is used for temperature below 0°C and water from 0 to 50°C. It has large tank which filled with methanol. The liquid is heated or cooled to the desired temperature .

The volume is 9 ltr. And access opening is 90X90 sq. mm with 230 mm depth. The temperature of the calibrator is set and controlled by a self tuned PID controller with automatic super fine adjustment.

The Autocal -80/50 is an automatic temperature calibration system for the Thermocouple and RTD. The system consists of Temperature bath and PC software, which together contribute to the whole cycle of auto calibration process. The system accept 4 channels, 4 Thermocouples or 4 RTDs. The connection for these channels through special type of locking connectors. The channel configuration can be done with LCD display via touch screen keypad. The thermocouple microvolt & RTD ohm reading for each channel is monitored with CJC compensation. After the calibration process complete the PC software generates a excel sheet of actual calibrated values for the inputs.

SPECIFICATIONS

Autocal -80/50 & CALsys -80/50

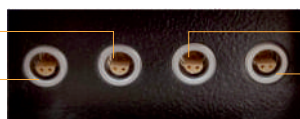
| | |
|------------------------------------|---|
| Temperature range | -80 °C to 50 °C |
| Stability | ±0.04°C at -80°C |
| | ±0.07°C at 0°C |
| | ±0.05°C at 50°C |
| Uniformity | ±0.05°C at -80°C |
| | ±0.09°C at 0°C |
| | ±0.07°C at 50°C |
| Volume | Approx 9 Ltr. |
| Immersion depth | 230mm |
| Access opening | 90x90 mm |
| Method of Control | Self tuned PID controller |
| Cooling time | 90 Min (Room Temperature to -80°C) |
| Resolution | 0.1°C |
| Display | LCD, °C or F user-selectable |
| Size (H x W x D) | 1080(H) x 675 (W) x 555 (D) mm |
| Weight | 135 kg |
| Power Requirements | 230 VAC or 110 VAC 50/60 Hz 2 kW |
| Computer interface | RS-232/USB/LAN |
| Calibration | Accredited calibration certificate provided (Optional) |
| Environmental operating conditions | 0°C to 30°C |
| Input (Autocal -80/50) | Four channels (one master and three test sensors) high quality universal LEMO connector suitable both for T/C {J, K, N, T, R, S, B type) and RTD |
| Software (Autocal -80/50) | The calibrator will be provided with software for data Excel generation in Auto Mode |

SENSOR CONNECTION (Autocal -80/50)

The Calibration system provides caensors.libration upto four channels i.e. one master and three tests

Connection for First TEST Sensor

Connection for MASTER Sensor

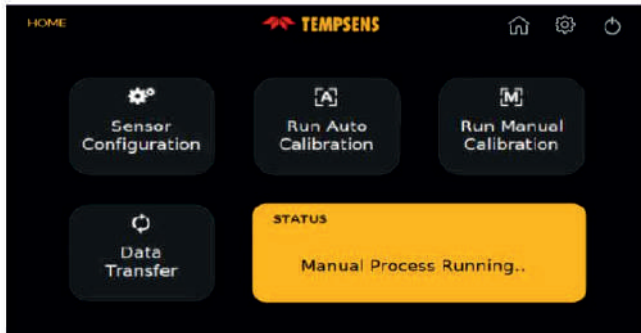


Connection for Second TEST Sensor

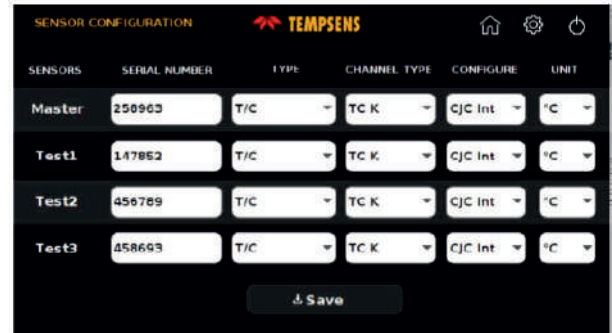
Connection for Third TEST Sensor

USER INTERFACE (Autocal -80/50)

Home Screen: In this screen user can select sensor configuration (for selection of type of sensors), mode of operation (auto / manual) and data transfer (file transfer). This window also shows the ongoing process.

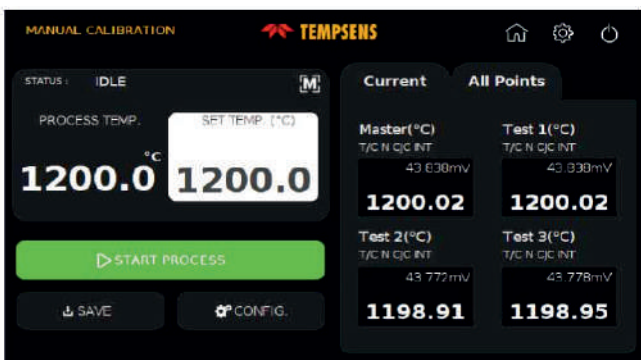


Sensor Configuration: In this screen user select the sensors Thermocouple (J, K, B, N, R, S, T type) / RTD (PT 100, PT 1000, PT50 etc.) for calibration with their serial number and temperature unit (°C/F/K).

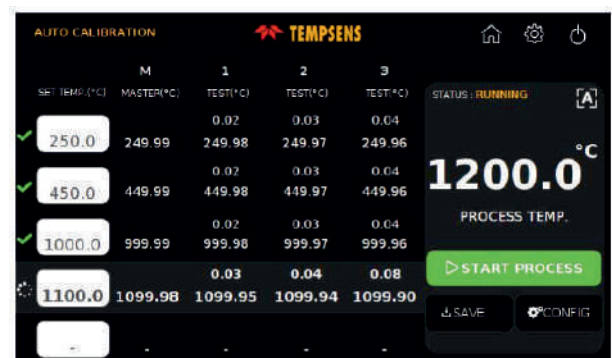


Autocal -80/50 have two operating modes i.e. Manual and Auto mode

Manual Mode: In this screen user set the temp. Point for calibration and on clicking start process button the process of calibration starts



Auto Mode : In this screen user sets the temperature Points for calibration (Max 5 Points)



SOFTWARE : Tempsens make Easy to use Customized software enables end user to access temperature data both for Manual mode and Automode



ACCESSORIES

- **Inserts for Autocal -80/50 & CALsys -80/50 model**

Inserts for Autocal -80/50 & CALsys -80/50 about 90X90 sq. mm access opening with 230mm insertion depth and have multiholes of 2x6.5 mm and 2x8.5 mm. All Specifications based on outer diameter of the sensor under test.

*We also offer customized hole size based on Customer requirements.

- **Reference Standard RTD Part no. TPRT-A-300.**
- **Calsoft Software**
- **Operational Manual**
- **NABL accredited calibration certificate (Optional)**

