



CALIBRATION BATH for Stirred Liquid and Dry Block of Extra Large Calibration Volume

T-35NLL / T-300PLL

- The T-35NLL generates temperatures from -35 °C to 140 °C, and the T-300PLL from ambient temperature to 300 °C.
- Stirred Liquid or Dry Block.
- Extra large calibration volume: 59 mm diameter x 200 mm height.
- High Stability, Uniformity and Accuracy. Easily performs 1/5 and 1/10 DIN Pt-100 calibrations.
- Optional temperature measurement and control by external probe with Callendar-Van Dusen coefficients.
- Resolution of 0.01 °C.
- Stability of ± 0.02 °C for T-35NLL and ± 0.05 °C for T-300PLL.
- Have input for thermocouples, resistance thermometers and thermostats.
- Internal regulated 24 Vdc power supply and mA input for 2-wire transmitters.
- Completely automatic calibration with or without the use of a computer.
- Documenting capabilities: connection with computer and ISOPLAN® calibration software.

The T-35NLL and T-300PLL baths were developed for applications which require an extra large calibration volume. Thus, the dimensions of 59 mm diameter by 200 mm height of the inserts enable the calibration of many different shapes and sizes sensors or the calibration of multiple temperature sensors at the same time. When using the container insert (Stirred Liquid Insert) filled with fluid, T-35NLL/ T-300PLL become true liquid baths of high homogeneity since they have a uniform mechanical stirrer magnetically coupled, maintaining constant turbulence of the fluid. It can also be purchased an external probe so that the control can be done from a sensor inserted in the block, together with the sensors to be calibrated. Have all the common features of the Presys calibrators: automatic calibrations, auxiliary calibrator, communication with computer and Isoplan® software etc.

Low Viscosity Silicone Oil

Type 200-10 (-30 to 160 °C)
Type 710 (80 to 300 °C)

- Order Code 200-10: 03.03.0206-21
- Order Code 710: 03.03.0225-21
- Operating Temperature: -30 °C to 160 °C / 80 °C to 300 °C.
- Flash Point: 163 °C / 302 °C.
- 1 kg package.
- Emits no vapors.

Technical Specifications
T-35NLL
T-300PLL

Operating Range: ambient temperature: 23°C	-35 °C to 140 °C	from ambient temperature to 300 °C
Accuracy: internal reference with external probe with external thermometer	± 0.1 °C	
	± 0.07 °C	
	± 0.05 °C	
Resolution:	0.01 °C	
Stability:	± 0.02 °C	± 0.05 °C
Heating Time:	50 min (25 °C to 140 °C)	60 min (25 °C to 300 °C)
Cooling Time:	120 min (25 °C to -35 °C)	100 min (300 °C to 100 °C)
Temperature Uniformity:	± 0.05 °C	
Weight:	14.8 kg	13 kg
Power Supply:	110 or 220 Vac, 50/60Hz	
Electric Power:	450 W	1000 W
Units / Temperature Scales:	°C or °F / IPTS-68 or ITS-90 user selectable	
Display:	Graphic vacuum fluorescent with contrast adjustment	
Well diameter / Depth:	Ø59 x 200 mm	
Dimensions: (HxWxD)	380 x 200 x 270 mm	
Warranty:	1 year, except for rechargeable battery and elements of Peltier effect	

Electrical Input Specifications

Input Ranges	Resolution	Accuracy	Remarks
millivolt -150 to 150 mV -500 to -150 mV 150 to 2450 mV	0.001 mV	± 0.01 % FS	Rinput > 10 MΩ
	0.01 mV	± 0.02 % FS	auto-range
	0.01 mV	± 0.02 % FS	
mA -5 to 24.5 mA	0.0001 mA	± 0.02 % FS	Rinput < 160 Ω
	0.01 Ω	± 0.01 % FS	Excitation current 0.9 mA
resistance 0 to 400 Ω 400 to 2500 Ω	0.01 Ω	± 0.03 % FS	auto-range
	0.01 Ω	± 0.03 % FS	
Pt-100 -200 to 850 °C / -328 to 1562 °F	0.01 °C / 0.01 °F	± 0.1 °C / ± 0.2 °F	IEC-60751
Pt-1000 -200 to 400 °C / -328 to 752 °F	0.1 °C / 0.1 °F	± 0.1 °C / ± 0.2 °F	IEC-60751
Cu-10 -200 to 260 °C / -328 to 500 °F	0.1 °C / 0.1 °F	± 2.0 °C / ± 4.0 °F	MINCO 16-9
Ni-100 -60 to 250 °C / -76 to 482 °F	0.1 °C / 0.1 °F	± 0.2 °C / ± 0.4 °F	DIN-43760
TC-J -210 to 1200 °C / -346 to 2192 °F	0.1 °C / 0.1 °F	± 0.2 °C / ± 0.4 °F	IEC-60584
TC-K -270 to -150 °C / -454 to -238 °F -150 to 1370 °C / -238 to 2498 °F	0.1 °C / 0.1 °F	± 0.5 °C / ± 1.0 °F	IEC-60584
	0.1 °C / 0.1 °F	± 0.2 °C / ± 0.4 °F	
TC-T -260 to -200 °C / -436 to -328 °F -200 to -75 °C / -328 to -103 °F -75 to 400 °C / -103 to 752 °F	0.1 °C / 0.1 °F	± 0.6 °C / ± 1.2 °F	IEC-60584
	0.1 °C / 0.1 °F	± 0.4 °C / ± 0.8 °F	
	0.1 °C / 0.1 °F	± 0.2 °C / ± 0.4 °F	
TC-E -270 to -150 °C / -454 to -238 °F -150 to 1000 °C / -238 to 1832 °F	0.1 °C / 0.1 °F	± 0.3 °C / ± 0.6 °F	IEC-60584
	0.1 °C / 0.1 °F	± 0.1 °C / ± 0.2 °F	
TC-N -260 to -200 °C / -436 to -328 °F -200 to -20 °C / -328 to -4 °F -20 to 1300 °C / -4 to 2372 °F	0.1 °C / 0.1 °F	± 1.0 °C / ± 2.0 °F	IEC-60584
	0.1 °C / 0.1 °F	± 0.4 °C / ± 0.8 °F	
	0.1 °C / 0.1 °F	± 0.2 °C / ± 0.4 °F	
TC-L -200 to 900 °C / -328 to 1652 °F	0.1 °C / 0.1 °F	± 0.2 °C / ± 0.4 °F	DIN-43710

FS = Full Scale

Accuracy values are valid within one year and temperature range from 20 to 26 °C. Outside these limits add 0.001 % FS / °C, taking 23 °C as the reference temperature. For thermocouples with internal cold junction compensation, add a cold junction compensation error of ± 0.2 °C or ± 0.4 °F.

Order Code
T-35NLL / T-300PLL — — **IN** — — —
Power Supply

1 - 110 Vac 2 - 220 Vac

Included Insert

Choose between the inserts listed below. Unless specified, the accompanying insert is IN03.

Optional

BB - Black Body Insert _____

AG - Stirred Liquid Kit _____

Accessories

Inserts:	Holes	Order Code
IN01	7x 6 mm and 1x 1/4"	T-35NLL / T-300PLL 06.04.0107-00
IN02	8x 1/4"	06.04.0108-00
IN03	2x 3.0 mm, 2x 6.0 mm, 2x 1/4" and 2x 8 mm	06.04.0109-00
IN04	2x 6.0 mm, 2x 8.0 mm, 2x 3/8" and 1x 1/4"	06.04.0110-00
IN10	Others, under ordering	06.04.0111-00

Serial Communication: Modbus® RTU Protocol (RS-232/RS-485).

Included Items: carrying case, strap, insert (selectable), insert extractor tool, test leads, manual and power cord.

Optional Accessories:

 Temperature Sensors:
 1/5 DIN R Probe - Order Code: 04.06.0001-21.
 Communication Interface - Order Code: 06.02.0002-00.