



Tecal Accu-Temp II

Tecal Accu-Temp II Laboratory Grade Reference Thermometer

The Tecal Accu-Temp II is a high accuracy multi purpose digital thermometer for both platinum resistance thermometers and thermocouples. Dual Channel input allows a probe on Channel B to be calibrated against a standard on Channel A - directly compare any combination of PRT and Thermocouple. The Tecal Accu-Temp II supports 13 thermocouple Types B, E, J, K, N, R, S, T, D, C, I, U, Au/Pt and both 3 and 4 wire 100 ohm Platinum resistance thermometers and RTDs.

- Accuracy of RTD and PRT measurement ± 0.010 °C
- Accuracy of T/C measurement, better than ± 0.1 °C
- 0.001 resolution for RTDs/PRTs and thermocouples
- 2 measuring inputs
- 13 thermocouples: B, E, J, K, N, R, S, T, D, C, I, U, Au/Pt
- T/C CJC internal or external
- Input of RTD coefficients: Calendar Van Dusen & ITS90
- Probe self-heat check
- Automatic current reversal for RTDs/PRTs
- Suitable for 3 and 4 wire RTDs/PRTs
- Units °C, °F, K, mV, ohms
- Math functions max/min, std. deviation & mean
- Data logging 4000 values
- Expandable by plugging in optional 4 input RTD or thermocouple scanner cards to 1 of 2 rear panel slots available.
- RS232 talk/listen - included
- Rechargeable sealed lead acid battery: 8 hrs operation continuous

The powerful math function enables statistical analysis of the captured data, mean, max, min, peak and standard deviation. The Tecal Accu-Temp II can be expanded by adding either a 4 input Thermocouple or 4 input PRT card into one of the two available slots in the rear of the unit. Ultimately two cards of the same type could be added to allow the measurement of up to 10 sensors of the same type or one PRT as a reference and nine thermocouples. Each unit includes an RS232 cable, NIST traceable calibration, instruction manual and mains cable. Combine the Tecal Accu-Temp II with one of Techne's Secondary Standard PRTs, a Techne Dry block calibrator or liquid calibration bath and Technetworks software to create a thermometer and sensor calibration system with high overall accuracy.

Technical Specification

Dimensions	219mm W x 315mm H x 110mm D
Weight	5.5kg approx

Thermocouple Accuracy

Type	Range °C	Resolution °C, °F or K	Display Resolution mV	Uncertainty @20 °C °C 5 \pm 1 year	Uncertainty @20 °C °C 5 \pm 60 days	Temperature Coefficient /°C
B	+250 to +1820	0.001	1.0	$\pm(0.025\% \text{ Rdg} + 0.006\% \text{ FS})^*$	$\pm(0.02\% \text{ Rdg} + 0.006\% \text{ FS})^*$	7 ppm Rdg + 6 ppm FS
C	0 to +2315	0.001	1.0	$\pm(0.075\% \text{ Rdg} + 0.005\% \text{ FS})$	$\pm(0.05\% \text{ Rdg} + 0.005\% \text{ FS})$	7 ppm Rdg + 6 ppm FS
D	0 to +2315	0.001	1.0	$\pm(0.75\% \text{ Rdg} + 0.005\% \text{ FS})$	$\pm(0.05\% \text{ Rdg} + 0.005\% \text{ FS})$	7 ppm Rdg + 6 ppm FS
E	-200 to +1000	0.001	1.0	$\pm(0.026\% \text{ Rdg} + 0.004\% \text{ FS})$	$\pm(0.01\% \text{ Rdg} + 0.004\% \text{ FS})$	7 ppm Rdg + 6 ppm FS
J	-210 to +1200	0.001	1.0	$\pm(0.03\% \text{ Rdg} + 0.005\% \text{ FS})$	$\pm(0.008\% \text{ Rdg} + 0.005\% \text{ FS})$	7 ppm Rdg + 6 ppm FS
K	-200 to +1372	0.001	1.0	$\pm(0.035\% \text{ Rdg} + 0.006\% \text{ FS})$	$\pm(0.01\% \text{ Rdg} + 0.006\% \text{ FS})$	7 ppm Rdg + 6 ppm FS
N	-200 to +1300	0.001	1.0	$\pm(0.035\% \text{ Rdg} + 0.005\% \text{ FS})$	$\pm(0.01\% \text{ Rdg} + 0.005\% \text{ FS})$	7 ppm Rdg + 6 ppm FS
R	-50 to +1768	0.001	1.0	$\pm(0.02\% \text{ Rdg} + 0.015\% \text{ FS})$	$\pm(0.005\% \text{ Rdg} + 0.015\% \text{ FS})$	7 ppm Rdg + 6 ppm FS
S	-50 to +1768	0.001	1.0	$\pm(0.02\% \text{ Rdg} + 0.015\% \text{ FS})$	$\pm(0.005\% \text{ Rdg} + 0.015\% \text{ FS})$	7 ppm Rdg + 6 ppm FS
T	-200 to +400	0.001	1.0	$\pm(0.025\% \text{ Rdg} + 0.015\% \text{ FS})$	$\pm(0.005\% \text{ Rdg} + 0.015\% \text{ FS})$	7 ppm Rdg + 6 ppm FS
U	-200 to +600	0.001	1.0	$\pm(0.025\% \text{ Rdg} + 0.015\% \text{ FS})$	$\pm(0.005\% \text{ Rdg} + 0.015\% \text{ FS})$	7 ppm Rdg + 6 ppm FS
L	-200 to +600	0.001	1.0	$\pm(0.03\% \text{ Rdg} + 0.005\% \text{ FS})$	$\pm(0.008\% \text{ Rdg} + 0.005\% \text{ FS})$	7 ppm Rdg + 6 ppm FS
Au/Pt	0 to +1000	0.001	1.0	$\pm(0.02\% \text{ Rdg} + 0.015\% \text{ FS})$	$\pm(0.005\% \text{ Rdg} + 0.015\% \text{ FS})$	7 ppm Rdg + 6 ppm FS

RTD & PRT Accuracy

Type	Range °C	Resistance	Current	Resolution	Resistance °C, °F or K	Accuracy Typically @20°C \pm
Pt100	-200 to 660	18 to 340 Ω	0.5mA	0.001	0.001 Ω	0.010
Pt100	660 to +450	340 to 450 Ω	0.5mA	0.001	0.001 Ω	0.020