

Digital Contact Thermometer TT3B

IEC 751 – ITS 90 – ASTM E644 – ASTM E1137 – ASTM E2877 – ASTM D8278



- ⊕ **0.001°C resolution**
- ⊕ **Fast response ($T_{63} < 3$ seconds)**
- ⊕ **2 line LC Display + backlight**
- ⊕ **Up to $\pm 0.02^\circ\text{C}$ precision**
- ⊕ **$^\circ\text{C} / ^\circ\text{F}$ selectable**
- ⊕ **ITS 90, ASTM E2877 Class A**
- ⊕ **Delivered with 5 calibration points**

General

This thermometer is referred to as a Resistive Contact Thermometer (RCT) or Resistive Thermometer Device (RTD). The TT3B thermometer uses a six points ITS 90 calibration. The display provides a three decimal reading (0.001°C) and an accuracy of $\pm 0.02^\circ\text{C}$ over the full scale.

The thermometer has a thin stainless steel probe which ensures a very fast temperature response. The probe has low thermal mass which prevents temperature changes slowing down thus not influencing the measurement. This prevents significant measurement error caused by a slow measurement response.

Construction

The thermometer consists of a stainless steel PT100 probe, a small electronic circuit board which is placed in a plastic (HIPS) housing. The PT100 probe is thermally insulated from this housing using a PTFE ring. The electronics are powered via USB cable. The probe is designed to accommodate a wide range of voltages and frequencies (85-260V/50~60Hz).

Item	Unit	TT3B
P/N		10T6094
Range		-40 .. + 140°C/-40..302°F
Reading		$^\circ\text{C}$ or $^\circ\text{F}$ menu selectable
Interface		USB
Resolution	[$^\circ\text{C}/^\circ\text{F}$]	0.001
Accuracy	[$^\circ\text{C}$]	Up to ± 0.02
Linearity	[$^\circ\text{C}$]	± 0.01
Drift annual	[$^\circ\text{C}$]	± 0.001
Response T_{63}	[Sec]	< 3
Power		9V mains adapter
Dimensions (l x h x w)	[mm]	115 x 180 x 35 (excluding probe)
Probe	[mm]	215 (upper part 100 * \varnothing 6, bottom part 115 * \varnothing 3)
Log time	hr	9hr sample rate 1s 500 hr sample rate 60s
Probe material		304 Stainless steel
Weight	[gr]	375
CE		Conforms to CE regulation

Calibration

The probe is factory calibrated and a calibration certificate comes standard with the thermometer and is traceable to an ISO 17025 certified laboratory. The calibration certificate offers at least 5 calibration points over the full range.

USB

The thermometer can be connected to a "USB – A" connector to read out the logged sessions. Free software (TamCom) is available from the website. The battery is powered via a 9V adapter and connects to a standard 5.1 mm power connector.

Software

A free software package is supplied on our web site providing the handling of the logged data. The measured temperature can be stored as Vector image, Bitmap or as Comma Separated Value (CSV). These CSV files can be read by MS Excel for further analysis.

The software is easy to use and can be installed and operated on all Microsoft platforms.





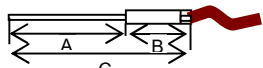

Standards and regulation

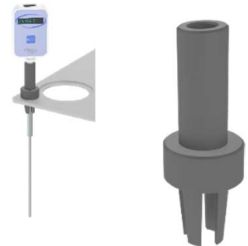
The thermometer meets the following standards and regulations: CE, IEC 751, ITS 90, ASTM E644, ASTM E1137, ASTM E2877 and ASTM D8278. For calibration, please see ASTM E563, ASTM E644 and ASTM E1750.

TT3B DCT

Digital Contact Thermometer TT3B

IEC 751 – ITS 90 – ASTM E644 – ASTM E1137 – ASTM E2877 – ASTM D8278

Standard included with TT3B Thermometer		
Part Number	Picture	Description
10T6097		Works certificate with test points. This certificate is standard included with the delivery.
21T0200		Carrying case
24T0014		9V Adapter
25T2310		Temperature probe Cable length 1050mm  Probe: A=115x3; B=100x6; C=215 [mm]; Class "a".
28T2039		USB-A – A cable

Necessary Accessory		
Part Number	Picture	Description
14T0303		Adapter to insert an TT3B thermometer in a Tamson bath or 12.5 mm thermometer opening.

TT3B DCT