

TT3

Tamson Thermometer 3 decimals



- ⊕ **3 decimal reading**
- ⊕ **Small device**
- ⊕ **3 mm probe**
- ⊕ **Built-in data logging**
- ⊕ **High stability**
- ⊕ **High linearity**
- ⊕ **Conforms to IEC751**
- ⊕ **Rechargeable battery (NiMH)**
- ⊕ **Free software**

General

The Tamson Thermometer has a three decimal reading. The thermometer uses a class "A" PT100 probe to meet the IEC751 required accuracy of $\pm 0.01^\circ\text{C}$ by using a correction table. A calibrated instrument has an uncertainty better than $\pm 0.01^\circ\text{C}$ relative to our calibration standard. The menu offers reading in $^\circ\text{C}$ or $^\circ\text{F}$.

Construction

A high accuracy data converter samples the PT100 value and a microprocessor is used to correct these values. The calibration data is kept in internal memory. A second memory offers the possibility for data logging. Sampling times can vary from 1 second to 300 seconds. At each interval the temperature is measured and stored. Each measurement has an individual time stamp and can be recalled easily using the PC software. The thermometer can be used on RS232 or USB ports.

Item	Unit	TT3
Ordering code		10T6095
Range		-40..+150 $^\circ\text{C}$ / -40..302 $^\circ\text{F}$
Reading		$^\circ\text{C}$ or $^\circ\text{F}$ menu selectable
Interface		RS232
Resolution	$^\circ\text{C}/^\circ\text{F}$	0.001
Accuracy*	$^\circ\text{K}$	± 0.01
Linearity*	$^\circ\text{K}$	± 0.01
Drift annual	$^\circ\text{K}$	$< \pm 0.001$
Response	Sec.	3 sec.
Power		Battery NiMH operated
Charging		takes 2Hrs
Mains adapter		100-240-50/60Hz 9V-500mA
Sleep current		0.01mA
On current		2mA
Battery pack		800mAh
Log time	hr	19hr sample rate 1s
		5700hr sample rate 300s
Sample rate	Sec.	1,2,5,10,20,60,120,300
Dimensions	mm	105x32x150 (LxWxH) excl. probe
Weight	Gr	355 (incl. probe)
Frequency	Hz	Suited for both 50 & 60
Use	$^\circ\text{C}$	20 .. 30 (or ambient temperature)
	%	10..90 humidity (relative)
CE		All models conform to CE regulation

* From -40 .. +150 $^\circ\text{C}$ relative to our calibration standard

The thermometer operates on a rechargeable battery pack. A full charge, supplies power for several days of continuous use.

The thermometer conforms to CE regulation. A battery charger is included.

Specification versus ASTM requirements**

	TT3	ASTM
Element:	PT100	PT100
Display reading:	3 decimals	2 decimals
Accuracy:	$\pm 0.01^\circ\text{C}$	$\pm 0.02^\circ\text{C}$
Linearity:	$\pm 0.01^\circ\text{C}$	$\pm 0.01^\circ\text{C}$
Response time:	3 seconds	6 seconds
Annual drift:	$< \pm 0.001^\circ\text{C}$	$< \pm 0.01^\circ\text{C}$
Probe diameter:	3 mm	-

**ASTM E20-09, D445, D4684, D6821, D6896

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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 to install and runs on all Microsoft platforms.





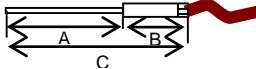
Calibration

The device is calibrated off work in a range from -40 .. 150°C***, traceable to the national standard (Van Swinden Laboratory, NL).

*** Uncertainty $\pm 0.01^\circ\text{C}$, relative to our certified calibration standard.

Supply

Including battery pack and adapter. Please order cable (P/N 24T0037) and RS232 converter (P/N 24T0038) when Tamcom (free of charge) software is used.




Necessary accessories for TT3 P/N 10T6095		
Item	Picture	Description
10T6096****		Works certificate [0 .. +150°C 32 .. +302°C] (Uncertainty $\pm 0.01^\circ\text{C}$ of TT3 is relative to our certified calibration device).
10T6097****		Works certificate [-40 .. +150°C -40 .. +302°F] (Uncertainty $\pm 0.01^\circ\text{C}$ of TT3 is relative to our certified calibration device).
21T0200		Carrying case.
25T2350*****		Temperature probe -100..+300°C/-148..+572°F Cable length 1050mm  Probe: A=115x3; B=100x6; C=215 [mm]; Class "a".



**** Either P/N 10T6096 or P/N 10T6097 is a necessary accessory.

***** The unit will be calibrated in combination with the supplied probe in order to meet IEC 751. It is not possible to exchange probes.

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Optional accessories		
Item	Picture	Description
10T6098		Verification calibration per point [-40 .. +150°C -40 .. 302°F] (Uncertainty $\pm 0.01^\circ\text{C}$ of TT3 is relative to our certified calibration device).
24T0038		RS232 .. USB converter.
24T0037		Cable (two meters).
24T0036		Cable (one meter).

Spare parts		
Item	Picture	Description
24T0019		12V Adapter.
24T4185		Battery pack.

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