

## High Accuracy Industrial Handheld Thermometer

(Product code 25.2)



### Model Wise Description:

Sr.No	Model	Product Description
25.2.1	<b>DTM-22-RTD &amp; TC</b>	Thermometer suitable for Pt-100 and Thermocouple probes
25.2.2	<b>DTM-22-RTD</b>	Thermometer suitable only for Pt-100 probes
25.2.3	<b>DTM-22-TC</b>	Thermometer suitable only for Thermocouple probes

### Description:

Libratherm offers Precision Industrial Portable Thermometer (Model DTM-22), which is designed using the latest low power, high speed microcontroller for accurate measurement of wide range of temperature and hence it is an indispensable tool in the industry for cross checking the temperature.

Single instrument can accept multiple type of sensors, such as Pt-100 or J, K, R, S, or B type of thermocouples. The selection is possible through touch key pad. Thermocouple and Pt-100 curves are software linearized for  $\pm 0.1\%$  of display accuracy.

Various types of interchangeable probes can be used to measure the temperature. Industrial standard Omega make male/female connectors are provided for the sensor connections or for connecting floating leads of the external thermocouple already inside the furnace or oven or any hot or cold system. Other useful features allows user to record maximum and minimum temperature, freeze the measured reading and select the unit of measurement either in  $^{\circ}\text{C}$  or  $^{\circ}\text{F}$ . White Back lit LCD to read the display in the dark area. Serial interface is optionally available for logging the data on to the PC using RS232 adapter. DTM-22 works on single 9V battery or on external 9V adapter.

## Application:

- ◆ To measure the temperature of hot or cold flat / rotating / vibrating surface , solid surface, cylindrical surface, powder, liquid, gas, furnace, ovens, cold storage's, hot mould, etc..... and to log the data on to the computer .

## Technical Specifications:

<b>Sensor Input / Range</b>	As per the Model, Input and range selection table given below (Input selection through key pad).
<b>Accuracy</b>	±0.1 °C/°F for RTD (Pt-100) sensor & ±1 °C /°F for Thermocouple sensor
<b>Resolution</b>	0.1°C for RTD(Pt-100) and 1°C for T/C sensor
<b>Display</b>	4 Digit, 0.5" high 7 segment numeric LCD (with Back lit *)
<b>Over range indication</b>	Provided.
<b>Low Battery indication</b>	Provided.
<b>Soft Touch Key pad</b>	For °C / °F /Max / Min /Hold /Clear /Back Lit Functions
<b>CJC</b>	Built in Automatic for all types of thermocouples
<b>Supply</b>	9 volts dry cell / 9V AC-DC adaptor.
<b>Serial Interface (Optional)</b>	RS232 port for PC interface with additional adaptor (available as additional accessory)
<b>Key Sound</b>	Miniature beeper – sounds on Key press
<b>Operating/Storage Temperature</b>	0-50°C Max. / 0-70°C Max. @ 10-85% Rh (Non-Condensing)
<b>Size</b>	150(H) x 82(W) x 35 (D) mm.
<b>Weight</b>	200 gms approx.
<b>Enclosure</b>	ABS Plastic body with polycarbonate front and membrane keyboard.

## Input and Range Selection Table:

DTM-22 RTD and TC		DTM-22 RTD		DTM-22 TC	
Input	Range °C	Input	Range °C	Input	Range °C
Pt-100	0.0 to 400.0	Pt-100	-150.0 to 200.0	J type TC	0 to 760
J type TC	0 to 760		200 to 450	K type TC	0 to 1370
K type TC	0 to 1370		(auto ranging)	R type TC	0 to 1768
R type TC	0 to 1768			S type TC	0 to 1768
S type TC	0 to 1768			B type TC	200 to 1820
B type TC	200 to 1820				

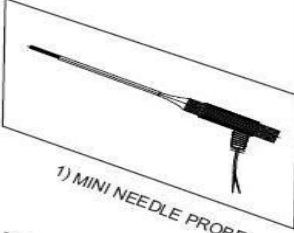
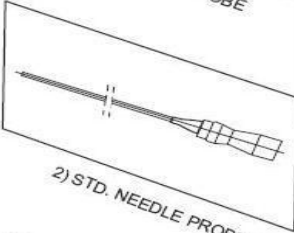
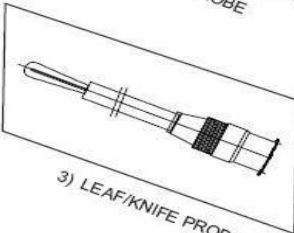
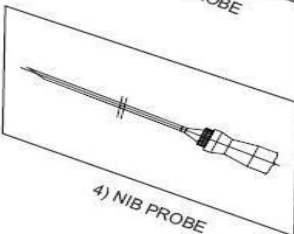
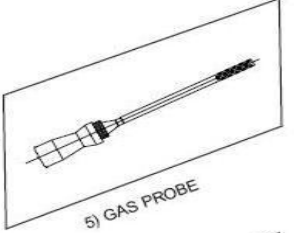
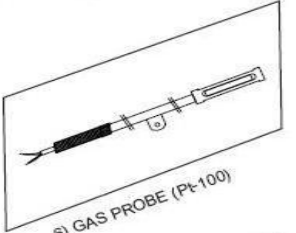
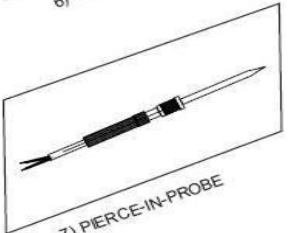
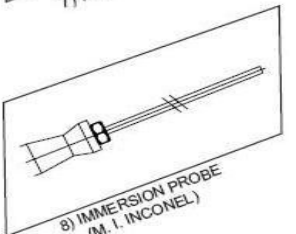
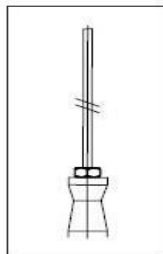
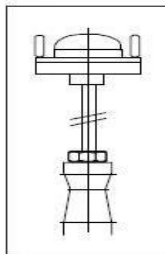
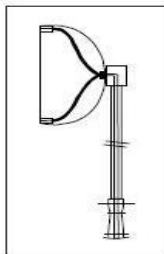
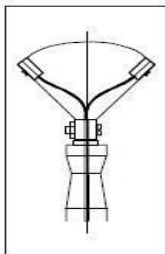
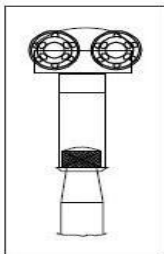
**Ordering Code:** i) DTM-22 RTD and TC or ii) DTM-22 RTD or iii) DTM-22 TC

For high temperature probes above 1200°C – we recommend R, S or B type sensors.

For very low temperature probes below -50°C – we recommend Pt-100 type sensors.

Libratherm offers special type of very low and high temperature probes as per the requirement.

Below is the List of standard Pt-100 and K type probes for general purpose use (-50 to 1000 oC):

<b>PORTABLE PROBES FOR DIGITAL THERMOMETER</b>	
<b>TYPE</b>	
 1) MINI NEEDLE PROBE	(A1) Mini - Needle 300°C (for liquid/powder)
 2) STD. NEEDLE PROBE	(A2) Standard needle 300° C (for liquid/powder)
 3) LEAF/KNIFE PROBE	(A3) Leaf / Knife 600°C (for flat surface)
 4) NIB PROBE	(A4) Nib probe 300°C
	(A5) Gas Probe 300°C/800°C
	(A6) Gas Probe Pt- 100 (- 50°C to 600°C)
	(A7) Pierce-in probe 300°C
	(A8) Immersion probe 1000°C M.I. Inconel
	(A9) Immersion probe Pt-100 (- 50°C to 600°C)
	(A10) Flat Surface Bow 300°C/600°C
	(A11) Std. Bow - 300°C (for cylindrical or round surface)
	(A12) Mini Bow - 300°C
	(A13) Roller Type (for rolling surface)
	 5) GAS PROBE
	 6) GAS PROBE (Pt-100)
	 7) PIERCE-IN-PROBE
	 8) IMMERSION PROBE (M. I. INCONEL)
 9) IMMERSION PROBE (Pt-100)	
 10) FLAT SURFACE BOW PROBE	
 11) STD. BOW PROBE	
 12) MINI BOW PROBE	
 13) ROLLER TYPE PROBE	