

*Pt 100 + Type K/J/R/E/T*

# THERMOMETER

Model : TM-936

*ISO-9001, CE, IEC1010*



**Lutron**

**LUTRON ELECTRONIC**

*The Art of Measurement*

# 2 in 1

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Pt 100 ohm + Type K/J/R/E/T

Model : TM-936

FEATURES
* 2 in 1, Pt 100 ohm thermometer + Thermocouple type J/K/R/E/T ) thermometer.
* Microcomputer circuit with high performance.
* Wide temperature measuring range.
* Build in °C & °F select button on the front panel.
* 0.1 degree resolution for Pt 100 ohm & type K/J/T/E.
* Data hold function for storing the desired value .
* Memory function to record the maximum & minimum reading.
* Build in a REL button, useful for relative measurement.
* Sensor select button on the front panel, easy to change different type probe.
* 4 wires PT 100 ohm probe input, 0.00385 alpha coefficient, meet DIN IEC 751, high precision.
* Thermocouple probe accept 5 different types : type K, type J, type R, type T, type E.
* RS 232 data output, easy to connect with computer.
* Optional data acquisition software for data record.
* Auto power off saves battery life.
* Built-in low battery indicator.
* Heavy duty & compact housing case with stand.
* Powered by 006P DC 9V battery.

## GENERAL SPECIFICATIONS

Display	51 mm x 32 mm supper large LCD display, 15 mm ( 0.6" ) digit size.
Sensor Type	1. Platinum Pt 100 ohm ( 0.00385 alpha coefficient, meet DIN IEC 751 ) 2. Thermocouple probe @ Thermocouple type K @ Thermocouple type J @ Thermocouple type T @ Thermocouple type E @ Thermocouple type R
Functions	°C, °F, Data hold, Memory ( Max., Min. ), Relative measurement,
Resolution	0.1 degree or 1 degree.
Circuit	Exclusive microcomputer circuit, the software build in linearity correction function instead of the traditional hardware circuit.
Probe Input Socket	Pt 100 ohm probe : DIN type 4 pin socket. Thermocouple couple probe : Standard 2 pin thermocouple socket.
Sampling Time	Approx. 1 second.
Hold Function	To freeze the display reading value.
Memory Recall	Memorize the Maximum, Minimum reading.
Offset Adjustment	Available for thermocouple thermometer, adjustment by pushing button on front panel.
Over Indication	Show " - - - - ".
Data Output	RS232 PC serial interface.
Power Supply	Alkaline or heavy duty type, DC 9V battery, 006P, MN1604 ( PP3 ) or equivalent.
Power Consumption	Approx. DC 11 mA.
Operating Temperature	0 to 50 °C (32 to 122 °F).
Operating Humidity	Less than 80% RH.
Size	195 x 68 x 30 mm ( 7.6 x 2.6 x 1.2 inch ).
Weight	220 g/0.48 LB.
Standard Accessory	Operational manual..... 1 PC.
Optional & accessories Temp. Probe	Thermocouple couple ( Type K ) probe : Model : TP-01, TP-02A, TP-03, TP-04. Pt 100 ohm probe : Model : TP-100 RS232 cable Model : UPCB-02 Application software, windows version. Model : SW-U801-WIN

## ELECTRICAL SPECIFICATIONS

### **A. Thermocouple ( type K/J/R/E/T ) Thermometer**

Sensor Type	Resolution	Range	Accuracy
Type K	0.1 °C	-50.0 to 1300.0 °C	± ( 0.2 % + 0.5 °C )
		-50.1 to -100.0 °C	± ( 0.2 % + 1 °C )
	0.1 °F	-58.0 to 2372.0 °F	± ( 0.2 % + 1 °F )
		-58.1 to -148.0 °F	± ( 0.2 % + 1.8 °F )
Type J	0.1 °C	-100.0 to 1150.0 °C	± ( 0.2 % + 0.5 °C )
		-50.1 to -100.0 °C	± ( 0.2 % + 1 °C )
	0.1 °F	-58.0 to 2102.0 °F	± ( 0.2 % + 1 °F )
		-58.1 to -148.0 °F	± ( 0.2 % + 1.8 °F )
Type T	0.1 °C	-50.0 to 400.0 °C	± ( 0.2 % + 0.5 °C )
		-50.1 to -100.0 °C	± ( 0.2 % + 1 °C )
	0.1 °F	-58.0 to 752.0 °F	± ( 0.2 % + 1 °F )
		-58.1 to -148.0 °F	± ( 0.2 % + 1.8 °F )
Type E	0.1 °C	-50.0 to 900.0 °C	± ( 0.2 % + 0.8 °C )
		-50.1 to -100.0 °C	± ( 0.2 % + 1 °C )
	0.1 °F	-58.0 to 1652.0 °F	± ( 0.2 % + 1.5 °F )
		-58.1 to -148.0 °F	± ( 0.2 % + 1.8 °F )
Type R	1 °C	0 to 600 °C	± ( 1 % + 5 °C )
		601 to 1700 °C	± ( 1.5 % + 5 °C )
	1 °F	32 to 1112 °F	± ( 1 % + 10 °F )
		1113 to 3092 °F	± ( 1.5 % + 10 °F )

Remark :

- a. Accuracy value is specified for the meter only.
- b. Accuracy is tested under the ambient temperature within  $23 \pm 5^{\circ}\text{C}$ .
- c. Linearity Correction :  
Memorize the thermocouple's curve into the intelligent CPU circuit,

### **B. Platinum PT 100 ohm Thermometer**

Resolution	Range	Accuracy
0.1 °C	-200.0 to 850.0 °C	± ( 0.2 % + 0.5 °C )
0.1 °F	-328.0 to 1562.0 °F	± ( 0.2 % + 1.0 °F )

Remark :

- a. Accuracy value is specified for the meter only.
- b. Accuracy is tested under the ambient temperature within  $23 \pm 5^{\circ}\text{C}$ .
- c. Linearity Correction :  
Memorize the Pt 100 ohm's curve into the intelligent CPU circuit.
- d. Pt 100 probe input, 0.00385 alpha coefficient, meet DIN IEC 751.
- e. Input socket : DIN 4 pin socket.
- f. 4 wires Pt 100 ohm probe ( model : PT-100 ) is optional Temp. probe.