

*Type K/J , Pt 100 Thermometer  
Real Time Data Logger, 16,000 Data, RS232*

# **Muti-function THERMOMETER**

**Model : YK-2005TM**

*ISO-9001, CE, IEC1010*



**LUTRON ELECTRONIC**

*The Art of Measurement*

# THERMOMETER

Model : YK-2005TM

## 1. FEATURES

* 3 in 1, Thermocouple ( Type K/J ) thermometer, Pt 100 ohm thermometer + Infrared thermometer.
* 0.1 degree resolution for Pt 100 ohm & type K/J.
* Wide temperature measuring range.
* 4 wires PT 100 ohm probe input, 0.00385 alpha coefficient, meet DIN IEC 751, high precision.
* Offset adjustment.
* Fast humidity measuring response time.
* Real time data logger, build in clock ( hour-min.-sec., year-month-date ).
* Auto data record, 16,000 Data logger no.
* Wide sampling time adjustment range from two seconds to 8 hours 59 minutes 59 seconds.
* RS232 computer interface.
* Can default auto power off or manual power off.
* Multi function with easy operation
* Large LCD with multiple display.
* Data hold, record max. and min. reading.
* Microcomputer circuit provides special function & offer high accuracy.
* Power by UM3 ( 1.5 V ) x 4 batteries or DC 9V adapter.
* RS232 PC serial interface.
* Separate probe, easy for operation of different measurement environment.

## 2-1 General Specifications

Circuit	Custom one-chip of microprocessor LSI circuit.
Display	LCD size : 58 mm x 34 mm.
Measurement	1. Thermocouple probe @ Thermocouple type K @ Thermocouple type J 2. Platinum Pt 100 ohm ( 0.00385 alpha coefficient, meet DIN IEC 751 ) 3. Infrared Thermometer
Display Unit	°C, °F.
Resolution	0.1 °C, 0.1 °F.
Sampling Time of Data Logger	2 sec to 8 hour 59 min. 59 sec. @ Auto datalogger
Temperature Compensation	Automatic temp. compensation for the type K/J thermometer and Infrared Thermometer.
Linear Compensation	Both for Type K/J. Pt 100 ohm and the IR thermometer.
Offset Adjustment	Available to adjust the zero drift value, adjustment by pushing button.
Probe Input Socket	Type K/J probe : Standard 2 pin thermocouple socket. Pt 100 and IR probe : Exclusive socket.
Over Indication	Show " - - - - ".
Data Hold	Freeze the display reading.
Memory Recall	Maximum & Minimum value.
Sampling Time of display	Approx. 1 second.
Power off	Auto shut off saves battery life or manual off by push button.
Data Output	RS 232 PC serial interface.
Operating Temperature	0 to 50 °C.
Operating Humidity	Less than 80% R.H.

Power Supply	DC 1,5 V battery ( UM3 ) x 4 PCs, ( Heavy duty type ). DC 9V adapter input. @ AC/DC power adapter is optional.
Power Current	Approx. DC 21.5 mA @ Main instrument. + Type K/J ( Pt 100 ) probe
Weight	515 g/ 1.13 LB. @ Battery is included.
Dimension	203 x 76 x 38 mm
Accessories Included	Instruction manual.....1 PC Type K probe, TP-01.....1 PC Carrying case.....1 PC
Optional Accessories	* Type K thermocouple probe. TP-02A, TP-03, TP-04, TP-05 * Pt 100 ohm probe, PT-100P * AC to DC 9V adapter. * RS232 cable/UPCB-02, USB cable/USB-01 * Data Acquisition software, SW-U801-WIN. * Data Logger software, SW-DL2005.

## 2-2 Electrical Specifications (23±5 °C)

Type K/J 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 1100.0 °C	± ( 0.2 % + 0.5 °C )
		-50.1 to -100.0 °C	± ( 0.2 % + 1 °C )
	0.1 °F	-58.0 to 2012.0 °F	± ( 0.2 % + 1 °F )
		-58.1 to -148.0 °F	± ( 0.2 % + 1.8 °F )

\* Accuracy value is specified for the meter only.  
\* Type K probe, TP-01 is the standard accessory.  
\* Other Type K probe. TP-02A, TP-03. TP-04 is the optional accessories.

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 :

- Accuracy value is specified for the meter only.
- Linearity Correction :  
Memorize the Pt 100 ohm's curve into the intelligent CPU circuit.
- Pt 100 probe input, 0.00385 alpha coefficient, meet DIN IEC 751.
- 4 wires Pt 100 ohm probe ( Model : PT-100P ) is optional.