

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

# **Multi-function THERMOMETER**

**Model : YK-2005TM**

**ISO-9001, CE, IEC1010**



## **FEATURES**

- \* High capacity, 16,000 data logger no.
- \* Real time data logger ( record year, month, date, hour, minute, second ).
- \* Type K/J, Pt100 ohm, IR Thermometer
- \* Max., Min., Data hold, zero adjust.

- \* Optional probe :  
Type K/J, PT 100 ohm, IR
- \* RS-232 computer interface
- \* DC 1.5V ( UM3, AA ) x 4 PCs or  
DC 9V adapter in.
- \* Size : 203 x 76 x 38 mm.

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**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 or manual 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.

Power Supply * main instrument	DC 1,5 V battery ( UM3 ) x 4 PCs, ( Heavy duty type ). DC 9V adapter input. @ AC/DC power adapter is optional.
Power Supply * clock module	DC 3V silver battery. Type : CR2032.
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 DC 3V silver battery, CR2032..... 1 PC Carrying case..... 1 PC
Optional Accessories	* Type K thermocouple probe. TP-02A, TP-03, TP-04 * Pt 100 ohm probe, PT-100P * Infrared Probe, YK-200PIR * AC to DC 9V adapter. * RS232 cable, UPCB-02. * Data Acquisition software, SW-U801-WIN. * Data Logger software, SW-DL2005.

## 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	Manual	Push the data logger button once will save data one time. @ Set the sampling time to 0 second
	Auto	2 sec to 8 hour 59 min. 59 sec.
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.	

## 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.

Infrared Thermometer	
Measurement Range	-10 °C to 300 °C / 14 °F to 572 °F.
Resolution/ Accuracy	1°C or 1°F. ± 3 % of reading or ± 3°C which ever is greater. * It should cooperate the optional IR probe, YK-200PIR. * Meter operating Temp. within 23± 5°C & the emissivity value of measurement target is 0.95. * Spec. tested under the 20 cm dia. black body, the measuring distance from the Probe sensing Head is 30 cm.