

0.1 degree + type K, red laser guide **INFRARED THERMOMETER**

Model : TM-909AL

ISO-9001, CE, IEC1010



FEATURES

- * 2 in 1, Infrared thermometer + Type K thermometer.
- * Infrared thermometer, non-contact temperature measurement, -20 to 400 °C (-4 to 752 °F).
- * Type K thermometer , range : -100.0 to 1300.0 °C -148.0 to 2372.0 °F.
- * 0.1 °C display resolution both for the measurement of IR thermometer and Type K thermometer.
- * Microcomputer circuit with high performance.
- * Auto power shut off saves battery life.
- * Wide temperature measuring range.
- * Build in °C & °F select button.
- * Data hold.
- * Memory function to record the maximum & minimum reading.
- * Build the REL button, useful for relative measurement.
- * Emissivity adjustment.
- * Red laser target light guide, < 1 mW.
- * Heavy duty & compact housing case.

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The Art of Measurement

INFRARED THERMOMETER

Model : TM-909AL

FEATURES	
* 2 in 1, Infrared thermometer + Type K thermometer.	* Build the REL button, useful for relative measurement.
* Infrared thermometer, non-contact temperature measurement, -20 °C to 400 °C (-4 °F to 752 °F).	* Sensor select button on the front panel, easy to change different type probe.
* Microcomputer circuit with high performance.	* Emissivity adjustment for IR thermometer.
* Wide temperature measuring range.	* Red laser target light guide for IR thermometer.
* 0.1 °C display resolution both for the measurement of IR thermometer and Type K thermometer.	* RS 232 data output, easy cooperate with computer.
* Build in °C & °F select button on the front panel.	* Optional data acquisition software for data record.
* Data hold function.	* Auto power shut off saves battery life.
* Memory function to record the maximum & minimum reading with recall.	* Built-in low battery indicator.
	* Heavy duty & compact housing case with stand.
	* Operates from 006P DC 9V battery.

GENERAL SPECIFICATIONS			
Display	<i>Dual display with annunciator :</i> * Main display : 10 mm (0.4") LCD, 5 digit. * Small display : To show the emissivity value.	Over Indication	Show " - - - - ".
Sensor Type	1. <i>Infrared thermometer</i> (Non contact temperature measurement) 2. <i>Type K thermometer</i>	Data Output	RS232 PC serial interface.
Functions	°C, °F, Data hold, Memory (Max., Min.), Relative measurement, Emissivity adjustment (IR thermometer).	Power Supply	Alkaline or heavy duty type, DC 9V battery, 006P, MN1604 (PP3) or equivalent.
Resolution	0.1 degree.	Power Consumption	Approx. DC 12 mA (w/o tagret light on). Approx. DC 23 mA (with target light on). * <i>Above consumption value is calculated under the function of IR thermometer.</i>
Circuit	Exclusive microcomputer circuit, the software build in linearity correction instead the traditional hardware circuit.	Operating Temperature	0 to 50 °C (32 to 122 °F).
Emissivity Adjustment	Range : 0.20 to 1.00. Adjustment by pushing button on front panel.	Operating Humidity	Less than 80% RH.
Target Guide	Red color, laser power less than 1 mW.	Weight	260 g/0.57 LB.
Probe Input Socket	Standard 2 pin thermocouple socket.	Dimension	195 x 120 x 57 mm. (7.7 x 4.7 x 2.2 inch).
Sampling Time	Approx. 1 second.	Standard Accessory	Operational manual..... 1 PC.
Hold Function	To freeze the display reading value.	Optional & accessories	Hard carrying case Model : CA-06 <i>RS232 cable</i> Model : UPCB-02 <i>Application software, windows version.</i> Model : SW-U801-WIN
Memory Recall	Memorize the Maximum, Minimum reading with recall.		
Offset Adjustment	Available for thermocouple thermometer offset adjustment by pushing button on front panel.		

ELECTRICAL SPECIFICATIONS (23 ± 5 °C)			
A. Infrared Thermometer			
Resolution/ ranges	0.1 °C	- 20 °C to 400 °C	
	0.1 °F	-4 °F to 752 °F	
Accuracy	± 3 % of reading or ± 3 °C (5 °F), which ever is greater. 1. <i>Accuracy test under the measurement range within - 10 °C to 350 °C .</i> 2. <i>Meter operating temp. within 23 5 °C and the emissivity value of measurement target set to 0.95.</i> 3. <i>Spec. tested under the 20 cm dia. black body, the measuring distance from the probe sensing Head is 30 cm.</i>		
Temp. Sensor	Thermocouple pie.		
Emissivity	<i>By push button. Setting range : 0.20 to 1.00.</i> The default emissivity value is 0.95, which will cover 90% of a typical application.		
Measurement Wave length Region	6 to 12 micro meter.		
Distance Factor	D/S : Approx. 7:1. * <i>D - Distance, S - Spot.</i>		
B. Type K Thermometer			
Sensor Type	Resolution	Range	Accuracy
Type K	0.1 °C	-100.0 to 1300.0 °C	± (1 % + 1 °C)
	0.1 °F	-148.0 to 2372.0 °F	± (1 % + 2 °F)
Remark : a. <i>Accuracy value is specified for the meter only.</i> b. <i>Accuracy test is based on the environment temperature of 23 ± 5°C.</i> c. <i>Linearity Correction : Memorize the thermocouple's curve into the CPU circuit.</i>			

* Appearance and specifications listed in this brochure are subject to change without notice.