

*Humidity, Anemometer, Light, Type K/J*

# ENVIRONMENT METER

Model : EM-9100

*ISO-9001, CE, IEC1010*



## FEATURES

- \* 4 in 1 :  
Humidity meter, Light meter,  
Anemometer,  
Type K/J thermometer.
- \* Humidity :  
10 to 95 %RH, 0 to 50 °C.
- \* Light : 0 to 20,000 Lux.
- \* Anemometer : 0.5 to 25 m/s.
- \* Type K thermometer :  
-100 to 1300 °C, °C/°F.  
Type J thermometer :  
-100 to 1200 °C, °C/°F.
- \* Unit select, Data hold.
- \* REC ( max., min. ).
- \* Separate probe, easy operation.
- \* RS-232 interface.
- \* Optional sound level probe.
- \* Optional Type K Temp. probe :  
TP-01, TP-02A, TP-03, TP-04,
- \* Patented.



**Lutron**

**LUTRON ELECTRONIC**

***The Art of Measurement***

# ENVIRONMENT METER

Model : EM-9100

## FEATURES

* Environment instrument, multi-function, all in one.
* Type K/J thermometer, Humidity/Temp. meter, Anemometer, Light meter, Sound level meter ( optional adapter )
* Thermocouple Thermometer can default to accept type K or type J Temp. probe.
* Temperature measurement can default the display unit to °C or °F.
* Anemometer can default the display unit to m/S, FPM, Km/h, mph, knot.
* Light meter can default the display unit to LUX or Ft-cd.
* Meter can default auto power off or manual power off.
* 0.1 degree resolution for temperature measurement.
* Microcomputer circuit provides intelligent function and high accuracy.
* LCD with two display, easy readout.
* Records Maximum and Minimum readings with recall.
* Data hold function for freezing the desired value.
* Build in the input socket for DC 9V power adapter.
* RS232 PC serial interface.
* Few panel buttons, easy operation.
* Built-in low battery indicator.
* Heavy duty & compact housing case.
* Available for the HVAC applications.

## GENERAL SPECIFICATIONS

Circuit	Custom one-chip of microprocessor LSI circuit.
Display	* LCD size : 60 mm x 33 mm * Dual function meter's display.
Measurement	* Type K/J thermometer * Humidity/Temp. meter * Anemometer with Temp. * Light meter * Sound level meter ( optional adapter )
Temperature Compensation	Automatic cold junction compensation both type K/J thermometer * Type K/J Temp.
Linear Compensation	Linear Compensation for the full range. * Type K/J Temp.
Input Socket	Standard 2 pin thermocouple socket. * Type K/J Temp.
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 to save 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	006P DC 9V battery ( Alkaline or Heavy duty type ). DC 9V adapter input. * AC/DC power adapter is optional.
Power Current	Type K/J thermometer : Approx. DC 6 mA Humidity, Anemometer, Light meter : Approx. DC 10 mA
Weight	256 g/0.56 LB, main instrument.
Dimension	Meter 180 x 72 x 32 mm ( 7.1 x 2.8 x 1.3 inch ) Probe 105 x 46 x 29 mm
Accessories Included	Instruction manual..... 1 PC Probe ( EM-900P )..... 1 PC Carrying case..... 1 PC

Optional Accessories	* Type K thermocouple probe. TP-01, TP-02A, TP-03, TP-04. * Sound adapter, SL-407 * AC to DC 9V adapter. * RS232 cable, UPCB-02. * USB cable, USB-01 * Data Acquisition software, SW-U801-WIN. * Carrying case, CA-05A, CA-06.
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## 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	± ( 0.4 % + 0.8 °C )
		-50.1 to -199.9 °C	± ( 0.4 % + 1 °C )
	0.1 °F	-58.0 to 2372.0 °F	± ( 0.4 % + 1.5 °F )
Type J	0.1 °C	-50.0 to 1100.0 °C	± ( 0.4 % + 0.8 °C )
		-50.1 to -199.9 °C	± ( 0.4 % + 1 °C )
	0.1 °F	-58.0 to 2012.0 °F	± ( 0.4 % + 1.5 °F )
		-58.1 to -327.8 °F	± ( 0.4 % + 1.8 °F )

\* Accuracy value is specified for the meter only.  
\* Temp. probe ( Type K, TP-01 TP-02A, TP-03, TP-04 ) is the optional accessories, refer page 22.

### Anemometer

#### A. Air velocity

Measurement	Range	Resolution	Accuracy
m/S	0.4 - 25.0 m/s	0.1 m/s	± (2% + 0.2 m/s)
km/h	1.4 - 90.0 km/h	0.1 km/h	± (2% + 0.8 km/h)
mph	0.9 - 55.9 mile/h	0.1 mile/h	± (2% + 0.4 mile/h)
knot	0.8 - 48.6 knots	0.1 knots	± (2% + 0.4 knots)
FPM	80 - 4930 ft/min	1 ft/min	± (2%+40 ft/min.)

Note: m/S - meters per second km/h - kilometers per hour  
FPM - feet/per minute knot - nautical miles per hour  
mph - miles per hour (international knot)

#### B. Temperature

Measuring Range	0 °C to 50 °C/32 °F to 122 °F
Resolution	0.1 °C/0.1 °F
Accuracy	± 0.8 °C/1.5 °F

### Humidity/Temp. meter

#### A. Humidity

Measuring Range	0 % to 95 % R.H.
Resolution	0.1 % R.H.
Accuracy	≥ 70% RH ± (3% reading + 1% RH). < 70% RH ± 3% RH.

#### B. Temperature

Measuring Range	0 °C to 50 °C/32 °F to 122 °F
Resolution	0.1 °C/0.1 °F
Accuracy	± 0.8 °C/1.5 °F

### Light meter

Measuring Range	LUX	0 to 20,000 LUX.
	Ft-cd	0 to 2,000 Ft-cd
Resolution	LUX	1 LUX
	Ft-cd	0.1 Ft-cd
Accuracy	± ( 5% rdg ± 8 dgt )	

Note : Ft-cd : Feet candle