

+ Sound, 9 in 1

# ENVIRONMENT METER

Model : ME-9100

ISO-9001, CE, IEC1010



**Lutron**

LUTRON ELECTRONIC

*The Art of Measurement*

+ Sound, 9 in 1

# ENVIRONMENT METER

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## FEATURES

* 7 in 1 professional environment instruments: 1. Sound level meter., 2. Humidity/Temp., 3. Light meter 4. Dew point, 5. Wet bulb, 6. Heat index, 7. Type K Temp.( optional Temp. probe )
* Tiny bone shape with light weight and small size case design are suitable for handling with one hand.
* Wristlet design provides extra protection to the instrument especially for user one hand operation.
* Low-friction ball bearing mounted wheel design provides high accuracy at high and low air velocity.
* High precision humidity sensor with fast response time.
* Build in baro sensor for the atmosphere value and altitude measurement precisely.
* Built-in microprocessor circuit assures excellent performance and accuracy.
* Concise and compact buttons arrangement, easy operation.
* Memorize the maximum and minimum value with recall.
* °C/°F detection by pressing button on the front panel.
* Hold function to freeze the current reading value.

## GENERAL SPECIFICATIONS

Display	14 mm LCD display.
Measurement	1. Sound level meter. 2. Humidity/Temp. 3. Dew point 4. Wet bulb 5. Heat index 6. Light meter 7. Type k Temp.( optional )
Operating Humidity	Max. 80% RH.
Operating Temperature	0 to 50 °C ( 32 to 122 °F )
Over Input Display	Indication of " - - - "
Power Supply	UM4-AAA DC 1.5 V battery x 3 PCs.
Power Consumption	Approx. DC 5 mA
Weight	160g (battery included)
Dimension	HWD 120 x 45 x 20 mm ( 4.7 x 1.8 x 1.2 inch )
Standard Accessory	Instruction Manual
Optional Accessories	Type K Temp. probe : TP-01, TP-02A, TP-03, TP-04, TP-05

## ELECTRICAL SPECIFICATION ( 23 ± 5°C )

### Sound level meter

Measurement Range	35 to 130 dB, Auto range																		
Resolution	0.1 dB.																		
Measurement Frequency	31.5 Hz to 8,000 Hz.																		
Weighting	Frequency Weighting	Characteristics of " A " frequency weighting network. * A weighting : The characteristic is simulated as " Human Ear Listing " response.																	
	Time Weighting	" Fast " time weighting.																	
Accuracy (23± 5 °C)	Characteristics of " A " frequency weighting network meet IEC 61672 class 2. Under 94 dB input signal, the accuracy are :																		
		<table border="1"> <tr><td>31.5 Hz</td><td>± 3.5 dB</td></tr> <tr><td>63 Hz</td><td>± 2.5 dB</td></tr> <tr><td>125 Hz</td><td>± 2.0 dB</td></tr> <tr><td>250 Hz</td><td>± 1.9 dB</td></tr> <tr><td>500 Hz</td><td>± 1.9 dB</td></tr> <tr><td>1 K Hz</td><td>± 1.4 dB</td></tr> <tr><td>2 K Hz</td><td>± 2.6 dB</td></tr> <tr><td>4 K Hz</td><td>± 3.6 dB</td></tr> <tr><td>8 K Hz</td><td>± 5.6 dB</td></tr> </table>	31.5 Hz	± 3.5 dB	63 Hz	± 2.5 dB	125 Hz	± 2.0 dB	250 Hz	± 1.9 dB	500 Hz	± 1.9 dB	1 K Hz	± 1.4 dB	2 K Hz	± 2.6 dB	4 K Hz	± 3.6 dB	8 K Hz
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Calibrator	B & K (Bruel & kjaer), multi-fuction acoustic calibrator, model : 4226.
Microphone	Electric condenser microphone.
Size of microphone	1/2 inch standard size.
Data Hold	Hold function to freeze the display value.
Optional Accessories	94 dB Sound Calibrator, Model : SC-941
<i>Remark : Above specification tests under the environment RF Field Strength less than 3 V/M &amp; frequency less than 30 MHz only</i>	

### Humidity/Temp.

Unit	Range	Resolution	Accuracy
% RH	10 to 95 %RH	0.1 %RH	< 70% RH : ± 4 %RH ≥ 70% RH : ± ( 4 %rdg + 1.2 %RH)
Temp.	0 to 50 °C	0.1 °C	± 1.2 °C
	32 to 122 °F	0.1 °F	± 2.5 °F

### Light \* auto range

Unit	Range	Resolution	Accuracy
Lux	0 to 2,200 Lux	1 Lux	± 5% rdg ± 8 dgt
	1,800 to 20,000 Lux	10 Lux	
Ft-cd	0 to 204.0 Fc	0.1 Ft-cd	
	170 to 1,860 Fc	1 Ft-cd	
<i>Remark : Ft-cd : feet candle</i>			

### Dew point Temp.

Unit	Range	Resolution	Remark
°C	-25.3 to 49.0 °C	0.1 °C	* Calculate from the humidity/Temp. value
°F	-13.5 to 120.0 °F	0.1 °F	
<i>Remark : Please refer to <a href="http://en.wikipedia.org/wiki/Dew_point">http://en.wikipedia.org/wiki/Dew_point</a></i>			

### Wet bulb Temp.

Unit	Range	Resolution	Remark
°C	-5.4 to 49.0 °C	0.1 °C	* Calculate from the humidity/Temp. value
°F	22.2 to 120 °F	0.1 °F	
<i>Remark : Please refer to <a href="http://en.wikipedia.org/wiki/Wet-bulb_temperature">http://en.wikipedia.org/wiki/Wet-bulb_temperature</a></i>			

### Heat index

Unit	Range	Resolution	Accuracy
°C	0 to 100.0 °C	0.1 °C	± 2.0 °C
°F	32 to 212 °F	0.1 °F	± 3.6 °F

*Pleas refer to [http://en.wikipedia.org/wiki/Heat\\_index](http://en.wikipedia.org/wiki/Heat_index)*

### Effects of the heat index (shade values)

Celsius	Fahrenheit	Notes
27- 32 °C	80- 90 °F	Caution : Fatigue is possible with prolonged exposure and activity. Continuing activity could result in heat cramps
32- 41 °C	90- 105 °F	Extreme caution : Heat cramps, and heat exhaustion are possible. Continuing activity could result in heat stroke
41- 54 °C	105- 130 °F	Danger : Heat cramps, and heat exhaustion are likely ; heat stroke is probable with continued activity
over 54 °C	over 130 °F	Extreme danger : Heat stroke is imminent
<i>Remark : Exposure to full sunshine can increase heat index values by up to 8 °C ( 14°F ).</i>		

### Type K Thermometer

Unit	Range	Resolution	Accuracy
°C	-148 to 2372 °F	1 °C	± (1% rdg + 2°F)
°F	-100 to 1300 °C	1 °F	± (1% rdg + 1°C)

\* The above accuracy are based on the meter only.

\* Type K Temp. probe ( TP-01, TP-02A, TP-03, TP-04, TP-05 ) is optional, not included

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

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