Sound, Anemometer, Anemometer, %RH, Temp., Type K

5 IN 1 METER

Model : LM-8102 ***ISO-9001, CE, IEC1010***

Lutron

LUTRON ELECTRONIC

The Art of Measurement

5 in 1

Anemometer, Humidity meter, Light Meter, Thermometer, Sound level meter

Model : LM-8102

FEATURES

* 5 in 1 professional measuring instrument: Anemometer, Hygrometer, Type K Thermometer, Light meter. Sound level meter.
* Anemometer use low-friction ball bearing mounted wheel design provides high accuracy.
* Light meter use exclusive photo diode and color correction filter light sensor, spectrum meets C.I.E. photopic.
* Type K thermometer use standard type K (NiCr-NiAl) thermocouple input jack suitable for all kinds of type K probe.
* Humidity meter use high precision humidity sensor with fast response time.
* Sound level meter's characteristic is simulated as " Human Ear Listing" response, used the " A " frequency weighting and " Fast " time weighting to meet IEC 61672 class 2.
* Sound level meter can cooperate the external 94 dB sound calibrator and just press the front buttons to make the calibration
* Built- in microprocessor circuit assures excellent performance and accuracy.
* Concise and compact buttons arrangement, easy operation.
* Memorize the maximum and minimum value with recall.
* Hold function to freeze the current reading value.
* ℃/℉ detection by pressing button on the front panel.
* Lux/Feet-candle selection by pressing front button.
* Air velocity measuring units selection by pressing button on the front panel for five kinds of units.
* Multi channel display for relative humidity and temperature measured values or air velocity and temperature measured values at the same time.
* Zero button design makes light meter calibration.
* Rough housing case suitable for handling with one hand,
* RS232/USB computer data bus

GENERAL SPECIFICATIONS

Display	LCD display, LCD soze : 41.5 x 31.5 mm.
Measurement	5 in 1 : *Anemometer (Air velocity + Temp.)* *Humidity (%RH + Temp.)* *Light* *Thermometer (type K)* *Sound level*
Operating Humidity	Max. 80 %RH.
Operating Temperature	0 to 50° C (32 to 122° F)
Over Input Display	Indication of "- - - - "
Data Output	RS 232/USB PC serial interface. ** Connect the optional RS232 cable UPCB-02 will get the RS232 plug.* ** Connect the optional USB cable USB-01 will get the USB plug.*
Power Supply	DC 1.5 V battery (UM4, AAA) x 4 PCs, Or DC 9V adapter input. *@ AC/DC power adapter is optional.*
Power Consumption	Anemometer : Approx. DC 11 mA. Other functions : Approx. DC 7.5 mA.
Weight	335 g/0.74 LB (battery included).
Dimension	HWD 248 x 70 x 34 mm (9.8 x 2.8 x 1.3 inch).
Standard Accessory	Instruction Manual..... 1 PC
Optional Accessories	Carrying case. Type K Temperature probe. Sound Calibrator/SC-941. USB cable/USB-01. RS232 cable/UPCB-02. Data Acquisition software, SW-U801-WIN. AC to DC power adapter.

ELECTRICAL SPECIFICATION (23 ± 5℃)

Hygrometer (Humidity/Temp.)

Measurement		*Range*	*Resolution*
Humidity	%RH	10 to 95 %RH	0.1 %RH
	Temperature	32 to 122 ℉	0.1 ℉
	(Semiconductor)	0 to 50 ℃	0.1 ℃

Measurement	*Range*	*Accuracy*
Humidity	10 to 95 %RH	*< 70 %RH :* ± 4 %RH *≧70 %RH :* ± (4%rdg + 1.2 %RH)
	32 to 122 ℉	± 2.5 ℉
	0 to 50 ℃	± 1.2 ℃

Type K Thermometer

Measurement	*Range*	*Resolution*
Temperature (Type K)	-148 to 2372 ℉	0.1 ℉
	-100 to 1300 ℃	0.1 ℃

Measurement	*Range*	*Accuracy*
Temperature (Type K)	-148 to 2372 ℉	± (1% rdg + 2℉)
	-100 to 1300 ℃	± (1% rdg + 1℃)

Anemometer (Air velocity/Temp.)

Measurement		*Range*	*Resolution*
Air velocity	ft/min	80 to 5910 ft/min	1 ft/min
	m/s	0.4 to 30.0 m/s	0.1 m/s
	km/h	1.4 to 108.0 km/h	0.1 km/h
	MPH	0.9 to 67.0 mile/h	0.1 MPH
	knots	0.8 to 58.3 knots	0.1 knots
	Temperature	32 to 122 ℉	0.1 ℉
	(Semiconductor)	0 to 50 ℃	0.1 ℃

Measurement	*Range*	*Accuracy*
Air velocity	80 to 5910 ft/min	≦ 20 m/s : ± 3% F.S. > 20 m/s : ± 4% F.S.
	0.4 to 30.0 m/s	
	1.4 to 108.0 km/h	
	0.9 to 67.0 mile/h	
	0.8 to 58.3 knots	
	32 to 122 ℉	± 2.5 ℉
	0 to 50 ℃	± 1.2 ℃

Remark :
ft/min : feet per minute — *MPH : miles per hour*
m/s : meters per second — *knots : nautical miles per hour*
km/h : kilometers per hour

Light

Measurement		*Range*	*Resolution*
Light	Lux	0 to 2,200 Lux	1 Lux
		1,800 to 20,000 Lux	10 Lux
** auto range*	Ft-cd	0 to 204.0 Fc	0.1 Ft-cd
		170 to 1,860 Fc	1 Ft-cd
Temperature (Type K)		-148 to 2372 ℉	0.1 ℉
		-100 to 1300 ℃	0.1 ℃

Measurement	*Range*	*Accuracy*
Light	0 to 20,000 Lux 0 to 1,860 Fc	± 5% rdg ± 8 dgt
Temperature (Type K)	-148 to 2372 ℉	± (1% rdg + 2℉)
	-100 to 1300 ℃	± (1% rdg + 1℃)
Remark : Ft-cd : feet candle		

Sound Level

Measurement Range	Auto range *35 to 130 dB, 3 ranges :* range 1 - 35 to 80 dB, range 2 - 50 to 100 dB, range 3 - 80 to 130 dB,	
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 ℃)*	Characteristics of " A " frequency weighting network meet IEC 61672 class 2. Under 94 dB input signal, the accuracy are :	

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	± 5.6 dB

Calibrator	B & K (Bruel & kjaer), multi-fuction acoustic calibrator, model : 4226.
Microphone	Electric condenser microphone.
Size of microphor	1/2 inch standard size.
Data Hold	Hold function to freeze the display value.
Optional Accessories	94 dB Sound Calibrator, Model : SC-941

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