

*SD Card, real time data logger, Patent
Humidity, Light, Anemometer, type K/J Temp.*

ENVIRONMENT METER

Model : EM-9300SD

ISO-9001, CE, IEC1010



LUTRON ELECTRONIC

The Art of Measurement

SD Card real time data logger

ENVIRONMENT METER

Model : EM-9300SD

FEATURES

* Environment instrument, multi-function, all in one.
* Type K/J thermometer, Humidity/Temp. meter, Anemometer, Light meter, Sound level meter (optional adapter).
* Humidity measurement show both %RH and Temp. .
* 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.
* Thermocouple Thermometer can default to accept type K or type J Temp. probe.
* Temp. display unit default to °C or °F.
* Meter can default auto power off or manual power off.
* Real time SD memory card Datalogger, it Built-in Clock and Calendar, real time data recorder , sampling time set from 1 second to 3600 seconds.
* Manual datalogger is available (set the sampling time to 0), during execute the manual datalogger function, it can set the different position (location) No. (position 1 to position 99).
* Innovation and easy operation, computer is not need to setup extra software, after execute datalogger, just take away the SD card from the meter and plug in the SD card into the computer, it can down load the all the measured value with the time information (year/month/date/ hour/minute/second) to the Excel directly, then user can make the further data or graphic analysis by themselves.
* SD card capacity : 1 GB to 16 GB.
* LCD with green light backlight, easy reading.
* Can default auto power off or manual power off.
* Data hold, record max. and min. reading.
* Power by UM3/AA (1.5 V) x 6 batteries or DC 9V adapter.
* RS232/USB PC COMPUTER interface.
* Available for the HVAC applications.

GENERAL SPECIFICATIONS

Circuit	Custom one-chip of microprocessor LSI circuit.
Display	LCD size : 52 mm x 38 mm LCD with green backlight (ON/OFF).
Measurement Unit	* Type K/J thermometer * Humidity/Temp. meter * Anemometer with Temp. * Light meter * Sound level meter (optional adapter)
Datalogger Sampling Time Setting range	Auto 1 second to 3600 seconds @ Sampling time can set to 1 second, but memory data may loss. Manual Push the data logger button once will save data one time. @ Set the sampling time to 0 second. @ Manual mode, can also select the 1 to 99 position (Location) no.
Memory Card	SD memory card. 1 GB to 16 GB.
Advanced setting	* Set clock time (Year/Month/Date, Hour/Minute/ Second) * Decimal point of SD card setting * Auto power OFF management * Set beep Sound ON/OFF * Set thermometer type to Type K or Type J * Set temperature unit to °C or °F * Set sampling time * SD memory card Format
Temperature Compensation	Automatic temp. compensation for the Anemometer function and the type K/J thermometer.
Data Hold	Freeze the display reading.
Memory Recall	Maximum & Minimum value.
Sampling Time of Display	Approx. 1 second.
Data Output	RS 232/USB PC computer 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.
Operating Temperature	0 to 50 °C.
Operating Humidity	Less than 85% R.H.
Power Supply	* Alkaline or heavy duty DC 1.5 V battery (UM3, AA) x 6 PCs, or equivalent. * DC 9V adapter input. (AC/DC power adapter is optional).

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Power Current	Normal operation (w/o SD card save data and LCD Backlight is OFF) : Approx. DC 15 mA. When SD card save the data and LCD Backlight is OFF) : Approx. DC 36 mA.
Weight	515 g/ 1.13 LB.
Dimension	Meter 135 x 60 x 33 mm. Probe 105 x 46 x 29 mm.
Accessories Included	* Instruction manual..... 1 PC * Probe (EM-901P)..... 1 PC * Hard carrying case (CA-06)..... 1 PC
Optional Accessories	* SD Card (1 G) * SD Card (2 G) * Type K thermocouple probe. TP-01, TP-02A, TP-03, TP-04 * Sound adapter, SL-417 * AC to DC 9V adapter. * USB cable, USB-01. * RS232 cable, UPCB-02. * Data Acquisition software, SW-U801-WIN.

ELECTRICAL SPECIFICATIONS (23± 5 °C)

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 1,860 Ft-cd
Resolution	LUX 1 LUX Ft-cd 0.1 Ft-cd
Accuracy	± (5% rdg ± 8 dgt)

Note: Ft-cd : Feet candle

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 -100.0 °C	± (0.4 % + 1 °C)
	0.1 °F	-58.0 to 2372.0 °F	± (0.4 % + 1.5 °F)
Type J	0.1 °C	-58.1 to -148.0 °F	± (0.4 % + 1.8 °F)
		-50.0 to 1200.0 °C	± (0.4 % + 0.8 °C)
	0.1 °F	-50.1 to -100.0 °C	± (0.4 % + 1 °C)
	0.1 °F	-58.0 to 2192.0 °F	± (0.4 % + 1.5 °F)
		-58.1 to -148.0 °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.

PATENT	CHINA : ZL 2008 2 0189918.5 ZL 2008 2 0189917.0 Germany : Nr. 20 2008 016 337.4 JAPAN : 3151214 U.S.A. : Pending	TAIWAN : M 358970 M 359043
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