

## ***SD Card real time data recorder***

***%RH, Light, Anemometer, Temp, all in one***

# **ENVIRONMENT METER**

**Model : EMC-9400SD**

***ISO-9001, CE, IEC1010***



Anemometer Probe



Humidity probe



Light probe



Type K Temp. probe ( included ); TP-01.

Optional type K Temp. probe : TP-02A, TP-03, TP-04, TP-05.



**Lutron**

**LUTRON ELECTRONIC**

***The Art of Measurement***

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# ENVIRONMENT METER

Model : EMC-9400SD

## FEATURES

* Environment instrument, multi-function, all in one.
* Type K/J thermometer, Humidity/Temp. meter, Anemometer, Light meter.
* Humidity measurement can show %RH and Temp., Dew, Wet 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 download 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	TFT LCD size : 52 mm x 38 mm
Measurement Unit	* Anemometer with Temp. * Humidity/Temp. meter * Light meter * Type K/J thermometer
Datalogger Sampling Time Setting range	Auto 1 second to 3600 seconds @ For anemometer measurement, the sampling time setting value should be ≥ 2 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 ).
Power Current	Normal operation ( w/o SD card save data ) : Approx. DC 15 mA. When SD card save the data 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 * Anemometer Probe, AM-01..... 1 PC * Humidity Probe, HT-01..... 1 PC * Light Probe, LX-01..... 1 PC * Type K thermocouple Probe, TP-01..... 1 PC * Hard carrying case ( CA-06 )..... 1 PC	

## Electrical Specification ( 23 ±5 ℃ )

### 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

### Air flow

Measurement	Range	Resolution
CMM ( m³/min. )	0 to 54,000 CMM	0.001 to 1 CMM
CFM ( ft³/min. )	0 to 1,907,000 CFM	0.001 to 100 CFM

Measurement	Area
CMM ( m³/min. )	0.001 to 30,000 m²
CFM ( ft³/min. )	0.01 to 322.93 ft²

### Humidity/Temperature

Humidity	Range	5 % to 95 % R.H.
	Resolution	0.1 % R.H.
	Accuracy	≥ 70% RH : ±(3% reading + 1% RH). < 70% RH : ±3% RH.
Temperature	Range	0 °C to 50 °C, 32 °F to 122 °F.
	Resolution	0.1 degree
	Accuracy	°C    ±0.8 °C. °F    ±1.5 °F.

### Dew Point Temp. ( Humidity )

°C	Range	-25.3 °C to 48.9 °C
	Resolution	0.1 °C
°F	Range	-13.5 °F to 120.1 °F.
	Resolution	0.1 °F.

### Wet bulb Temp. ( Humidity )

°C	Range	-21.6 °C to 50.0 °C
	Resolution	0.1 °C
°F	Range	-6.9 °F to 122.0 °F.
	Resolution	0.1 °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 )
		-58.0 to 2192.0 °F	± ( 0.4 % + 1.5 °F )
		-58.1 to -148.0 °F	± ( 0.4 % + 1.8 °F )

\* Spec. tested under the environment RF Field Strength less than 3 V/M & frequency less than the 30 MHz only.