

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

ENVIRONMENT METER

Model : EM-9300SD

ISO-9001, CE, IEC1010



Lutron

LUTRON ELECTRONIC

The Art of Measurement

SD Card real time data logger

ENVIRONMENT METER

Model : EM-9300SD

FEATURES

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| * 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

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| 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 @ 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). |

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|----------------------|---|
| 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 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-910P).....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

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|-----------------|-------------------------------|
| 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

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|-----------------|---|
| 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

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|-----------------|--|
| 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 | Reso- lution | 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) |
| | | -58.1 to -148.0 °F | ± (0.4 % + 1.8 °F) |
| Type J | 0.1 °C | -50.0 to 1200.0 °C | ± (0.4 % + 0.8 °C) |
| | | -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.

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| PATENT | CHINA : ZL 2008 2 0189918.5 ZL 2008 2 0189917.0 Germany : Nr. 20 2008 016 337.4 | TAIWAN : M 358970 M 359043 JAPAN : 3151214 | U.S.A. : Pending |
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* Appearance and specifications listed in this brochure are subject to change without notice.

1005-EM9300SD