

*SD card real time data recorder*

*Air velocity, Air flow, Humidity, Dew point, Type K/J Temp.*

# ANEMOMETER

**Model : AM-4237SD**

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



**Lutron**

**LUTRON ELECTRONIC**

***The Art of Measurement***

# SD Card real time data recorder Humidity/Temp., type K/J Temp., Air flow ANEMOMETER Model : AM-4237SD

## FEATURES

|   |
|---|
| * Two probes are included :<br>Anemometer probe and Humidity/Temp. probe.   |
| * 3 in 1 : Anemometer, Humidity/Temp. meter, Type J/K thermometer.  |
| * ABS plastic vane probe, heavy duty.   |
| * Air velocity : m/S, Ft/min, Km/h, Knots, Mile/h.  |
| * Air temperature ( °C, °F )  |
| * Air flow : CMM, CFM.  |
| * Low-friction ball vane wheels make sure high accuracy in high & low velocities.   |
| * Type K, Type J thermocouple thermometer.  |
| * Air Temp. used thermistor sensor, fast response time.   |
| * Humidity/%RH : 10 to 95 %RH.  |
| * Dew point. Wet bulb Temp..  |
| * 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.  |
| * Microcomputer circuit, high accuracy.   |
| * Power by UM3/AA ( 1.5 V ) x 6 batteries or DC 9V adapter.   |
| * RS232/USB PC COMPUTER interface.  |
| * Separate probe, easy for operation of different measurement environment.  |
| * Wide applications: use this anemometer to check air conditioning & heating systems, measure air velocities, wind temperature...etc.   |

## GENERAL SPECIFICATIONS

|  |   |   |
|--|---|---|
| Circuit                                | Custom microprocessor LSI circuit.  |   |
| Display                                | LCD size : 52 mm x 38 mm<br>LCD with green backlight ( ON/OFF ).  |   |
| Function                               | Anemometer ( Air velocity, Air flow ).<br>Humidity/Temp. meter.<br>Type J/K thermometer.  |   |
| Measurement Unit                       | Air velocity :<br>m/S (meters per second)<br>Km/h ( kilometers per hour )<br>Ft/min ( FPM, feet per minute )<br>Knots ( nautical miles per hour )<br>Mile/h ( mph, miles per hour )<br>Air temperature : °C, °F<br>Air flow : CMM, CFM.<br>Humidity/Temp. : %RH/°C or °F.<br>Dew point ( Humidity ) : °C or °F.<br>Wet bulb ( Humidity ) : °C or °F.<br>Type K/ Type J thermometer : °C, °F |   |
| Datalogger Sampling Time Setting range | Auto  | 1, 2, 5, 10, 30, 60, 120, 300, 600, 1800 3600 second.<br>@ Sampling time can set to 1 second, but memory data may loss.   |
|  | Manual  | Push the data logger button once will save data one time.<br>@ Set the sampling time to 0 second.<br>@ Manual mode, can also select the 1 to 99 position ( Location ) no. |
| Memory Card Advanced setting           | SD memory card. 1 GB to 16 GB.<br>* Set clock time ( Year/Month/Date, Hour/Minute/ Second )<br>* Decimal point of SD card setting<br>* Auto power OFF management<br>* Set beep Sound ON/OFF<br>* Set thermometer type to Type K or Type J<br>* Set temperature unit to °C or °F<br>* Set sampling time<br>* SD memory card Format   |   |
| Temperature Compensation               | Automatic temp. compensation for 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.<br>* Connect the optional RS232 cable<br>UPCB-02 will get the RS232 plug.<br>* Connect the optional USB cable<br>USB-01 will get the USB plug.  |   |
| Operating Temperature                  | 0 to 50 °C.<br>* meter only   |   |
| Operating Humidity                     | Less than 85% R.H.  |   |
| Power Supply<br>* Battery              | * Alkaline or heavy duty DC 1.5 V battery ( UM3, AA ) x 6 PCs, or equivalent.   |   |
| Power Supply<br>* ACV                  | *.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 ) :<br>Approx. DC 15 mA.<br>When SD card save the data and LCD Backlight is OFF ) :<br>Approx. DC 36 mA.                                 |              |
| Weight               | 347 g/ 0.76 LB.  | * Meter only |
| Dimension            | Main instrument :<br>182 x 73 x 47.5 mm<br>( 7.1 x 2.9 x 1.9 inch )<br>Anemometer sensor head :<br>Round, 72 mm Dia.<br>Humidity Probe :<br>197 mm ( 7.8 inch ) in length.                                 |              |
| Accessories Included | * Instruction manual.....1 PC<br>* Anemometer probe.....1 PC<br>* Humidity probe.....1 PC<br>* Hard carrying case ( CA-06 ).....1 PC   |              |
| Optional Accessories | SD Card 1-16G<br>Type K thermocouple probe.<br>AC to DC 9V adapter.<br>USB cable, USB-01.<br>RS232 cable, UPCB-02.<br>Data Acquisition software, SW-U801-WIN.<br>Excel Data Acquisition software, SW-E802. |              |

## ELECTRICAL SPECIFICATIONS (23± 5 °C)

### 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 ( Mile/h ) | 0.9 - 55.9 mile/h | 0.1 mph    | ± ( 2%+0.4 mph )   |
| Knots          | 0.8 - 48.6 knots  | 0.1 Knots  | ± ( 2%+0.4 Knots ) |
| FPM ( Ft/min ) | 80 - 4930 ft/min  | 1 FPM      | ± ( 2%+40 FPM )    |

### Air temperature

|                 |                               |
|-----------------|-------------------------------|
| Measuring Range | 0 °C to 80 °C/32 °F to 176 °F |
| Resolution      | 0.1 °C/0.1 °F                 |
| Accuracy        | 0.8 °C/1.5 °F ( < 60 °C )     |

### Air flow

| Measurement       | Range              | Resolution       |
|-------------------|--------------------|------------------|
| CMM ( m^3/min. )  | 0 to 63,000 CMM    | 0.001 to 1 CMM   |
| CFM ( ft^3/min. ) | 0 to 2,224,900 CFM | 0.001 to 100 CFM |

| Measurement       | Area                |
|-------------------|---------------------|
| CMM ( m^3/min. )  | 0.001 to 30,000 m^2 |
| CFM ( ft^3/min. ) | 0.01 to 322.93 ft^2 |

## Humidity/ Temperature

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

## Dew Point ( 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.               |

### Remark :

- \* Dew Point display value is calculated from the Humidity/Temp. measurement automatically.
- \* The Dew Point accuracy is sum accuracy value of Humidity & Temperature measurement..

## Wet bulb ( 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.              |

### Remark :

- \* Wet bulb display value is calculated from the Humidity/Temp. measurement automatically.
- \* The Wet bulb accuracy is sum accuracy value of Humidity & Temperature measurement..

## Type K/J thermometer

| Sensor Type | Resolution | Range              | Accuracy             |
|-------------|------------|--------------------|----------------------|
| Type K      | 0.1 °C     | -50.0 to 1300.0 °C | ± ( 0.4 % + 0.5 °C ) |
|             |            | -50.1 to -100.0 °C | ± ( 0.4 % + 1 °C )   |
|             | 0.1 °F     | -58.0 to 2372.0 °F | ± ( 0.4 % + 1 °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 % + 0.5 °C ) |
|             |            | -50.1 to -100.0 °C | ± ( 0.4 % + 1 °C )   |
|             | 0.1 °F     | -58.0 to 2192.0 °F | ± ( 0.4 % + 1 °F )   |
|             |            | -58.1 to -148.0 °F | ± ( 0.4 % + 1.8 °F ) |

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

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