***SD Card real time data recorder, + type K/J Temp.***
***Air flow ( CMM, CFM )***

# HOT WIRE ANEMOMETER

**Model : AM-4215SD** *ISO-9001, CE, IEC1010*



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*The Art of Measurement*

***SD card real time data recorder***
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# HOT WIRE ANEMOMETER, + type K/J Temp.

## Model : AM-4215SD

**FEATURES**

* One meter can accept two probes : Hot wire anemometer probe
* Combination of hot wire and standard thermistor, deliver rapid and precise measurements even at low air velocity value.
* Slim hot wire probe, ideal for grilles & diffusers.
* Air velocity : m/s, Ft/min, Km/h, Knot, Mile/h,
* Air flow ( CFM, CMM ) measurement.
* Air temperature ( ℃, ℉ )
* Air Temp. used thermistor sensor, fast response time.
* Fast humidity measuring response time.
* Type K, Type J thermocouple thermometer.
* 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.
* Applications : Environmental testing, HVAC, Air conveyors, Flow hoods, Clean rooms, Air velocity, Air balancing, Fans/motors/blowers, Furnace velocity, Refrigerated case, Paint spray booths . measurements

**GENERAL SPECIFICATIONS**

| | | |
|---|---|---|
| Circuit | Custom one-chip of microprocessor LSI circuit. | |
| Display | LCD size : 52 mm x 38 mm<br>LCD with green backlight ( ON/OFF ). | |
| 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 ) | |
| | Air flow :<br>CFM, CMM<br>* CFM : cube feet per minute<br>* CFM : cube meters per minute | |
| | ℃, ℉<br>Type K/ Type J thermometer :℃, ℉<br>Air temperature: ℃, ℉ | |
| Sensor Structure | Air velocity & Air flow :<br>Tiny glass bead thermistor. | |
| | Air temperature :<br>Thermistor. | |
| | Type K, Type J thermometer :<br>Type K/J thermocouple probe.<br>* Probes are optional. | |
| Datalogger Sampling Time Setting range | Auto | 1 second to 3600 seconds<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 | SD memory card. 1 GB to 16 GB.<br>* It recommend use memory card ≦ 4 GB. | |
| Advanced setting | * Set clock time ( Year/Month/Date, Hour/Minute/ Second )<br>* Set sampling time<br>* Auto power OFF management<br>* Set beep Sound ON/OFF<br>* Decimal point of SD card setting<br>* SD memory card Format<br>* Set thermometer type to Type K or Type J<br>* Set temperature unit to ℃ or ℉<br>* Set air flow type ( CFM/USA, CMM/EURO )<br>* Set air flow area dimension | |
| 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.<br>* Connect the optional RS232 cable UPCB-02 will get the RS232 plug.<br>* Connect the optional USB cable USB-01 will get the USB plug. |
| Operating Temperature | 0 to 50 ℃. |
| 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.<br>* .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 30 mA.<br>When SD card save the data and LCD Backlight is OFF) :<br>Approx. DC 50 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 ) |
| | Hot wire telescope probe :<br>Round, 12 mm Dia x 280 mm ( min. length ).<br>Round, 12 mm Dia x 940 mm ( max. length ). |
| Accessories Included | * Instruction manual.....1 PC<br>* Hot wire telescope probe. 1 PC<br>* Hard carrying case .....1 PC |
| Optional Accessories | * SD Card ( 2 G )<br>* Type K thermocouple probes, refer to page 31.<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 ℃)**

**Air velocity**

| Measurement | Range | Resolution | Accuracy |
|---|---|---|---|
| m/s | 0.2 to 5.0 m/s | 0.01 m/s | ± ( 5% + a ) reading<br>or<br>± ( 1% + a ) full scale |
| | 5.1 to 25.0 m/s | 0.1 m/s | |
| Km/h | 0.70 to 18.00 km/h | 0.01 Km/h | |
| | 18.0 to 72.0 km/h | 0.1 Km/h | |
| Mile/h ( MPH ) | 0.50 to 11.20 mph | 0.01 mph | |
| | 11.2 to 44.7 mph | 0.1 mph | |
| Knot | 0.40 to 9.70 knot | 0.01 Knot | |
| | 9.7 to 38.8 knot | 0.1 Knot | |
| Ft/min | 40-3940 ft/min | 1 Ft/min | |

@ a = 0.1 m/s, 0.3 km/h, 0.2 mile/h, 0.2 knot, 20 ft/min

*Note:*
m/s - meters per second km/h - kilometers per hour
ft/min - feet per minute knot - nautical miles per hour
mile/h - miles per hour **

**Air temperature**

| | |
|---|---|
| Measuring Range | 0 ℃ to 50 ℃/32 ℉ to 122 ℉ |
| Resolution | 0.1 ℃/0.1 ℉ |
| Accuracy | ± 0.8 ℃/1.5 ℉ |

**Air flow**

| Measurement | Range | Resolution |
|---|---|---|
| CMM ( m^3/min. ) | 0 to 54,000 CMM | 0.001 to 1 CMM |
| CFM ( ft^3/min. ) | 0 to 1,907,000 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 |

**Type K/J thermometer**

| Sensor Type | Resolution | Range | Accuracy |
|---|---|---|---|
| Type K | 0.1 ℃ | -50.0 to 1300.0 ℃ | ± ( 0.4 % + 0.5 ℃ ) |
| | | -50.1 to -100.0 ℃ | ± ( 0.4 % + 1 ℃ ) |
| | 0.1 ℉ | -58.0 to 2372.0 ℉ | ± ( 0.4 % + 1 ℉ ) |
| | | -58.1 to -148.0 ℉ | ± ( 0.4 % + 1.8 ℉ ) |
| Type J | 0.1 ℃ | -50.0 to 1200.0 ℃ | ± ( 0.4 % + 0.5 ℃ ) |
| | | -50.1 to -100.0 ℃ | ± ( 0.4 % + 1 ℃ ) |
| | 0.1 ℉ | -58.0 to 2192.0 ℉ | ± ( 0.4 % + 1 ℉ ) |
| | | -58.1 to -148.0 ℉ | ± ( 0.4 % + 1.8 ℉ ) |