

SD Card real time data recorder

CO2, O2, Humidity, Temp., one probe **AIR QUALITY METER**

Model : AQ-9918SD

ISO-9001, CE, IEC1010



LUTRON ELECTRONIC

The Art of Measurement

SD Card real time data recorder

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FEATURES

* Real time recorder, save the data into the SD memory card and can be downloaded to the Excel, extra software is no need.
* Air quality measurement, multi-function and only use one probe to cover whole measurement : CO2 (Carbon dioxide), O2 (Oxygen), Humidity, Temp..
* Can show and record multi-probe's input measuring data on the same LCD display at same time.
* CO2 range : 0 to 10,000 ppm x 1 ppm.
* O2 range : 0 to 30.0 % x 0.1 %.
* Humidity range : 5 to 95 %RH.
* Dew point range : -25.3 to 48.9 oC, oC/oF.
* Temperature range : 0 to 50 oC, oC/oF.
* CO2 sensor : NDIR long term reliability.
* O2 sensor : Galvanic cell type .
* Humidity sensor : Precision capacitance sensor.
* Sampling time for data recorder is 0 to 3600 seconds.
* Complete set with one multi-function probe.
* SD card capacity : 1 GB to 16 GB.
* TFT color LCD, easy reading.
* Optional acquisition software, SW-US801-WIN, SW-E802.
* Power by UM3/AA (1.5 V) x 6 batteries or DC 9V adapter.

General Specifications

Circuit	Custom one-chip of microprocessor LSI circuit.	
Display	LCD size : 52 mm x 38 mm (Dot Matrix) LCD with green backlight (ON/OFF).	
Measurement	CO2 (Carbon dioxide) O2 (Oxygen in air) Humidity Dew point Temp., Wet bulb Temp. Temperature	
Sensor structure	CO2 NDIR * Nondispersive infrared sensor	
	Humidity Precision capacitance sensor	
	O2 Galvanic cell type	
	Temp. Precision thermistor	
Datalogger Sampling Time Setting range	Auto 2 sec to 8 hour 59 min. 59 sec. @ 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.	
Data error no.	0.1% of total saved data max.	
Memory Card	SD memory card. 1 GB to 16 GB.	
Advanced setting @ main setting	* SD memory card Format * Set clock time * Set sampling time * Auto power OFF management * Set beep Sound ON/OFF * Decimal point of SD card setting * Temp. unit setting * Alarm value setting * Altitude value setting	
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.	
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	CO2 measurement	Normal operation (w/o SD card save data and LCD Backlight is OFF) : Approx. DC 136.5 mA.
		When SD card save the data and LCD Backlight is OFF) : Approx. DC 166 mA.
	Humidity measurement	Normal operation (w/o SD card save data and LCD Backlight is OFF) : Approx. DC 10.5 mA.
		When SD card save the data and LCD Backlight is OFF) : Approx. DC 40 mA.
	O2 measurement	Normal operation (w/o SD card save data and LCD Backlight is OFF) : Approx. DC 12.5 mA.
		When SD card save the data and LCD Backlight is OFF) : Approx. DC 42.5 mA.

Operating Temperature	0 to 50 °C. (32 to 122 °F).	
Operating Humidity	Less than 80% R.H.	
Weight	350 g/0.77 LB.	
Dimension	Meter	177 x 68 x 45 mm
	CO2/Humidity/ O2 probe	length 202 mm x ϕ 31.5
Accessories Included	Instruction manual..... 1 PC Hard carrying case, CA-06.....1 PC CO2 / Humidity/ O2 probe..... 1 PC	
Optional Accessories	SD memory card (4 GB) AC to DC 9V adapter. USB cable, USB-01. RS232 cable, UPCB-02. Data Acquisition software, SW-U801-WIN.	

Electrical Specification (23 ± 5 °C)

CO2 (Carbon dioxide)

CO2 (Carbon dioxide) 23 ± 5 °C.	Range	0 to 10,000 ppm
	Resolution	1 ppm
	Accuracy	±40 ppm * ≤ 1,000 ppm.
		±(50ppm +3% of reading) * > 1,000 ppm ≤ 3,000 ppm.
Repeatability	±(50ppm +5% of reading) typically * > 3,000 ppm ≤ 10,000 ppm.,	
	± 20 ppm * ≤ 3,000 ppm.	
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.

O2 (Air oxygen)

O2 * Air oxygen	Range	0 to 30 %O2.	
	Resolution	0.1 %O2.	
	Accuracy	±(1 % reading + 0.2 % O2). @ After calibration	
		Response time	≤ 15 seconds. @ t 90
	Overload protection	100 %O2.	
	Environment pressure range	0.9 to 1.1 atmosphere.	
	Expected life time	≥ 2 years.	
	Alarm	If the measurement Air oxygen value is < 18.0 %O2, the buzzer will sound for warning.	
	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.	

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.
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 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.
Remark :		
* Wet bulb display value is calculated from the Humidity/Temp. measurement automatically.		
* The Welt bulb accuracy is sum accuracy value of Humidity & Temperature measurement..		
* Spec. tested under the environment RF Field Strength less than 3 V/M & frequency less than the 30 MHz only.		