

**SD Card real time data logger, Patent**

# **CO<sub>2</sub> /HUMIDITY/TEMP. MONITOR**

**Model : MCH-383SD**

*ISO-9001, CE, IEC1010*

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*The Art of Measurement*

# SD Card real time data logger CO2/HUMIDITY/TEMP. MONITOR

Model : MCH-383SD

## FEATURES

* Monitor with real time data logger, save the measuring data along the time information ( year, month, date, hour, minute, second ) into the SD memory card and can be down load to the Excel, extra software is no need. user can make the further data or graphic analysis by themselves.
* Show CO2 ( Carbon dioxide ), Humidity and Temperature value in the same LCD.
* NDIR method principal for CO2 ( Carbon dioxide ) measurement, available for long term operation. high repeatability and high accuracy.
* 0.1 %RH resolution for the humidity reading, 0.1 degree resolution for the Temp. reading.
* Used the precision capacitance type humidity sensor, professional and high accuracy.
* SD card capacity : 1 GB to 16 GB.
* Large LCD display, easy readout.
* Microcomputer circuit, high reliability.
* Low power consumption and long battery life when use battery power.
* Power supply from AC.DC 9V adapter in.
* RS232/USB computer interface.
* Patented

## GENERAL SPECIFICATIONS

Circuit	Custom one-chip of microprocessor LSI circuit.
Display	LCD size : 60 mm x 50 mm
Measurement	CO2 ( Carbon dioxide ) Humidity and Temperature
Unit	CO2           ppm Humidity      %RH Temp.          °C, °F
CO2 Sensor Structure	NDIR
Response Time for CO2 measurement	CO2 : < 2 min. typically. *Reach the 63% reading value *Depend the environment air circulation.
Temperature Compensation	Automatic temp. compensation for CO2 measurement.
Datalogger Sampling Time	5/10/30/60/120/300/600 seconds or Auto. * Default sampling time is 60 seconds. * The " Auto " sampling . means when the measuring value is changed ( > ± 1 %RH or > ± 1 °C or ± 50 ppm ) will save the data one time only.
Data error no.	≤ 0.1 % no. of total saved data typically.
Memory Card	SD memory card. 1 GB to 16 GB.
Advanced setting 1	* SD memory card Format * Set clock time ( Year/Month/Date, Hour/Minute/ Second ) * Set sampling time * Set beeper sound ON/OFF * Set SD card Decimal character * Select the Temp. unit to °C or °F * Set RS232 data output ON/OFF

Advanced setting 2	* Set CO2 height ( meter ) compensation value * Set CO2 height ( feet ) compensation value	
Memory Card	SD memory card. 1 GB to 16 GB.	
Update Time of Display	Approx. 1 second if measuring data is changed.	
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 90% R.H.	
Power Supply * Meter & probe	* DC 9V adapter input. ( AC/DC power adapter is included ).	
Power Supply * Clock backup battery	* Alkaline or heavy duty DC 1.5 V battery ( UM4, AAA ) x 6 PCs, or equivalent.	
Weight	Meter	240 g/0.53 LB.
	CO2 probe	158 g/0.35 LB.
Dimension	Meter	132 x 80 x 32 mm ( 5.2 x 3.1 x 1.3 inch )
	CO2 probe	132 x 38 x 32 mm
Accessories Included	Instruction manual..... 1 PC CO2 probe..... 1 PC AC to DC 9V adapter..... 1 PC Main meter hanging unit ( with sticker ) .....1 PC CO2 hanging unit ( with sticker ).....1 PC	
Optional Accessories	SD Card ( 2 GB ), SD-2GB. USB cable, USB-01. RS232 cable, UPCB-02. Data Acquisition software, SW-U801-WIN.	

## ELECTRICAL SPECIFICATIONS (23± 5 °C)

### CO2 ( Carbon dioxide )

Range	0 to 4,000 ppm	
Resolution	1 ppm	
Accuracy	± 40 ppm	* ≤1,000 ppm.
	± 5% of reading	* > 1,000 ppm ≤ 3,000 ppm.
	± 250 ppm typically	* > 3,000 ppm, reference only

### Humidity

Range	10 % to 90 % R.H.	
Resolution	0.1 % R.H.	
Accuracy	≥70% RH : ± (4% reading + 1% RH). < 70% RH : ± 4% 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.	

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.

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