## SD Card real time data logger, Patent

# **HUMIDITY/BAROMETER/TEMP. MONITOR**

Model: MHB-382SD *ISO-9001, CE, IEC1010* 









The Art of Measurement

# SD Card real time data logger

# **HUMIDITY/BAROMETER/TEMP. MONITOR**

Model: MHB-382SD

### **FEATURES**

| * | Monitor with real time data logger, save the measuring   |
|---|--|
|   |  |
|   | data along the time information ( year, month, date,     |
|   | 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 Humidity, Temperature and Barometer value in the    |
| L | same LCD.  |
| * | 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 for humidity measurement. |
| * | Professional barometer, unit: hPa, mmHg, inHg.           |
| * | 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.                                       |
| * | DC 1.5V ( UM-4, AAA ) battery x 6 PCs or DC 9V           |
|   | adapter in.  |
| * | RS232/USB computer interface.                            |
|   | Patented   |

#### **GENERAL SPECIFICATIONS**

| Circuit Custom one-chip of microprocessor LSI |  |  |  |
|---|--|--|--|
| on our  | circuit.   |  |  |
| Display                                       | LCD size : 60 mm x 50 mm   |  |  |
| Measurement                                   |  |  |  |
| Memory Card                                   | Humidity, Temperature and Barometer SD memory card. 1 G to 16 G.           |  |  |
| Datalogger                                    | Save mode 1 60 seconds.  |  |  |
|   | Save mode 2  | 30 seconds.                                  |  |
| Sampling Time                                 | Save mode 3  | 5 seconds.                                   |  |
|   |  |  |  |
|   | AC   | 5 seconds.                                   |  |
|   | power  |  |  |
| Advanced                                      | * Set clock time ( Year/Month/Date,  |  |  |
| setting                                       | Hour/Minute/ Second )  |  |  |
|   | * Decimal point of SD card setting   |  |  |
|   | * Set temperature unit to ${}^\circ\!\mathbb{C}$ or ${}^\circ\!\mathbb{F}$ |  |  |
|   | * Set sampling time mo   | * Set sampling time mode ( power consumption |  |
|   | mode ).  |  |  |
|   | * SD memory card Format  |  |  |
|   | * Set save mode type   |  |  |
| Update Time                                   | Approx. 1 second if measuring data   |  |  |
| of Display                                    | 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 th                            |  | USB plug.                                    |  |
|   |  | , 5  |  |
|   |  |  |  |
|   |  |  |  |

| Operating                         | 0 to 50 ℃.                                  |                       |  |  |
|-----------------------------------|---|-----------------------|--|--|
| Temperature                       |   |                       |  |  |
| Operating                         | Less than 85%                               | Less than 85% R.H.    |  |  |
| Humidity                          |   |                       |  |  |
| Power Supply                      | * Alkaline or heavy duty DC 1.5 V battery   |                       |  |  |
|                                   | ( UM4, AAA ) x 6 PCs, or equivalent.        |                       |  |  |
|                                   | * DC 9V adapter input. ( AC/DC power        |                       |  |  |
|                                   | adapter is optional ).                      |                       |  |  |
| Save mode/                        |   |                       |  |  |
| Battery life                      | Save mode 2                                 | 60 days approximately |  |  |
|                                   | Save mode 3                                 | 30 days approximately |  |  |
|                                   | * Battery power                             |                       |  |  |
|                                   | * The above value is specified under the    |                       |  |  |
|                                   | meter is used the Alkaline battery, power   |                       |  |  |
|                                   | capacity is > 300 mAH.                      |                       |  |  |
| Weight                            | Veight 240 g/0.53 LB.                       |                       |  |  |
| Dimension                         | 132 x 80 x 32 mm                            |                       |  |  |
|                                   | (5.2 x 3.1 x 1.3 inch)                      |                       |  |  |
| Accessories                       | Instruction manual1 PC                      |                       |  |  |
| Included                          |   |                       |  |  |
| Optional                          | SD Card (1 GB)                              |                       |  |  |
| Accessories SD Card ( 2 GB )      |   | )                     |  |  |
|                                   | AC to DC 9V adapter.                        |                       |  |  |
|                                   | USB cable, USB-01.<br>RS232 cable, UPCB-02. |                       |  |  |
|                                   |   |                       |  |  |
| Data Acquisition software, SW-U80 |   |                       |  |  |

### ELECTRICAL SPECIFICATIONS (23 $\pm$ 5 $^{\circ}$ C)

### Humidity

| Range      | 10 % to 95 % R.H.       |  |
|------------|-------------------------|--|
| Resolution | 0.1 % R.H.              |  |
| Accuracy   | ≧70% RH :               |  |
|            | ± (3% reading + 1% RH). |  |
|            | < 70% RH :              |  |
|            | ± 3% RH.                |  |

### Temperature

| Range      | 0 ℃ to 50 ℃,32 °F to 122 °F. |
|------------|------------------------------|
| Resolution | 0.1 degree                   |
| Accuracy   | ℃ - 0.8 ℃.                   |
|            | °F - 1.5 °F.                 |

#### Barometer

| Measurement | Range         | Resolution | Accuracy @ reading |
|-------------|---------------|------------|--------------------|
| hPa         | 10.0 to 999.9 | 0.1        | ± 1.5 hPa          |
|             | 1000 to 1100  | 1          | ± 2 hPa            |
| mmHg        | 7.5 to 825.0  | 0.1        | ± 1.2 mmHg         |
| inHg        | 0.29 to 32.48 | 0.01       | ± 0.05 inHg        |

| PATENT | CHINA: ZL 2008 2 0189918.5 ZL 2008 2 0189917.0 |                | TAIWAN: M 358970 M 359043 |
|--------|--|----------------|---------------------------|
|        | Germany: Nr. 20 2008 016 337.4                 | JAPAN: 3151214 | U.S.A. : Pending          |