

*SD card real time recorder*

# MANOMETER *200 mbar*

Model : PM-9112SD

*ISO-9001, CE, IEC1010*



**Lutron**

**LUTRON ELECTRONIC**

*The Art of Measurement*

# SD card real time data recorder 200 mbar, differential input

# MANAOMETER

Model : PM-9112SD

### FEATURES

|  |
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| * Dual & differential input, 200 mbar max. range.  |
| * Application : Industrial, laboratory, heating, ventilation, medical hospital, used for air or not corrosive and not ionized gas & liquid.  |
| * Sensor is built inside the housing.  |
| * Single lugs for pipe connection.   |
| * 10 kind display units ( mbar, psi, Kg/cm <sup>2</sup> , mm Hg, inch Hg, meter H2O, inch H2O, Atmosphere, hpa, kpa ) select by push button on the front panel   |
| * Auto shut off saves battery life.  |
| * Zero button on the front panel, easy to offset the zero value.   |
| * Microprocessor circuit assures maximum possible accuracy, provides special functions and features,   |
| * Super large LCD display with contrast adjustment for best viewing angle.   |
| * 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.  |
| * It 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.   |

1

### GENERAL SPECIFICATIONS

|                              |   |   |
|------------------------------|---|---|
| Circuit                      | Custom one-chip of microprocessor LSI circuit.  |   |
| Display                      | LCD size : 61 mm x 34 mm<br>LCD with green backlight ( ON/OFF ).  |   |
| Display units                | psi , inch Hg , inch H2O , hPA , KPA, mbar, Kg/cm <sup>2</sup> , mm Hg , meter H2O , Atmosphere.  |   |
| Measurement Function         | Dual & differential input, data hold, zero/relative, memory.  |   |
| Zero adjust                  | Push button on the front panel.   |   |
| Sensor                       | * Sensor is built inside the housing.<br>* Piezoelectric sensor.<br>* Used for dry, non-corrosive and non-ionic air and gas only.<br>Liquid is prohibited.  |   |
| Datalogger                   | Auto  | 1 sec to 3600 sec.  |
| Sampling Time                |   | @ Sampling time can set to 1 second, but memory data may loss.  |
| Setting range                | 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>* 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 |   |
| Data Hold                    | Freeze the display reading.   |   |
| Memory Recall                | Maximum & Minimum value.  |   |
| Sampling Time of Display     | Approx. 1 second.   |   |
| 7 Temperature                | Meter   | 0 to 50 °C .  |
|                              | Probe   | 0 to 60 °C .  |
| Operating Humidity           | Less than 85% R.H.  |   |

|                      |   |
|----------------------|---|
| 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.  |
| 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 7 mA.<br>When SD card save the data and LCD Backlight is OFF ) :<br>Approx. DC 25 mA.<br>* If LCD backlight on, the power consumption will increase approx. 10 mA |
| Weight               | 489 g/1.08 LB.  |
| Dimension            | 190 x 68 x 45 mm<br>(7.5 x 2.7x 1.8 inch)   |
| Accessories Included | * Instruction manual..... 1 PC.<br>* Hard carrying case..... 1 PC.<br>* Plug for quick coupler..... 2 PCs.  |
| Optional Accessories | SD memory card ( 4 GB )<br>AC to DC 9V adapter.<br>USB cable, USB-01.<br>RS232 cable, UPCB-02.<br>Data Acquisition software, SW-U801-WIN.   |

### ELECTRICAL SPECIFICATIONS (23 ± 5 °C)

| Unit               | Max. range                | Resolution               |
|--------------------|---------------------------|--------------------------|
| mbar               | ±200 mbar                 | 0.1 mbar                 |
| psi                | ±2.9 psi                  | 0.001 psi                |
| Kg/cm <sup>2</sup> | ±0.204 Kg/cm <sup>2</sup> | 0.001 Kg/cm <sup>2</sup> |
| mm Hg              | ±150 mm Hg                | 0.1 mm Hg                |
| inch Hg            | ±5.905 inch Hg            | 0.002 inch Hg            |
| meter H2O          | ±2.04 meter H2O           | 0.001 meter H2O          |
| h PA               | ±200 h PA                 | 0.1 h PA                 |
| K PA               | ±20 K PA                  | 0.01 K PA                |
| inch H2O           | ±80.2 inch H2O            | 0.05 inch H2O            |
| Atmosphere         | ±0.197 Atmosphere         | 0.001 Atmosphere         |

| Unit               | Max. range                | Accuracy   |
|--------------------|---------------------------|--|
| mbar               | ±200 mbar                 | ± 2 % F.S.<br><br>Note :<br>* 23 ± 5 °C .<br>* F.S. : full scale<br>* Included linearity, hysteresis and repeatability |
| psi                | ±2.9 psi                  |  |
| Kg/cm <sup>2</sup> | ±0.204 Kg/cm <sup>2</sup> |  |
| mm Hg              | ±150 mm Hg                |  |
| inch Hg            | ±5.905 inch Hg            |  |
| meter H2O          | ±2.04 meter H2O           |  |
| h PA               | ±200 h PA                 |  |
| K PA               | ±20 K PA                  |  |
| inch H2O           | ±80.2 inch H2O            |  |
| Atmosphere         | ±0.197 Atmosphere         |  |

Remark :

| Measuring unit     | Display unit |
|--------------------|--------------|
| psi                | Psi          |
| inch Hg            | in/Hg        |
| inch H2O           | inch H2O     |
| h PA               | h PA         |
| KPA                | - PA         |
| mbar               | - bar        |
| Kg/cm <sup>2</sup> | - g /cm2     |
| mm Hg              | - - /Hg      |
| meter H2O          | - H2O        |
| Atmosphere         | ATP          |

\* Appearance and specifications listed in this brochure are subject to change without notice.