

*SD card real time recorder*

# MANOMETER, 2000 mbar

Model : PM-9110SD

*ISO-9001, CE, IEC1010*



**Lutron**

**LUTRON ELECTRONIC**

*The Art of Measurement*



# SD Card real time data logger

## MANOMETER, 2,000 mbar

### Model : PM-9110SD

#### FEATURES

* Dual & differential input, 2000 mbar max. range.
* Applications : Industry, laboratory, heating, ventilation, medical hospital, used for air or non-corrosive and nonionized gas & liquid.
* Single lugs for pipe connection.
* 8 kind display units : mbar, psi, Kg/cm <sup>2</sup> , mm Hg, inch Hg, meter H <sub>2</sub> O, inch H <sub>2</sub> O, Atmosphere.
* Built-in Zero button on the front panel, easy to offset the zero value.
* Built-in Unit button on the front panel, easy to select.
* All in one, easy to make measurement.
* Microprocessor circuit assures maximum possible accuracy, provides special functions and features.
* Real time SD memory card Datalogger, built-in Clock and Calendar, sampling time can set from 1 sec to 8 hour 59 min. 59 sec.
* Manual datalogger is available, during execute the manual datalogger function, it can set the different 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, the 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.

#### GENERAL SPECIFICATIONS

Circuit	Custom one-chip of microprocessor LSI circuit.		
Display	LCD size : 52 mm x 38 mm LCD with green backlight ( ON/OFF ).		
Display units	mbar, psi, Kg/cm <sup>2</sup> , mm Hg, inch Hg, meter H2O, inch H2O, Atmosphere.		
Function	Dual & differential input, data hold, Zero, Unit, memory.		
Zero adjust	Push button on the front panel.		
Unit selecting	Built-in Unit button on the front panel.		
Sensor	* Sensor is built inside the housing. * Piezoelectric sensor. * Used for dry, non-corrosive and non-ionic air and gas only. * Liquid is prohibited.		
Datalogger Sampling Time Setting range	Auto	1 sec to 8 hour 59 min. 59 sec. <i>@ Sampling time can set to 1 second, but memory data may loss.</i>	
	Manual	Push the data logger button once will save data one time. <i>@ Set the sampling time to 0 second.</i> <i>@ Manual mode, can also select the 1 to 99 position ( Location ) no.</i>	
Memory Card	SD memory card. 1 GB to 16 GB.		
Data Hold	Freeze the display reading.		
Memory Recall	Maximum & Minimum value.		
Sampling Time of Display	Approx. 1 second.		

Advanced setting	* SD memory card Format * Set clock time ( Year/Month/Date, Hour/Minute/ Second ) * Set sampling time * Auto power OFF management * Set beep Sound ON/OFF * Decimal point of SD card setting * Unit setting.
Data Output	* 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 . ( 32 to 122 °F ).
Operating Humidity	Less than 80% R.H.
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	Normal operation ( w/o SD card save data and LCD Backlight is OFF ) : Approx. DC 14 mA.
	When SD card save the data and LCD Backlight is OFF ) : Approx. DC 37 mA. * If LCD backlight on, the power consumption will increase approx. 12 mA.
Weight	489 g/1.08 LB.
Dimension	177 x 68 x 45 mm (7.0 x 2.7 x 1.9 inch)
Accessories Included	Instruction manual.....1 PC
Optional Accessories	* Hard carrying case, CA-06. * Soft carrying case, CA-05A. * SD memory card ( 2 GB ). * AC to DC 9V adapter. * USB cable, USB-01. * RS232 cable, UPCB-02. * Data acquisition software, SW-U801-WIN. * Excel data acquisition software, SW-E802.

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

Unit	Max. range		Resolution	
m bar	2000	m bar	1	m bar
psi	29	psi	0.02	psi
Kg/cm <sup>2</sup>	2.040	Kg/cm <sup>2</sup>	0.001	Kg/cm <sup>2</sup>
mm/Hg	1500	mm/Hg	1	mm/Hg
inch/Hg	59.06	inch/Hg	0.05	inch/Hg
meter/H <sub>2</sub> O	20.40	meter/H <sub>2</sub> O	0.01	meter/H <sub>2</sub> O
inch/H <sub>2</sub> O	802	inch/H <sub>2</sub> O	0.5	inch/H <sub>2</sub> O
Atmosphere	1.974	Atmosphere	0.001	Atmosphere

Unit	Accuracy
m bar	± 2 % F. S. ( F.S. : full scale )  Note : Included linearity, hysteresis and repeatability
psi	
Kg/cm <sup>2</sup>	
mm/Hg	
inch/Hg	
meter/H <sub>2</sub> O	
inch/H <sub>2</sub> O	
Atmosphere	

PATENT	CHINA : ZL 2008 2 0189918.5 ZL 2008 2 0189917.0 Germany : Nr. 20 2008 016 337.4 JAPAN : 3151214	TAIWAN : M 358970 M 359043 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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