

SD Card real time data recorder, Patent

# VACUUM METER

Model : VC-9210SD

ISO-9001, CE, IEC1010

[www.yalab.com.tw](http://www.yalab.com.tw)

02-2389-0101



**Lutron**

[www.YaLAB.com.tw](http://www.YaLAB.com.tw)

*The Art of Measurement*

# VACUUM METER

Model : VC-9210SD

## FEATURE

- 1 Absolute vacuum & absolute pressure measurement.
- 2 Wide measure range from 1 to 1500 mbar.
- 3 Overload protection up to 2000 mbar max.
- 4 Separate probe, easy operation.
- 5 Application : Automobile, Industrial, laboratory, heating, ventilation, medical hospital.....
- 6 Heavy duty sensor used for air, oil gas, liquid.
- 7 7 kind display units ( torr, mm Hg, mbar, KPa, hPa, inch Hg, psi ) select by push button on the front panel.
- 8 Microprocessor circuit assures maximum possible accuracy, provides special functions and features,
- 9 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.
- 10 Manual datalogger is available, during execute the manual datalogger function, it can set the different location no. ( position 1 to position 99 ).
- 11 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.
- 12 SD card capacity : 1 GB to 16 GB.
- 13 LCD with green light backlight, easy reading.
- 14 It can default auto power off or manual power off.
- 15 Data hold, record max. and min. reading.
- 16 Microcomputer circuit, high accuracy.
- 17 Power by UM3/AA ( 1.5 V ) x 6 batteries or DC 9V adapter.
- 18 RS232/USB PC computer interface.

## GENERAL SPECIFICATION

Circuit	Custom one-chip of microprocessor LSI circuit.	
Display	LCD size : 52 mm x 38 mm LCD with green backlight ( ON/OFF ).	
Display units	7 kind display units : torr, mm Hg, mbar, KPa, hPa, inch Hg, psi.	
Zero adjust	Push button on the front panel.	
Span adjust	Push button gain adjustment, usage for calibration precisely if necessary.	
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>
Data error no.	0.1% of total saved data max.	
Memory Card	SD memory card. 1 GB to 16 GB.	
Data Hold	Freeze the display reading.	
Memory Recall	Maximum & Minimum value.	

Advanced setting	<ul style="list-style-type: none"> <li>* SD memory card Format</li> <li>* Set clock time ( Year/Month/Date, Hour/Minute/Second )</li> <li>* Set sampling time</li> <li>* Auto power OFF management</li> <li>* Set beep Sound ON/OFF</li> <li>* Decimal point of SD card setting</li> </ul>
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.
Operating Temperature	0 to 50 °C . ( 32 to 122 °F ).
Operating Humidity	Less than 80% R.H.
Power Supply	<ul style="list-style-type: none"> <li>* Alkaline or heavy duty DC 1.5 V battery ( UM3, AA ) x 6 PCs, or equivalent.</li> <li>* DC 9V adapter input. ( AC/DC power adapter is optional ).</li> </ul>
Power Current	Normal operation :Approx. DC 5 mA. ( w/o SD card save data and LCD Backlight is OFF) When SD card save the data and LCD Backlight is OFF) :Approx. DC 25 mA. * If LCD backlight on, the power consumption will increase approx. 12 mA.
Weight	350 g/0.77 LB.
Dimension	177 x 68 x 45 mm (7.0 x 2.7x 1.9 inch) * Meter only
Accessories Included	Instruction manual. 1 PC Vacuum sensor probe. 1 PC Hard carrying case, CA-06. 1 PC
Optional Accessories	Soft carrying case, CA-05A. SD memory card ( 1 GB ) SD memory card ( 2 GB ) AC to DC 9V adapter. USB cable, USB-01. RS232 cable, UPCB-02. Data Acquisition software, SW-U801-WIN.

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

Unit	Max. range	Resolution	Accuracy
mbar	1500 mbar	1 mbar	± 1 % F. S. ( 23±5 °C ) Note : Included linearity,hysteresis and repeatability F.S.: Full Scale
KPa	150.0 KPa	0.1 KPa	
hPa	1500 hPa	1 hPa	
torr	1125 torr	1 torr	
mm Hg	1125 mm Hg	1 mm Hg	
inch Hg	44.30 inch Hg	0.02 inch Hg	
psi	21.75 psi	0.01 psi	

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

1109-VC9210SD

#### VC-9210SD 真空壓力計記錄器

絕對真空和絕對壓力測量

關鍵名稱：

絕對真空壓力表

應用：汽車、工業、實驗室、供暖、通風、醫療醫院

1.真空壓力：1-1500mbar 過載保護：最高 2000mbar

絕對真空和絕對壓力測量

2.分離式測頭，操作簡易

3.泛用於負壓量測：空氣/氣體/水/液體/油等

4.七種單位切換：torr,mm Hg,mbar,KPa,hPa,inch Hg,psi

5.取樣時間：1 秒

6.精密度：±1%FS(23±5°C)

當真空度(絕對壓力)顯示為 750mmHg 時

負值的(相對壓力)將顯示為-10mmHg=-10 torr

絕對壓力 = 1 大氣壓力 + 相對壓力

絕對壓力：完全真空時 = 0；海平面上 = 760mmHg = 1 atm 大氣壓

真空度 = 相對壓力(負值) = 大氣壓力 - 絕對壓力

相對壓力/海平面上 = 0

**www.YaLAB.com.tw 02-2389-0101**