SD Card, real time data logger, Patent

PRESSURE METER

Model : PS-9303SD *ISO-9001, CE, IEC1010*

Pressure sensor
for PS-9303SD
Model : PS100-xxBAR

ISO 9001:2008 SGS
UKAS QUALITY MANAGEMENT
005

Lutron

LUTRON ELECTRONIC

The Art of Measurement

SD Card real time data logger

PRESSURE METER, full line

Model : PS-9303SD

FEATURES

* Meter can cooperate with 2, 5, 10, 20, 50, 100, 200, 400 Bar sensor, new calibration procedures are not necessary when change the new sensor .
* When change the new pressure sensor, just select pressure type (2, 5, 10, 20, 50, 100, 200, 400 bar) on the front panel button. The sensor type will memorize into the circuit permanently.
* 8 kind pressure units (Bar, Psi, Kg/cm^2, mm Hg, inch Hg, meter H20, inch H20, Atmosphere), unit select by push button on the front panel.
* Full line optional pressure sensors are available.
* Cooperate the external pressure sensor that its output signal is 100 mV for full scale.
* Zero button on the front panel, easy adjust the zero value of pressure sensor.
* Available push button gain adjustment, usage for calibration precisely if necessary.
* Separate pressure sensor, easy for remote 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.
* Wide applications : Measure pneumatic pressures, measure automobile engine pressures, pressure for super heat measurements, hydraulic servo controls, refrigeration, air conditioning, food processing.

GENERAL SPECIFICATIONS

Circuit 7	Custom one-chip of microprocessor LSI circuit.	
Display	LCD size : 52 mm x 38 mm LCD with green backlight (ON/OFF).	
Sensor type	Can cooperate with optional 2, 5, 10, 20, 50, 100, 200, 400 bar sensor, new calibration are not necessary when change the new sensor .	
Display units	Bar, Psi, Kg/cm^2, mm Hg, inch Hg, meter H20, inch H20, Atmosphere.	
Accuracy	± (0.5% + 1 d) ** Under the signal from the sensor is at full scale (100 mV).* ** Meter only.* ** Within 23± 5 ℃.*	
Pressure sensor	Cooperate the external pressure sensor that its output signal is 100 mV for full scale. ref. page 16	
Zero adjust	Push button on the front panel.	
Span adjust	Push button gain adjustment, usage for calibration precisely if necessary.	
Input signal from sensor	DC 100 mV for full Scale.	
Datalogger Sampling Time Setting range	Auto	1 sec to 8 hour 59 min. 59 sec. *@ Sampling time can set to 1 second, but memory data may loss.*
	Manual	Push the data logger button once will save data one time. *@ Set the sampling time to 0 second.* *@ Manual mode, can also select the 1 to 99 position (Location) no.*
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 * Set temperature unit to ℃ or ℉ * Set CD temperature compensation factor * Set CD to TDS or TDS to CD, CD only
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 ℃. (32 to 122 ℉).
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 2.7x 1.9 inch)
Accessories Included	Instruction manual..... 1 PC
Optional Accessories	Pressure sensor, PS100-xxBAR, * Refer to page
	Hard carrying case, CA-06. 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 ℃)

Sensor type	**2 bar**		**5 bar**		**10 bar**	
	Max. range	Reso-lution	Max. range	Reso-lution	Max. range	Reso-lution
bar	2	0.002	5	0.005	10	0.01
Psi	29	0.02	72.5	0.1	145	0.2
Kg/cm^2	2.040	0.002	5.095	0.005	10.19	0.01
mm Hg	1500	2	3750	5	7500	10
inch Hg	59.05	0.05	147.6	0.1	295.2	0.2
meter H20	20.40	0.02	50.95	0.05	101.9	0.1
inch H20	802	1	2006	2	4010	5
Atmosphere	1.974	0.002	4.935	0.005	9.87	0.01

Sensor type	**20 bar**		**50 bar**		**100 bar**	
	Max. range	Reso-lution	Max. range	Reso-lution	Max. range	Reso-lution
bar	20	0.02	50	0.05	100	0.1
Psi	290	0.2	725	1	1450	2
Kg/cm^2	20.40	0.02	50.95	0.05	101.9	0.1
mm Hg	15000	20	37500	50	75000	100
inch Hg	590.5	0.5	1476	1	2952	2
meter H20	204.0	0.2	509.5	0.5	1019	1
inch H20	8020	10	20050	20	40100	50
Atmosphere	19.74	0.02	49.35	0.05	98.7	0.1

Sensor type	**200 bar**		**400 bar**			
	Max. range	Reso-lution	Max. range	Reso-lution		
bar	200	0.2	400	0.5		
Psi	2900	2	5800	5		
Kg/cm^2	204.0	0.2	408.0	0.5		
mm Hg	150000	200	300000	500		
inch Hg	5905	5	11810	10		
meter H20	2040	2	4075	5		
inch H20	80200	100	160600	200		
Atmosphere	197.4	0.2	394.5	0.5		

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

* Appearance and specifications listed in this brochure are subject to change without notice. 0909-PS9303SD