+ Differential Manometer

SD Card real time data recorder

PITOT TUBE ANEMOMETER

Model : PAM-9212SD ***ISO-9001, CE, IEC1010***

Lutron

LUTRON ELECTRONIC

The Art of Measurement

+ Differential Manometer

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PITOT TUBE ANEMOMETER

Model : PAM-9212SD

FEATURES

* Pitot tube Anemometer measurements for Air Velocity .
* 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 plugs for pipe connection.
* Measurement units: Air vilocity : m/s, km/h, FPM, mph, knots Air pressure: 10 kind display units (mbar, Kg/cm^2 , mm Hg, meter H2O Atmosphere, psi, inch Hg, inch H2O, 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 for best viewing angle.
* No need 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 download the all the measured value with the time information (year/month/date/ hour/minute/second) to the Excel directly, thenuser 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 : 51 mm x 37 mm LCD with green backlight (ON/OFF).	
Display units	Air vilocity : m/s, km/h, FPM, mph, knots Air pressure: psi , inch Hg , inch H2O , h PA , kPA mbar, Kg/cm^2 , mm Hg , meter H2O , Atmosphere.	
Measurement Function	Air vilocity & Dual differential input, data hold, zero/relative, memory.	
Zero adjust	Push 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 Minute 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.*
Data error no.	≦ 0.1 % no. Of total saved data typically.	
Memory Card	SD memory card. 1 GB to 16 GB.	
Advanced setting	* 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 * SD memory card Format * Air density setting	
Data Hold	Freeze the display reading.	
Memory Recall	Maximum & Minimum value.	
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	Meter	0 to 50 ℃.
Operating Humidity	Less than 85% 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 7 mA.*	
	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. 10 mA.*	
Weight	265 g / 0.59 LB.	
Dimension	Meter	190 x 68 x 45 mm (7.5 x 2.7x 1.8 inch)
Accessories Included	* Instruction manual..... 1 PC. * PLug for quick coupler..... 2 PCs. * Pito tube 018..... 1 PC. * Silicon Soft tube 01(50 cm)..... 2 PCs.	
Optional Accessories	SD memory card (4 GB) AC to DC 9V adapter. USB cable, USB-01. RS232 cable, UPCB-02. Data Acquisition software,SW-U801-WIN.	

Electrical Specifications (23±5 ℃)

Air velocity

Measurement	Range	Resolution	Accuracy
m/s	4.1 to 100.0 m/s	0.1 m/s	±(3% + a) reading or ±(1% + a) full scale *Air density :1.200
Km/h	14.7 to 360.0 km/h	0.1 Km/h	
Mile/h (mph)	9.1 to 223.7 mph	0.1 mph	
Knot	7.9 to 194.3 knot	0.1 Knot	
Ft/min	81-19685 ft/min	1 Ft/min	

@ a = 0.1 m/s, 0.3 km/h, 0.2 mile/h, 0.2 knot, 20 ft/min

Note:

m/s - meters per second
ft/min - feet per minute
mile/h - miles per hour
km/h - kilometers per hour
knot - nautical miles per hour (international knot)

Manometer

Unit	*Max. range*		*Resolution*	
mbar	± 200	mbar	1	mbar
psi	± 2.9	psi	0	psi
Kg/cm^2	± 0.204	Kg/cm^2	0	Kg/cm^2
mm Hg	± 150	mm Hg	1	mm Hg
inch Hg	± 5.905	inch Hg	0	inch Hg
meter H2O	± 2.040	meter H2O	0	meter H2O
h PA	± 200	h PA	1	h PA
K PA	± 20	K PA	0	K PA
inch H2O	± 80.2	inch H2O	0	inch H2O
Atmosphere	± 0.197	Atmosphere	0.001	Atmosphere

Unit	*Max. range*		*Accuracy*
mbar	± 200	mbar	± 2 % F. S.
psi	± 2.9	psi	
Kg/cm^2	± 0.204	Kg/cm^2	*Note :*
mm Hg	± 150	mm Hg	* *23 ℃ ± 5 ℃ .*
inch Hg	± 5.905	inch Hg	* *F.S. : full scale*
meter H2O	± 2.040	meter H2O	* *Included linearity, hysteresis and repeatability*
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 H_2O	**In H2O**
h PA	**h PA**
KPA	**_ PA**
mbar	**- bAr**
Kg/cm^2	**_ g C2**
mm Hg	**- - Hg**
meter H_2O	**- t H2O**
Atmosphere	**AtP**