

SD Card, real time data logger, Patent, + ORP

pH METER

Model : PH-230SD

ISO-9001, CE, IEC1010



pH electrode
(optional)



LUTRON ELECTRONIC

The Art of Measurement

SD Card real time data logger

pH METER

Model : PH-230SD

FEATURES

* pH : 0 to 14.00 pH, mV (ORP) : \pm 1999 mV.
* pH measurement can select ATC or manual Temp. adj..
* Optional ATC probe for pH measurement.
* pH measurement can make the auto calibration for pH 7, pH 4 and pH 10 or other value.
* Real time SD memory card Datalogger, it Built-in Clock and Calendar, sampling time set from 1 sec to 8 hour 59 min. 59 sec.
* Manual datalogger is available (set the sampling time to 0), during execute the manual datalogger function, it can set the different position (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, 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.
* 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: water conditioning, aquariums, beverage, fish hatcheries, food processing, photography, laboratory, paper industry, plating industry, quality control, school & college, water conditioning.

GENERAL SPECIFICATIONS

Circuit	Custom one-chip of microprocessor LSI circuit.	
Display	LCD size : 52 mm x 38 mm LCD with green backlight (ON/OFF).	
Measurement Function	pH ORP (mV)	
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.	
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 $^{\circ}\text{C}$ or $^{\circ}\text{F}$ * Set pH manual Temp. compensation value	
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	0 to 50 $^{\circ}\text{C}$.
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 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	* PH electrode..... PE-03, PE-11, PE-06HDA, PE-03K7 * ATC Temp. probe.....TP-07 * pH 7 buffer solution.....PH-07 * pH 4 buffer solution.....PH-04 * ORP Electrode.....ORP-14 * 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 \pm 5 $^{\circ}\text{C}$)

pH Electrode	Optional, Any pH electrode with BNC connector.		
Measurement	pH	0 to 14 pH	
	mV	-1999 mV to 1999 mV	
Input Impedance	10 ¹² ohm		
Temperature Compensation for pH measurement	Manual	0 to 100 °C, be adjusted by push button on front panel.	
	Automatic (ATC)	With the optional temperature probe (TP-07) 0 to 65 °C.	
pH Calibration	pH7, pH4, and pH10, 3 points calibration ensure the best linearity and accuracy.		

Measurement	Range	Resolution	Accuracy
pH	0 to 14 pH	0.01 pH	±(0.02 pH + 2 d) * meter only ±((0.02 pH + 2 d) + 0.15pH) * meter + pH electrode
mV (ORP)	0 to 1999 mV	1 mV	±(0.5% + 2 d)
* pH accuracy is based on calibrated meter only.			

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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