

ATC, two displays, auto calibration

PH METER

Model : PH-221

ISO-9001, CE, IEC1010



pH electrode
(optional)

FEATURES

- * 0 to 14.00 pH, $\pm 1,999$ mV.
- * LCD show both pH and the temperature.
- * ATC or manual TEMP. compensation.
- * Auto calibration for pH 4 and pH 7.
- * Optional pH electrode and the ATC probe.
- * RS232 computer interface.
- * DC 9V battery (006P) or DC 9V adapter in.



LUTRON ELECTRONIC

The Art of Measurement

*pH/mV, manual Temp. adj. or ATC, auto calibration
1,600 point data logger, RS232, AC/DC adapter*

PH METER

Model : PH-221

FEATURES

* pH : 0 to 14.00 pH, mV : $\pm$ 1999 mV.
* mV function is used to accept the ORP electrode.
* BNC socket input, can accept most kind pH electrode.
* Separate pH electrode, easy for general purpose and remote measurement.
* pH measurement can select automatic temperature compensation (via. optional Temp. probe) or manual temperature adjustment.
* High input impedance for the pH function.
* Auto calibration for pH 7, pH 4 and pH 10 or other value.
* LCD with two display, easy readout.
* Manual and auto data logger, with flexible sampling time selection, can save max. 1,600 reading data.
* Can default auto power off or manual power off.
* Temperature unit can default to $^{\circ}\text{C}$ or $^{\circ}\text{F}$.
* Microcomputer circuit, intelligent function, high accuracy.
* Records Maximum and Minimum readings with recall.
* Data hold function for freezing the desired value.
* Build in the input socket for DC 9V power adapter.
* RS232 PC serial interface.
* Heavy duty & compact housing case.
* Available for wide applications, such as aquarium, beverage, fish hatcheries, food processing, photography, laboratory, quality control, school & colleges, swimming pools, water conditions.

GENERAL SPECIFICATIONS

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 $^{\circ}\text{C}$, be adjusted by push button on front panel.
	Automatic (ATC)	With the optional temperature probe (TP-07) 0 to 65 $^{\circ}\text{C}$.
pH Calibration	pH 7, pH 4, and pH 10, 3 points calibration ensure the best linearity and accuracy. * Other calibration point that near the pH 7, pH 4, and pH 10 are available.	
Circuit	Custom one-chip of microprocessor LSI circuit.	
Display	LCD size : 44 mm x 29 mm, dual function LCD display.	
Data Hold	Freeze the display reading.	

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

Sampling Time of Data Logger	Manual	Push the data logger button once will save data one time. * Set sampling time to 0 second.
	Auto	1, 2, 5, 10, 30, 60, 600, 1800, 3600 seconds.
Data Logger number	Max. 1,600-point Data logger	
Memory Recall	Maximum & Minimum value.	
Sampling Time of display	Approx. 1 second.	
Power off	Auto power shut off to save battery life or manual power off.	
Data Output	RS 232 PC serial interface.	
Operating Temperature	0 to 50 $^{\circ}\text{C}$.	
Operating Humidity	Less than 80% RH.	
Power Supply	006P DC 9V battery (Alkaline or Heavy duty type). DC 9V adapter input. * AC/DC power adapter is optional.	
Power Current	Approx. DC 6 mA.	
Weight	200 g/0.44 LB. * Include probe and battery.	
Dimension	135 x 60 x 33 mm.	
Accessories Included	Instruction manual..... 1 PC	
Optional probe and accessories	* pH electrode..... PE-03, PE-11, PE-01, PE-06HD PE-04HD, PE-05T, PE-03K7	
	* Temp. probe for ATC..... TP-07	
	* pH 7 buffer solution..... PH-07	
	* pH 4 buffer solution..... PH-04	
	* ORP electrode..... ORP-14	
	* RS232 cable.....UPCB-02.	
	* USB cable..... USB-01	
	* Data Acquisition software..... SW-U801-WIN.	
	* Data logger software.....SW-DL2005.	
	* Hard carrying case..... CA-06	
	* Soft Carrying case..... CA-05A	
	* AC to DC 9V adapter.	

ELECTRICAL SPECIFICATIONS (23 $\pm$ 5 $^{\circ}\text{C}$)

Measurement	Range	Resolution	Accuracy
pH	0 to 14 pH	0.01 pH	$\pm$ (0.02 pH + 2 d)
mV	0 to $\pm$ 1999 mV	1 mV	$\pm$ (0.5% + 2 d)
* pH accuracy is based on calibrated meter only.			
* Above specification tests under the environment RF Field Strength less than 3 V/M & frequency less than 30 MHz only.			

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