

Conductivity, TDS, Salt, Hardness, Resistivity
20 μ S/200 μ S/2 mS/20 mS/200 mS

WATER HARDNESS PURE WATER METER

Model : CD-4309

ISO-9001, CE, IEC1010



LUTRON ELECTRONIC

The Art of Measurement

Conductivity, TDS, Salt, Hardness, Resistivity
20uS, 200uS, 2mS, 20mS, 200mS

WATER HARDNESS/PURE WATER METER

Model : CD-4309

FEATURES

* One meter for multi purpose operation : Conductivity, TDS (Total dissolved solids), Salt , Hardness , Resistivity measurement.
* Conductivity : 20 uS/ 200 uS/2 mS/20 mS/200 mS.
* Salt : 0 to 12 % salt (% weight).
* Hardness : 0 to 100,000 ppm .
* Resistivity : 5 ohm to 99.99 M ohm .
* Conductivity measurement can select Temp. Coefficient of measurement solution.
* ATC for the conductivity measurement.
* Separate probe, easy for operation of different measurement environment.
* 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: 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	* Conductivity (uS, mS) * TDS (Total Dissolved Solids, PPM) * Salt (% Weight) * Temperature (°C, °F) * Hardness * Resistivity.	
Temperature Compensation	Automatic from 0 to 60 °C (32 - 140 °F), with temperature compensation factor variable between 0 to 5.0% per C.	
Probe Structure	Pt glass electrode for long life. High performance for the low conductivity (pure water) measurement.	
Advanced setting	* Set sampling time * Auto power OFF management * Set beep Sound ON/OFF * Set temperature unit to °C or °F * Set CD temperature compensation factor * Set probe CELL K 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	Meter	0 to 50 °C .
	Probe	0 to 60 °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	Approx. DC 6 mA. * If LCD backlight on, the power consumption will increase approx. 12 mA.	
Dimension	Meter	177 x 68 x 45 mm (7.0 x 2.7 x 1.9 inch)
	Probe	Round, 22 mm Dia. x 120 mm length.

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

Weight	489 g/1.08 LB.
Accessories Included	* Instruction manual.....1 PC * Conductivity/TDS/Salt pt glass probe, CDPB-04.....1 PC * Hard carrying case (CA-06).....1 PC
Optional Accessories	* 1.413 mS Conductivity Standard Solution, CD-14 * 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 °C)

Conductivity (uS, mS)

Range	Measurement	Resolution	Accuracy
20 uS	0 to 20.00 uS	0.01 uS	± (2% F.S.+1d)
200 uS	0 to 200.0 uS	0.1 uS	
2 mS	0.2 to 2.000 mS	0.001 mS	* F.S. : full scale
20 mS	2 to 20.00 mS	0.01 mS	
200 mS	20 to 200.0 mS	0.1 mS	

* Temperature Compensation :

Automatic from 0 to 60 °C (32 - 140 °F), with temperature compensation factor variable between 0 to 5.0% per C.

* The accuracy is specified under measurement value ≤ 100 mS.

* mS - milli Simens * @ 23± 5°C

TDS (Total Dissolved Solids)

Range	Measurement	Resolution	Accuracy
20 PPM	0 to 13.20 PPM	0.01 PPM	± (2% F.S.+1d)
200 PPM	0 to 132 PPM	0.1 PPM	
2,000 PPM	132 to 1,320 PPM	1 PPM	* F.S. - full scale
20,000 PPM	1,320 to 13,200 PPM	10 PPM	
200,000 PPM	13,200 to 132,000 PPM	100 PPM	

* Temperature Compensation :

Automatic from 0 to 60 °C (32 - 140 °F), with temperature compensation factor variable between 0 to 5.0% per °C .

* The accuracy is specified under measurement value ≤ 66,000 PPM.

* PPM - parts per millio * @ 23± 5°C

Temperature

Function	Measuring Range	Resolution	Accuracy
°C	0 °C to 60 °C	0.1 °C	± 0.8 °C
°F	32 °F to 140 °F	0.1 °F	± 1.5 °F
* @ 23± 5°C			

Salt

Measurement Range	0 to 12 % salt (% weight).
Resolution	0.01 % salt.
Accuracy	± 0.5 % salt value

Hardness

Range	Measurement	Resolution	Accuracy
10 PPM	0 to 10.00 PPM	0.01 PPM	± (2% F.S.+1d)
100 PPM	0 to 100 PPM	0.1 PPM	
1,000 PPM	100 to 1,000 PPM	1 PPM	* F.S. : full scale
10,000 PPM	1,000 to 10,000 PPM	10 PPM	
100,000 PPM	10,000 to 100,000 PPM	100 PPM	

Resistivity

Range	Measurement	Resolution	Accuracy
* automatic range	5 ohm-cm to 99.99 M ohm-cm	1 ohm-cm/ 0.01 M ohm-cm	± (2% F.S.+1d) * F.S. -full scale

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