

Conductivity, TDS, Salt, Hardness, Resistivity
SD card real time data recorder
20 μ S/200 μ S/2 mS/20 mS/200 mS

WATER HARDNESS/ PURE WATER METER

Model : CD-4319SD

ISO-9001, CE, IEC1010



LUTRON ELECTRONIC

The Art of Measurement

**Conductivity, TDS, Salt, Hardness, Resistivity
20uS, 200uS, 2mS, 20mS, 200mS
SD Card real time recorder**

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Model : CD-4319SD

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-cm to 99.99 M ohm-cm.
* Conductivity measurement can select Temp. Coefficient of measurement solution.
* ATC for the conductivity measurement.
* Separate probe, easy for operation of different measurement environment.
* Real time SD memory card Datalogger, built-in Clock and Calendar, sampling time can set from 1 sec to 3600 seconds
* 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, 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.
* 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	Automatic 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 * Resister	
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.	
Datalogger	Auto	1 sec to 3600 sec.
Sampling Time		@ Sampling time can set to 1 second, but memory data may loss.
Setting range	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	* 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 * 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, UPGB-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.	

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

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 6 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	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.	
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, UPGB-02. * Data Acquisition software,SW-U801-WIN., SW-E802.		

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) * F.S. : full scale
200 uS	0 to 200.0 uS	0.1 uS	
2 mS	0.2 to 2.000 mS	0.001 mS	
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) * F.S. - full scale
200 PPM	0 to 132 PPM	0.1 PPM	
2,000 PPM	132 to 1,320 PPM	1 PPM	
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

Temperature	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) * F.S. : full scale
100 PPM	0 to 100 PPM	0.1 PPM	
1,000 PPM	100 to 1,000 PPM	1 PPM	
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 to 0.01 M ohm	± (2% F.S.+1d) * F.S. -full scale

1609-CD4319SD