SD Card, real time data logger, Patent

SOUND LEVEL METER

Model : SL-4023SD *ISO-9001, CE, IEC1010*

Lutron

LUTRON ELECTRONIC

The Art of Measurement

SD Card real time data logger
SOUND LEVEL METER
Model : SL-4023SD

FEATURES

* Main functions are designed to meet IEC 61672 class 2.
* A & C weighting networks comply with standards.
* 0.5" standard microphone head.
* Time weighting (Fast & Slow) dynamic characteristic modes.
* Build External calibration VR.
* Auto range & Manual range selection.
* Available for external calibration adjustment.
* Condenser microphone for high accuracy & long-term stability.
* Memory function to store the Max. & Min. value.
* Hold and Peak Hold functions.
* Real time SD memory card Datalogger, it Built-in Clock and Calendar, real time data recorder, sampling time set from 1 second to 3600 seconds.
* Manual datalogger is available (set the sampling time to 0 second), 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.
* Heavy duty & compact housing case.

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 Range	30 - 130 dB.
Resolution	0.1 dB.
Function	dB (A & C frequency weighting), Time weighting (Fast, Slow), Peak hold, Data hold Record (Max., Min.).
Accuracy (23 ± 5 ℃)	Characteristics of " A " frequency weighting network meet IEC 61672 class 2. Under 94 dB input signal, the accuracy are : 31.5 Hz ± 3.5 dB 63 Hz ± 2.5 dB 125 Hz ± 2.0 dB 250 Hz ± 1.9 dB 500 Hz ± 1.9 dB 1 K Hz ± 1.4 dB 2 K Hz ± 2.6 dB 4 K Hz ± 3.6 dB 8 K Hz ± 5.6 dB *Remark :* *The above spec. are tested under the environment RF Field Strength less than 3 V/M & frequency less than 30 MHz only.*
Frequency Weighting Network	Characteristics of A & C. A weighting : The characteristic is simulated as "Human Ear Listing" response. Typical, if making the environmental sound level measurement, always select to A weighting. C weighting The characteristic is near the "FLAT" response. Typical, it is suitable for checking the noise of machinery (Q.C. check) & knowing the sound pressure level of the tested equipment.
Data hold	To freeze the measurement value.
Peak hold	To keep the peak (max.) measurement value.

Time weighting (Fast & Slow)	Fast - t= 200 ms * "Fast" range is simulated the human ear response time weighting. Slow - t = 500 ms * "Slow" range is easy to get the average values of vibration sound level.	
Range selector	*Auto range :* 30 to 130 dB.	
	Manual range : 3 range, 30 to 80 dB, 50 to 100 dB, 80 to 130 dB, 50 dB on each step, with over & under range indicating.	
Frequency	31.5 to 8,000 Hz.	
Microphone type	Electric condenser microphone.	
Microphone size	Out size, 12.7 mm DIA. (1/2 inch).	
Calibration VR	Build in external calibration VR, easy to calibrate on 94 dB level by screw driver. * Calibrated via external SOUND CALIBRATOR (SC-941, optional).	
Calibrator	B & K (Bruel & kjaer), MULTIFUCTION ACOUSTIC CALIBRATOR 4226.	
Datalogger Sampling Time Setting range	Auto	1 second to 3600 seconds *@ 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	* Set clock time (Year/Month/Date, Hour/Minute/ Second) * Decimal point of SD card setting * Auto power OFF management * Set beep Sound ON/OFF * Set sampling time * SD memory card Format	
Over Indication	Show " - - - - ".	
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.*	
Power off	Auto shut off saves battery life or manual off by push button.	
Operating Temperature	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 8.5 mA.*	
	When SD card save the data but and LCD Backlight is OFF) : *Approx. DC 30 mA.*	
	**. If LCD backlight on, the power consumption will increase approx. 14 mA.*	
Weight	489 g/1.08 LB.	
Dimension	245 x 68 x 45 mm. (9.6 x 2.7x 1.9 inch).	
Accessories Included	* Instruction manual.....1 PC	
Optional Accessories	* Sound calibrator (94 dB), SC-941. * Sound calibrator (94/114 dB), SC-942. * Sound wind shield ball, SB-01 * SD Card (1 GB) * SD Card (2 GB) * USB cable, USB-01. * RS232 cable, UPCB-02. * Data Acquisition software, SW-U801-WIN. * AC to DC 9V adapter. * Soft carrying case, CA-05A. * Hard carrying case, CA-06.	