SD card real time recorder
4 PINS

SOIL MOISTURE METER

Model :MS-7004SD   *ISO-9001, CE, IEC1010*

Laboratory Equipment Manufacturer
www.mrclab.com   CE   –IQNet®–

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FEATURES

*	Measurement ranges, 0 ~ 100 %. 0 ~ 60 ℃
*	Four PIN probe
*	High stability
*	High accuracy
*	Fast response.
*	Easy Installation.
*	Separate probe, easy for operation of different environment measurement .
*	Thermister temperature.
*	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), 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.

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 46 mA.*
	When SD card save the data but and Beep OFF LCD Backlight OFF) : *Approx. DC 65 mA.*
	* *If LCD backlight on, the power consumption will increase approx. 46 mA.*
Weight	604 g/1.33 LB.
Dimension	177 x 68 x 45 mm (7.0 x 2.7x 1.9 inch)
Standard Accessories Included	* Instruction manual.............................. 1 PC * SOIL TESTER sensor with protective cover... 1 PC * carrying case (CA-06)................................ 1 PC
Optional Accessories	SD Card AC to DC 9V adapter. USB cable, USB-01. RS232 cable, UPCB-02. Data Acquisition software,SW-U801-WIN. Hard carrying case, CA-06.

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	Soil moisture : 0 ~ 100 % Thermister temperature : 0 ~ 60 ℃ .	
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 G to 16 G.	
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 temperature unit to ℃ or °F * Set sampling time * SD memory card Format	
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.*	

Electrical Specifications (23±5 ℃)

Soil Moisture			

Measurement	**Range**	**Resolution**	Accuracy
Soil Moisture	0 ~ 100.0 %	0.1%	± (5 % F.S.+ 5d)

Thermister temprature			

Measurement	Range	Resolution	Accuracy
thermister temperation.	0 to 60.0 ℃	0.1 ℃	± (1.5% F.S.+ 5d)

* F.S. = Full Scale

@ *Above specification tests under the environment RF Field Strength less than 3 V/M & frequency less than 30 MHz only.*