# SD card real time recorder 4 PINS

## **SOIL MOISTURE METER**

Model: MS-7004SD

ISO-9001, CE, IEC1010





**LUTRON ELECTRONIC** 

The Art of Measurement

### **SOIL MOISTURE METER**

Model: MS-7004SD

#### **FEATURES**

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*	Measurement ranges, 0 ~ 100 %. 0 ~ 60 ℃
*	Four PIN probe (PIN length 78 mm)
*	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.

#### General Specifications

Circuit Custom one-chip of microprocessor LSI				
Circuit	Custom one-chip of microprocessor LSI			
Display	circuit.  LCD size : 52 mm x 38 mm			
Display	1			
Measurement	LCD with green backlight ( ON/OFF ).  Soil moisture: 0 ~ 100 %			
INICASUICITICITI				
Datalannan	Thermister temperature : 0 ~ 60 °C .  Auto 1 second to 3600 seconds			
Datalogger	Auto			
Sampling Time		@ Sampling time can set to 1 second,		
Setting range	ļ., .	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		time ( Year/Month/Date,		
setting	Hour/Minute/ Second )			
	* Decimal point of SD card setting			
	Auto power Or i management			
	* Set beep Sound ON/OFF			
	* Set temperature unit to °C or °F  * Set sampling time			
		•		
D		ory card Format		
Data Hold	Freeze the display reading.			
Memory Recall	Maximum & Minimum value.			
Sampling Time of Display	Approx. 1 second.			
Data Output	RS 232/US	B 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	0 to 50 °C.	Т			
Temperature					
Operating	Less than 85% R.H.				
Humidity					
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	Т			
	data and LCD Backlight is OFF) :				
	Approx. DC 46 mA.				
	When SD card save the data but and Beep OFF	Т			
	LCD Backlight OFF):				
	Approx. DC 65 mA.				
	* If LCD backlight on, the power				
	consumption will increase approx.				
	46 mA.				
Weight	640 g/1.33 LB.	Т			
Dimension	177 x 68 x 45 mm	_			
	(7.0 x 2.7x 1.9 inch)				
Standard	* Instruction manual	_			
Accessories	* SOIL TESTER sensor with protective				
Included	cover				
Optional	SD Card	_			
Accessories	AC to DC 9V adapter.				
	USB cable, USB-01.				
	RS232 cable, UPCB-02.				
	Data Acquisition software, SW-U801-WIN.				
	Hard carrying case, CA-07A.				

Electrical Specifications (23±5 °C)

#### Soil Moisture

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

#### Thermister temprature

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

<sup>\*</sup> F.S. = Full Scale

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