

*SD card real time recorder*

*High sensitivity, 50 MHz to 3.5 GHz*

# RF FIELD STRENGTH POWER METER

Model : EMF-831SD

*ISO-9001, CE, IEC1010*



**Lutron**

**LUTRON ELECTRONIC**

*The Art of Measurement*

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## RF FIELD STRENGTH POWER METER

### Model : EMF-831SD

#### FEATURES

* High radio frequency electromagnetic wave field strength measurement.
* Radio field strength power measurement : GSM, CDMA, TDMA, WiFi, WiMAX Bluetooth, security system, cordless phones, Zigbee....
* Microwave oven leakage detection.
* Frequency range : Wide band, 50 MHz to 3.5 GHz.
* Measuring unit : V/m, mA/m, mV/m, mW/m <sup>2</sup> , uA/m, uW/cm <sup>2</sup> , uW/m <sup>2</sup>
* 3 axis RF sensor.
* Backlight graphics dot matrix LCD with 4 function screens, digital and bar-graph display with warning symbol.
* 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.
* Beeper will sound for warning if measuring data are over the alert value.
* 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.
* 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.

Frequency response	± 1.0 dB ( 50 MHz to 1.9 GHz ) ± 2.4 dB ( 1.91 GHz to 3.5 GHz ) <i>@Taking into account typ. Cal. factor</i>	
Temperature response	± 0.5 dB <i>@ 0 to 50 °C</i>	
Datalogger Sampling Time Setting range	Auto	1 second to 3600 seconds <i>@ Sampling time can set to 1 second, but memory data may loss.</i>
	Manual	Push the data logger button once will save data one time. <i>@ Set the sampling time to 0 second. @ Manual mode, can also select the 1 to 99 position ( Location ) no.</i>
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 * Warning value setting. * Unit setting. * 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.	
Operating Temperature	0 to 50 °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	Normal operation ( w/o SD card save data and LCD Backlight is OFF ) : <i>Approx. DC 17 mA.</i> When SD card save the data but and LCD Backlight is OFF ) : <i>Approx. DC 40 mA.</i> <i>*.If LCD backlight on, the power consumption will increase approx. 4 mA</i>	
Weight	385 g/0.85 LB.	
Dimension	235 x 68 x 45 mm. (9.25 x 2.7 x 1.9 inch).	
Accessories Included	Instruction manual..... 1 PC	
Optional Accessories	SD Card ( 4 GB ) AC to DC 9V adapter. USB power to DC 9V converter, USBP-59 USB cable, USB-01. RS232 cable, UPCB-02. Data acquisition software, SW-U801-WIN. Excel data acquisition software, SW-E802. Hard carrying case, CA-06. Soft carrying case, CA-05A.	

#### GENERAL SPECIFICATIONS

Circuit	Custom one-chip of microprocessor LSI circuit.	
Display	LCD size : 52 mm x 38 mm LCD with backlight ( on/off ).	
Measurement Unit	V/m mA/m mV/m mW/m <sup>2</sup> uA/m uW/cm <sup>2</sup> uW/m <sup>2</sup>	
Frequency range	50 MHz to 3.5 GHz.	
Sensor axis no.	3 axis RF sensor.	
Unit/Range	<i>Unit</i>	<i>Range</i>
	mV/m, V/m	20 mV/m to 25.0 V/m
	uA/m, mA/m	53.0 u A/m to 66.31 mA/m
	uW/m <sup>2</sup> , mW/m <sup>2</sup>	1.0 uW/m <sup>2</sup> to 1657.8 mW/m <sup>2</sup>
	uW/cm <sup>2</sup>	0.001 uW/cm <sup>2</sup> to 165.78 uW/cm <sup>2</sup>
Unit/Resolution	<i>Unit</i>	<i>Resolution</i>
	mV/m, V/m	0.1 mV/m to 0.1 V/m
	uA/m, mA/m	0.1 uA/m to 0.01 mA/m
	uW/m <sup>2</sup> , mW/m <sup>2</sup>	0.1 uW/m <sup>2</sup> to 0.1 mW/m <sup>2</sup>
	uW/cm <sup>2</sup>	0.001 uW/cm <sup>2</sup> to 0.01 uW/cm <sup>2</sup>
Absolute error <i>@ 1 V/m, 100 MHz</i>	± 1.0 dB	

PATENT	CHINA : ZL 2008 2 0189918.5 ZL 2008 2 0189917.0 Germany : Nr. 20 2008 016 337.4 JAPAN : 3151214	TAIWAN : M 456490 U.S.A. : Pending
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\* Appearance and specifications listed in this brochure are subject to change without notice.