

-Key Features-

- Wideband Frequency Input
- High Dynamic Range
- Reliable and Accurate
- OLED Display
- Frequency CAL Buttons
- Industry Standard SCPI
- Compact and Easy to Use

PM9000L_{R1}

Portable USB Microwave RMS Power Meter



A Tiny Flexible Instrument

The PM9000L RF power sensor provides the user with a simple and reliable way to measure signal power with any modulation over a wide frequency range of 10MHz to 9GHz.

The dynamic range varies with frequency and is typically between 35dB at 9GHz and 60dB at 2GHz. Accuracy is typically +/- 1.0dB from 0dBm to -30dBm when the frequency calibration is valid. Frequency calibration can be easily set from the front panel or control software.

Front Panel and USB Interfaces

The PM9000L is perfect for automated test and validation setups. With the PM9000 connected to a host PC via its USB port, which is configured as a virtual COM port, industry standard SCPI text commands can control the instrument and retrieve measurement data.

The OLED display and interface buttons allow the user to control the unit in standalone mode with **NO HOST PC REQUIRED**. This makes a great portable or lab meter only requiring a standard USB port for power.

DS Instruments



www.dsinstruments.com

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Proper Usage and Warnings



Never exceed the maximum power of +20dBm on the meter INPUT port!

- Power measurements can be inaccurate if the device calibration factor is not set to the correct frequency.



Example power sources for the PM9000

- A high-quality USB cable connected to a USB hub.
- A USB cable plugged directly into a PC or laptop.
- A lithium-ion USB battery pack
- A USB smart phone charger

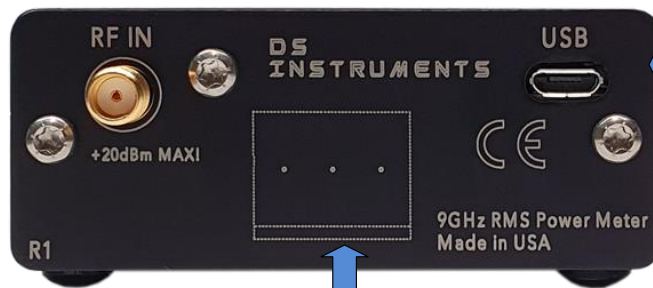
For more information or questions contact us:
Support@DSInstruments.com

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Front and Rear Panel Features



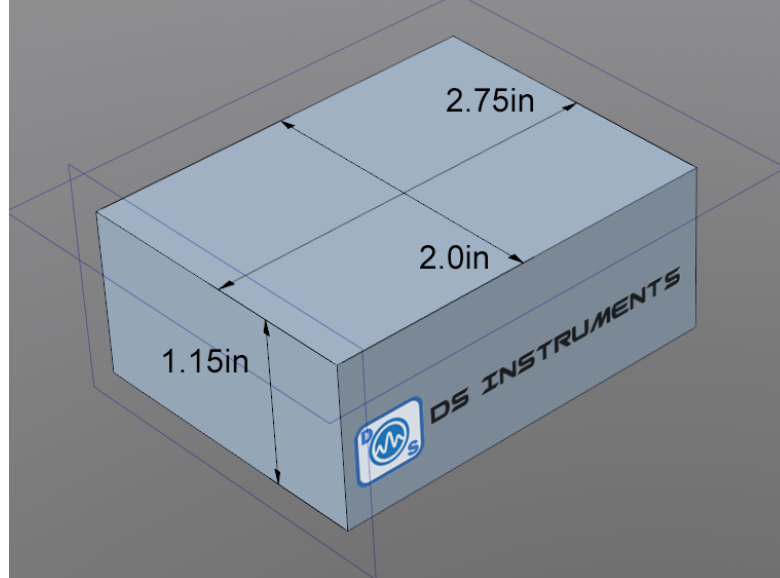
Control buttons to set the input frequency calibration factor



Micro USB – Data / Power

Optional Ethernet port

Ultra-Micro Case



RMS POWER METER SPECIFICATIONS

Parameter	Min	Max	Typ	Units
Input Frequency Range	10	9000		MHz
Dynamic Range (0.01 – 2.0GHz)	-54	+9		dBm
Dynamic Range (2.0 – 6.0GHz)	-45	+5		dBm
Dynamic Range (6.0 – 9.0GHz)	-30	+5		dBm
Max Power Input (Damage Level)			+20	dBm
Input Impedance			50	Ohm
SMA Input Return Loss	12		15	dB
Resolution			0.01	dB
Absolute Power Accuracy	±2.00		±0.75	dB
Relative Power Accuracy	±0.50		±0.25	dB
Temperature Stability			±0.20	dB
Power Meter Architecture			RMS	
Measurement Speed	25	500	100	mS
Averaging Range	1	50	10	
Input Voltage	4.5	5.4	5.0	VDC
Current requirement		450	175	mA
Temperature Range	-40	60	25	C

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Windows Control Software via USB or Ethernet

RF Power Meter / Frequency Counter - DS Instruments

Power / Frequency Meter
DS Instruments
V8.1
COM163
PM9000L - Firmware 1.05 5.01 V
[Help!](#)
Device Name: PM102x
Raw Command:

Power History (dBm)

Power Meter Control
Cal Frequency: 4000 MHz
Averaging: 10 Samples
Update Rate: 250 mS
Offset: 0.0 dB

-07.04 dBm
0.19770 mW

Disconnected! Disconnected! Ready Ready

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Serial Command List

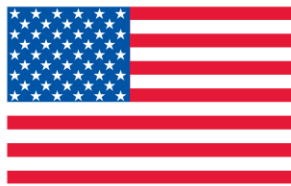
Command	Example 1	Example 2	Description
POWER:READ?			Returns the input power in dBm - measured RMS
*POWER:FCAL	*POWER:FCAL 5000	*POWER:FCAL 2333	Set the meter calibration to this frequency - MHz
*POWER:AVERAGE	*POWER:AVERAGE 1	*POWER:AVERAGE 50	Set the number of readings to average per result
*IDN?			Return the SCPI identification string
*RST			Reset unit now
*DISPLAY	*DISPLAY ON	*DISPLAY OFF	Force display to work in USB mode. Slows system.
*BUZZER	*BUZZER ON	*BUZZER OFF	Mute or un-mute the buzzer
SYST:ERR?			Returns last error message
SYST:DGB?			Returns last debug help message
*CLS			Clears any pending errors
*PING?			Identify a unit by flashing LED and sounding the buzzer
*SAVSTATE			Save current system mode and settings as boot defaults
*UNITNAME	*unitname Demo05		Save a nickname or device tag in flash memory
*UNITNAME?			Request the device tag/nickname
*SYSVOLTS?			Return the USB voltage level
LAN	LAN ON	LAN OFF	Turn off the ethernet system to save power
*DATE?			Return the calibration date string
*REV?			Return the hardware revision
<p>Command terminator: LINEFEED ("\n") COM Settings: 115200bps, 8bits, 1 stop, no parity, no flow control *NOTE: Leave a 5-25mS delay between sending multiple commands</p>			

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Ordering Information

PM9000 – (USB Only)	\$600.00
PM9000L – (USB + OLED + Buttons)	\$650.00
PM9000E – (USB + Ethernet)	\$750.00
PM9000LE – (USB + OLED + Buttons + Ethernet)	\$800.00

MADE IN



U. S. A.