

Smart Digital Power Meter **multicomp**PRO

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Introduction

The smart digital power meter is an economic and portable measuring instrument. It is a multi-functional measuring instrument which integrating voltage, current, power, power factor, frequency. The product is widely used in production, testing, evaluation and scientific research and multi-field.

Features

- VA broken code screen display, reading intuitive, it adopts high speed A/D transformer and 32-bit MCU operation.
- Multi-window simultaneous display of voltage, current, power, power factor/frequency.
- Voltage, current range can switch to auto range or manual range.
- Support AC, DC, AC+DC (T-RMS) mode.
- Average function can make the reading more stable and it suitable for measuring the load or power with large variations.
- Data upgrade period can be set. User can select a faster upgrade period according to the test needs, so as to improve the test efficiency.
- Communication interface supports RS-232 and RS-485. Communication protocol supports SCPI and Modbus for communicating with computer and PLC.
- It can freely set the upper and lower limit of current and power, the digital power meter will automatic judge whether the test value is exceed. Sound and light alarm indication, it is convenient for batch detection to improve the measurement efficiency.
- This is also supports set the voltage, apparent power and set and detect the upper and lower limit of power factor.)

Specifications

Display	VA broken code display, 5 digits, four windows
Display Update Rate	0.1S, 0.25S, 0.5S, 1S, 2S, 6S
Measuring Object	V,A,W,PF/Hz
Measuring Mode	AC/DC/AC+DC(T-RMS)
Measuring Range of Voltage	3V-600V
Voltage Range	75V/150V/300V/600V
Accuracy of Voltage (1%-100% of range)	DC $\pm(0.4\% \text{ reading} + 0.1\% \text{ range} + 1 \text{ character})$ 40Hz $\leq f \leq 66$ Hz: $\pm(0.4\% \text{ reading} + 0.1\% \text{ range} + 1 \text{ range} + 1 \text{ character})$ 66Hz $< f \leq 400$ Hz: $\pm(0.3\% \text{ reading} + 0.2\% \text{ range} + 1 \text{ character})$
Voltage Resolution	0.1V/0.1V
Measuring Range of Current	0.5mA-20A
Current Range	500mA/2A/8A/20A

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Accuracy of Current (1%-100% of range)	DC $\pm(0.4\% \text{ reading} + 0.1\% \text{ range} + 1 \text{ character})$ 40Hz $\leq f \leq 66$ Hz: $\pm(0.4\% \text{ reading} + 0.1\% \text{ range} + 1 \text{ range} + 1 \text{ character})$ 66Hz $< f \leq 400$ Hz: $\pm(0.3\% \text{ reading} + 0.2\% \text{ range} + 1 \text{ character})$	
Current Resolution	0.1mA/1mA	
Switching Range	Auto/Manual	
Power Range	1W-12kW	
Accuracy of Power (PF1)	DC $\pm(0.4\% \text{ reading} + 0.1\% \text{ range} + 1 \text{ character})$ 40Hz $\leq f \leq 66$ Hz: $\pm(0.4\% \text{ reading} + 0.1\% \text{ range} + 1 \text{ range} + 1 \text{ character})$ 66Hz $< f \leq 400$ Hz: $\pm(0.3\% \text{ reading} + 0.2\% \text{ range} + 1 \text{ character})$	
Power Resolution	0.001W/0.01W/0.1W/1W	
Power Factor Range	-1.000~1.000	
Accuracy of Power Factor	$\pm(0.004 + 0.001^* \text{ reading} + 1 \text{ character})$	
Frequency Range	DC, 40Hz-400Hz (voltage $>10\%$ of range)	
Accuracy of Frequency	$\pm(0.1\% \text{ reading} + 1 \text{ Character})$	
Auto Range	Voltage Range Increasing	Urms exceeds the measuring range about 110% (CF <2)
	Voltage Range Decreasing	Urms is less than the lower part range about 80% (CF <2)
	Current Range Increasing	Irms exceeds the measuring range about 110% (CF <2)
	Current Range Decreasing	Irms is less than the lower part range about 60% (CF <2)
Pre-heating Time	>30 min	
Current Peak	The maximum display 24A	
Maximum of Allowed Input for Continuous	Voltage 700V, Current 24A	
Maximum of Allowed input for Instant	1000V. 40A (1 min)	
Input Impedance	Voltage about 2 M Ω , Current is less than 0.02 Ω	
Upper/Lower Limit	Four settings for the upper/lower limit of power and current	
	P Hi (Power high) P Lo(Power low) A Hi (Current high) A Lo (Current low)	
Average Function	√	
Harmonic Analysis	-	
Peak Measurement	-	
Display Hold	√	
Mute Alarm	√	
Mute Key	-	
Lock Key	√	
Interface	RS232 (DB9 2-pin: TX, 3-pin: RX, 5-pin: GND)	
	RS485 (DB9; 8-pin: A. 9-pin: B)	

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Baud Rate	4800, 9600, 19.2K, 38.4K, 57.6K, 115.2K, default 9600, It follows communication protocol of standard SCPI and Modbus RTU.
Power Source	Input power: AC 100V-240V Frequency 50/60Hz
Precision Environment	18°C~28°C, 30%~75%RH (28°C < operating temperature < 18°C (when in 18°C, it needs to add temperature coefficient), reading of 0.05%C)
Storage Temperature	-10°C-50°C, non-condensing below 80% RH
Operating Altitude	≤2000 meters

General Characteristic

Colour	Grey
Weight	3.3kg
Size	214mm×80mm×340mm
Standard Accessories	Specialized power cable ×1; RS232 serial port line ×1

Part Number Table

Description	Part Number
Smart Digital Power Meter, 600V, 20A, EU/UK	MP701125

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