

*Watt, VA, Power factor, ACV, ACA, DCV, DCA,
VAr, Whr, ohms, true rms for Watt, ACV, ACA
0.1 Watt resolution for low power measurement*

POWER ANALYZER

Model : DW-6090A

ISO-9001, CE, IEC1010



LUTRON ELECTRONIC

The Art of Measurement

Bench type

POWER ANALYZER

Model : DW-6090A

FEATURES

* Multi-functions : WATT, VA, Whr, PF (Power factor), ACV, ACA, DCV, DCA, Hz, ohm.
* True AC power(Watt) & apparent power (VA) measurement.
* True rms display for ACV, ACA.
* 0.1 W resolution (< 1000 W), high precision and high resolution in the low watt range, good performance , for low power LED lamp watt measurement.
* Supper large LCD, easy to read-out, display the Watt, Power factor, Voltage & Current value at the same time.
* Accept different kinds current input signal as direct input, inductive clamp probe or CT (current transformer).
* Auto range.
* Built-in peak hold & data hold function.
* Watt & VA measurement with HI, low alarm setting capability.
* RS-232 output interface.
* Exclusive custo high accuracy, reliability and durability.
* Built-in over input indication.
* Power supply by batteries or AC to DC adapter.
* Built-in low battery indicator .
* Durable bench type housing plastic case with carrying handle.

GENERAL SPECIFICATIONS

Display	* 93 mm x 52 mm large LCD (Liquid Crystal Display) display. * Multi-display unit, show Volt, Ampere, Watt, Power factor or Hz at same time.
Measurement	WATT, VA, Whr., Power factor, ACV, ACA, DCV, DCA, Hz, ohm.
Zero Adjustment	Watt : Watt : External adjustment by push button. DCV, ACV, DCA, ACA : Automatic adjustment.
Polarity	Automatic switching, "-" indicates reverse polarity.
Current input mode	Direct input, inductive clamp probe or CT.
Over input Indication	Indication of " - - - - " or " - - - - ".
Data Output	RS232 serial interface.
Sampling Time	W, VA, ACA, ACV, PF, Hz : Approx. 1.5 Sec. DCV, DCA, OHM : Approx. 1 Sec.
Operating Temp.	0 to 50 °C (32 to 122 °F).
Operating Humidity	Less than 80 % R.H..
Power Supply	Battery power : DC 9V, 1.5 V AA (UM-3) battery x 6 PCs. AC power : AC to DC 9V adapter (500 mA), optional.
Power Consumption	Battery power : Approx. DC 55 mA
Dimension	280 x 210 x 90 mm (11.0 x 8.3 x 3.5 inch).
Weight	Approx. 1.6 Kg (3.52 LB).
Standard Accessories	Test lead (red & black)..... 1 pair. Instruction Manual..... 1 PC.
Optional Accessories	* USB cable, USB-01. * RS232 cable, UPCB-02. * Data acquisition software, SW-U801-WIN. * Excel data acquisition software, SW-E802 .

OHMS

Range	Resolution	Accuracy
9.999 ohm	1 ohm	± (1 % + 1 d)
19.99 K ohm	10 ohm	

* Auto range.

* Overload protection " Max. AC/DC 300 V.

* Appearance and specifications listed in this brochure are subject to change without notice.

ELECTRICAL SPECIFICATIONS (23± 5°C)

Watt (AC, true power), current mode from direct input		
Range	Resolution	Accuracy
6,000 Watt	0.1 W (< 1000W) 1 W (≥ 1000W)	± (1.5% + 5 d)

* Accuracy are specified under the following conditions :

- AC input current is ≥ 0.05 ACA and ≤ 10 ACA.
- AC input voltage is within $110 V \pm 15\%$ and $220V \pm 15\%$.
- ACA, ACV input signal is sine wave, 50/60 Hz.
- Power factor : ≥ 0.5 .

* ACA, ACV frequency response is from 40 to 400 Hz.
* Max. volt & current input signal value :
Volt input : Max. AC 600V, Current input : Max. AC 10 A

Watt (AC, true power), current input cooperate with inductive probe or CT	
Range	Resolution
0.1 to 999.9 Watt	0.1 Watt
9.999 Watt	1 Watt
99.99 KW	0.01 KW
999.9 KW	0.1 kW

* Accuracy will be same as the above " Direct Current Input Mode " but plus the accuracy value of Current Transformer (CT) or the accuracy value of Inductive Current Probe.
* Input current should obey :
Inductive Probe : ≥ 20 ACA.
CT 100/5 A : ≥ 8 ACA.
CT 1000/5 A : ≥ 80 ACA.

VA (AC, Apparent Power) current mode from direct input		
Range	Resolution	Accuracy
99.99 VA	0.01 VA	± (2 % + 2d)
999.9 VA	0.1 VA	
9,999 VA	1 VA	

* Accuracy are specified under the following conditions :

- AC input current is ≥ 0.05 ACA and ≤ 10 ACA.
- AC input voltage is within $110 V \pm 15\%$ and $220V \pm 15\%$.
- ACA, ACV input signal is sine wave, 50/60 Hz.

* ACA, ACV frequency response is from 40 to 400 Hz.

POWER FACTOR current mode from direct input only		
Range	Resolution	Accuracy
0.01 to 1.00	0.01	± (1.5% + 2 d)

* Accuracy are specified under the following conditions :

- AC input current is ≥ 0.05 ACA and ≤ 10 ACA.
- AC input voltage is within $110 V \pm 15\%$ and $220V \pm 15\%$.
- ACA, ACV input signal is sine wave, 50/60 Hz.

* Max. volt & current input value :
Volt input : AC 600V, Current input : AC 10A

Hz		
Range	Resolution	Accuracy
10.0 Hz to 99.9 Hz.	0.1 Hz	± (1 % + 1 d)
100 Hz to 999 Hz.	1 Hz	

* Auto range.
* Frequency signal input voltage level should $> 6V$ & $\leq 600 V$.

AC VOLTAGE (true rms), DC VOLTAGE		
Range	Resolution	Accuracy
0.1 V to 299.9 V	0.1 V	DCV : ± (1 % + 1d)
300 V to 600 V	1 V	ACV (< 10 V) : ± (1 % + 7d) ACV (10 V to 100 V) : ± (1 % + 5d) ACV (Others) : ± (1 % + 1d)

* Auto range.
* Max. input voltage : AC 600 V, DC 600 V.
* ACV accuracy is test under input signal is sine wave, 50/60 Hz.
* ACV frequency response is from 40 to 400 Hz.
* ACV is true rms.

AC CURRENT (true rms), DC CURRENT current mode from direct input			
Range	Resolution	Accuracy	
ACA	0.05 A to 1.999 A	1 mA	± (1%+3d)
	2.00 A to 10.00 A	10 mA	
DCA	0.01 A to 10.00 A	10 mA	± (1%+1d)

* Max. input current : AC 10 A, DC 10 A.
* ACA accuracy is test under input signal is sine wave, 50/60 Hz.
* ACA frequency response is from 40 to 400 Hz.
* ACA is true rms.

AC CURRENT (true rms), DC CURRENT current mode from inductive probe		
Range	Resolution	
ACA	< 2 A	0.01 A
	2 A to 1000 A	0.1 A
	> 1000 A	1 A
DCA	1000 A	1 A

* Accuracy : Meter voltage range accuracy plus Inductive Probe's accuracy.
* ACA is true rms.

AC CURRENT current mode from CT (current transformer)	
Range	Resolution
CT 100/5A, 0.1 - 200.0 A	0.01 A, < 20 A 0.1 A, ≥ 20 A
CT 1000/5A, 1 - 2000 A	0.1 A, < 200 A 1 A, ≥ 200 A

* Accuracy : Meter current range accuracy plus CT (current transformer) accuracy.
* ACA is true rms.

Watt Hour current from direct input	
Range	Resolution
0.001 Whr to 9.999 Whr	0.001 Whr
10.00 Whr to 99.99 Whr	0.01 Whr
100.0 Whr to 999.9 Whr	0.1 Whr
1000 Whr to 9999 Whr	1 Whr
10 K Whr to 99.99 K Whr	10 Whr
100 K Whr to 999.9 K Whr	100 Whr
1000 K Whr to 9999 K Whr	1 K Whr

* When Watt Hour value over 9999 K Whr, the Display value will reset to 0000 K Whr, then count up again.
* Accuracy & other specification requirement same as " Watt " range exactly up again.