

**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

**FGJ-NDT.IR  
DIGINDT.IR**



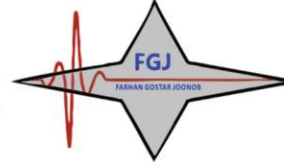
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**Lutron**

LUTRON ELECTRONIC

**The Art of Measurement**



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 custom exclusive design LSI circuit, provides 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 50 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	Test lead ( red & black )..... 1 pair.
Accessories	Instruction Manual..... 1 PC.

**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 30V.

\* 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 )	± ( 1.5% + 5 d )
	1 W ( ≥ 1000W )	

\* Accuracy are specified under the following conditions :  
a) AC input current is 0.01 ACA & 10 ACA.  
b) AC input voltage is within 110 V ± 15 % and 220V ± 15%.  
c) ACA, ACV input signal is sine wave, 50/60 Hz.  
d) 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 accuray 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 :  
a) AC input current is 0.4 ACA & 10 ACA.  
b) AC input voltage is within 110 V 15 % and 220V 15%.  
c) 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 :  
a) AC input current is 0.01 ACA & 10 ACA.  
b) AC input voltage is within 110 V 15 % and 220V 15%.  
c) 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 & 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 ( 1( 10 V ) : ± ( 1 % + 7d ) ACV ( 1( 11 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, < 20 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

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