

# POWER ANALYZER

Model : DW-6090

ISO-9001, CE, IEC1010

[www.yalab.com.tw](http://www.yalab.com.tw) 02-2389-0101



- ✓ 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,
- ✓ Supper large LCD, display the Watt, Power factor, Voltage & Current value at the same time.
- ✓ Accept inductive clamp or CT input.
- ✓ Peak hold & data hold function.
- ✓ Hi, Low alarm setting, RS-232/USB



[www.YaLAB.com.tw](http://www.YaLAB.com.tw)

*The Art of Measurement*

# Bench type POWER ANALYZER

Model : DW-6090

[www.YaLAB.com.tw](http://www.YaLAB.com.tw) 02-2389-0101

## FEATURE

- \* 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.
- \* 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 SPECIFICATION

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	<i>Watt</i> : Watt : External adjustment by push button. <i>DCV, ACV, DCA, ACA</i> : 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	<i>W, VA, ACA, ACV, PF, Hz</i> : Approx. 1.5 Sec. <i>DCV, DCA, OHM</i> : Approx. 1 Sec.
Operating Temp.	0 to 50 °C ( 32 to 122 °F ).
Operating Humidity	Less than 80 % R.H..
Power Supply	<i>Battery power</i> : DC 9V, 1.5 V AA (UM-3) battery x 6 PCs. <i>AC power</i> : AC to DC 9V adapter ( 500 mA ), optional.
Power Consumption	<i>Battery power</i> : Approx. DC 30 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.

## ELECTRICAL SPECIFICATIONS (23±5 °C)

OHMS		
Range	Resolution	Accuracy
9,999 ohm	1 ohm	± ( 1 % + 1d )
19.99 K ohm	10 ohm	
*Auto range.		*Overload protection " Max. AC/DC 300 V.

<b>Watt (AC, true power), current mode from direct input</b>		
Range	Resolution	Accuracy
0.1 to 99.9 Watt	0.1 Watt	$\pm ( 1.5\% + 5 \text{ d} )$
100 to 6,000 Watt	1 Watt	
* 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 $\pm$ 15 % and 220V $\pm$ 15%.		
c) ACA, ACV input signal is sine wave, 50/60 Hz.		
d) Power factor 0.8.		
* 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		

<b>Watt (AC, true power), current input cooperate with inductive probe or CT</b>		
Range	Resolution	
9,999 Watt	1 Watt	
99.99 KW	0.01 KW	
999.9 KW	0.1 kW	
* Accuracy will be same as the abve " Direct Current Input Mode " but plus the accuray value of Current Transformer ( CT ) or the acccuracy 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.		

<b>VA ( AC, Apparent Power ) current mode from direct input</b>		
Range	Resolution	Accuracy
99.99 VA	0.01 VA	$\pm ( 2 \% + 2 \text{ d} )$
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.		

<b>POWER FACTOR current mode from direct input only</b>		
Range	Resolution	Accuracy
0.01 to 1.00	0.01	$\pm ( 1.5\% + 2 \text{ d} )$
* 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.		
* Max. volt & current input value : Volt input : AC 600V, Current input : AC 10A		

<b>Hz</b>		
Range	Resolution	Accuracy
10.0 Hz to 99.9 Hz.	0.1 Hz	$\pm ( 1 \% + 1 \text{ d} )$
100 Hz to 999 Hz.	1 Hz	
* Auto range.		
* Frequency signal input voltage level should > 6V & 600 V.		

<b>AC VOLTAGE ( true rms ), DC VOLTAGE</b>		
Range	Resolution	Accuracy
0.1 V to 299.9 V	0.1 V	<b>DCV : <math>\pm ( 1 \% + 1 \text{ d} )</math></b>

300 V to 600 V	1 V	<b>ACV ( 10 V ) : <math>\pm ( 1 \% + 7d )</math></b> <b>ACV ( 11 V to 100 V ) : <math>\pm ( 1 \% + 5d )</math></b> <b>ACV ( Others ) : <math>\pm ( 1 \% + 1d )</math></b>
<ul style="list-style-type: none"> <li>* Auto range.</li> <li>* Max. input voltage : AC 600 V, DC 600 V.</li> <li>* ACV accuracy is test under input signal is sine wave, 50/60 Hz.</li> <li>* ACV frequency response is from 40 to 400 Hz.</li> <li>* ACV is true rms.</li> </ul>		

<b>AC CURRENT ( true rms ), DC CURRENT current mode from direct input</b>		
Range	Resolution	Accuracy
0.01 A to 10.00 A	10 mA	<b>ACA : <math>\pm ( 1\%+3d )</math></b> <b>DCA : <math>\pm ( 1\%+1d )</math></b>
<ul style="list-style-type: none"> <li>* Max. input current : AC 10 A, DC 10 A.</li> <li>* ACA accuracy is test under input signal is sine wave, 50/60 Hz.</li> <li>* ACA frequency response is from 40 to 400 Hz.</li> <li>* ACA is true rms.</li> </ul>		

<b>AC CURRENT ( true rms ), DC CURRENT current mode from inductive probe</b>		
Range	Resolution	
1000 A	1 A	
<ul style="list-style-type: none"> <li>* Accuracy : Meter voltage range accuracy plus Inductive Probe's accuracy.</li> <li>* ACA is true rms.</li> </ul>		

<b>AC CURRENT current mode from CT ( current transformer )</b>		
Range	Resolution	
CT 100/5A, 0.1 - 200.0 A	0.1 A	
CT 1000/5A, 1 - 2000 A	1 A	
<ul style="list-style-type: none"> <li>* Accuracy : Meter current range accuracy plus CT ( current transformer ) accuracy.</li> <li>* ACA is true rms.</li> </ul>		

<b>Watt Hour current from direct input</b>		
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	
<ul style="list-style-type: none"> <li>* When Watt Hour value over 9999 K Whr, the Display value will reset to 0000 K Whr, then count up again.</li> <li>* Accuracy &amp; other specification requirement same as " Watt " range exactly</li> </ul>		

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

DW-6090A+1904

[www.YaLAB.com.tw](http://www.YaLAB.com.tw)    02-2389-0101