



Home Appliance Electricity Meter

This product is designed in compliance with international standard IEC1036 (1996-09) and ANSI C12.16 standard – *Alternating Current Watt-Hour Meters for Active Energy, (Classes 1 and 2)*. The instrument does not need any specific installation or adjustments.

Applications

- Energy monitoring and cost calculation
- Self - control of household electricity expenses
- Individual electricity cost assessment
- Home appliance efficiency evaluation
- Grid feeder monitor for solar or wind power generators
- Efficiency monitor for human-generated energy equipment
- Marketing tool in the sales of energy efficient appliances

Valuable features

- **Automatic energy cost calculation by adjustable \$/kWhr constant**
 - Three buttons on the front panel allow the User to adjust electricity cost constant, which is then used by the instrument to calculate electricity cost. The display will toggle between kWhrs and \$, when the cost constant is set to a non-zero.
- **Nonvolatile memory for storage of energy reading and \$/kWhr constant**
 - Build-in EEPROM holds all data safe : constants, cost calculation and energy reading. No power outages would erase that data.
- **Bright red numerical LED display with large ½” digits**
 - The display can be seen with excellent quality under any ambient light conditions and especially at dark places, like the ones behind refrigerators and stoves. This type of display does not require ambient light to be seen and its viewing quality does not dependent on the viewing angle, which is a common problem with LCD type displays.
- **High display resolution - 0.001kWhr from 0 to 9.999 kWhrs**
 - Watt-X display resolution allows for immediate response to changes in load conditions. Thus the energy reading could be observed in nearly real time speed and the User will not have to wait hours before anything on the display changes. The high resolution mode is effective from 0 to 9.999 kWhrs , then it changes to 0.1 standard resolution.

- **Load intensity indication**
 - Load intensity is indicated by a flashing LED. As the electricity load turns larger the LED flashing frequency increases. This feature works independently from energy reading updates, so intensity pulses can be seen even before the display changes at all.
- **Field calibration**
 - The instrument does not require calibration and will perform according to the class standards without any need of additional adjustments. However if better accuracy is expected the instrument could be easily calibrated at steady load conditions.
- **Bi-directional energy detection**
 - This feature is a hardware option. The electricity meter with reverse detection measures generated energy only. The energy direction sensitivity is fixed in hardware and not User selectable feature.
- **Quality design and manufacturing**
 - Watt-X is proudly manufactured in U.S.A. with high quality parts and materials

Electrical specifications

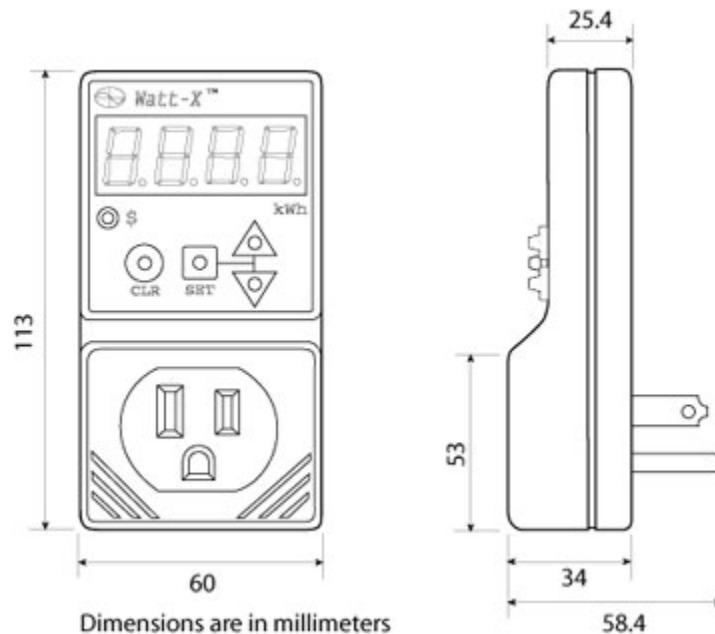
Parameter	Value																			
Basic current, I _b	2.5 A																			
Maximum current, I _{max}	20 A																			
Accuracy *	<table border="1"> <thead> <tr> <th>Load</th> <th>PF</th> <th>Error Limits</th> </tr> </thead> <tbody> <tr> <td>0.05 I_b ≤ 1 < 0.1I_b</td> <td>1</td> <td>±1.5%</td> </tr> <tr> <td>0.1 I_b ≤ 1 < I_{max}</td> <td>1</td> <td>±1.0%</td> </tr> <tr> <td rowspan="2">0.1 I_b ≤ 1 < 0.2I_b</td> <td>0.5 lag</td> <td>±1.5%</td> </tr> <tr> <td>0.8 lead</td> <td>±1.5%</td> </tr> <tr> <td rowspan="2">0.2 I_b ≤ 1 < I_{max}</td> <td>0.5 lag</td> <td>±1.0%</td> </tr> <tr> <td>0.5 lead</td> <td>±1.0%</td> </tr> </tbody> </table>	Load	PF	Error Limits	0.05 I _b ≤ 1 < 0.1I _b	1	±1.5%	0.1 I _b ≤ 1 < I _{max}	1	±1.0%	0.1 I _b ≤ 1 < 0.2I _b	0.5 lag	±1.5%	0.8 lead	±1.5%	0.2 I _b ≤ 1 < I _{max}	0.5 lag	±1.0%	0.5 lead	±1.0%
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Maximum voltage, U _{max}	120V AC ± 10%																			
Line Frequency, F _l	60 Hz																			
Power loss	< 2W																			

* Watt-X utilizes state of the art technology. It measures real energy by sampling instantaneous power signals from the load and applying subsequent digital filtering to derive real power information. This method works accurately at all power factors (PF)

Functional and mechanical specifications

Parameter	Value
Display resolution	0.001 from 0 to 9.999 kWhrs 0.1 from 10 to 999.9 kWhrs
Display update rate	3 sec
Calibration integration time	1.26 min
Reading saving rate in EEPROM	Every 0.1 or 0.01 kWhr change
Power down mode	10 sec of no load and no activity
Body	ABS plastic
Socket type	NEMA 5-15P, typical for US and Canada
Weight	5 Oz
Fasteners	6 screws

Dimensions



Additional information is available online at <http://www.vikrones.com/WattX.htm>

UL certification is in process at the time of this writing

For contact please write to sales@vikrones.com or call + 619 749 – 5846 , 8-5 PST