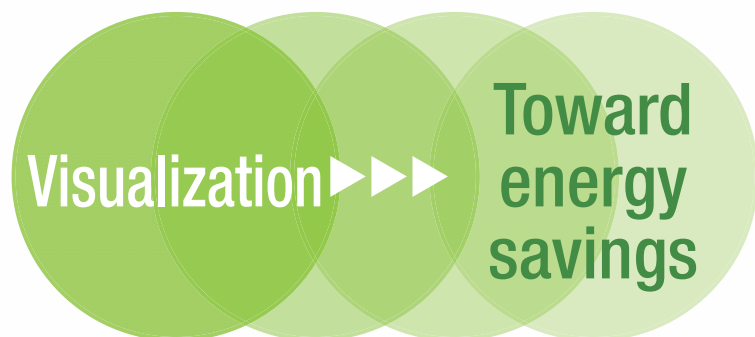


# KW8M

## Eco-POWER METER

1A/5A CT Input type



Makes us more ecological!



KW8M Eco- POWER METER  
(1A/5A CT Input type)  
AKW8115  
Available from: May 2010

### Direct input of secondary side 1A/5A CT

Direct input from "secondary side 1A/5A" type domestic and overseas CTs. Dedicated CTs are no longer needed, which lowers the cost of implementation.

### High current circuit measurement

Even for high currents that exceed 400 A on the primary side, a wide range of currents up to 4,000 A can be measured using a CT with secondary side current 1A/5A.

### 400 V and Three-phase four-wire system

With 400 VAC Transformer-less input possible, it is compatible with three-phase, four-wire systems. Direct connection is possible to the dynamic power systems of large-scale factories and buildings.

### Pulse measurement and Networking

Carried on from the standard KW8M specifications, features such as simultaneous pulse measurement, networking and the notification function are provided.



# KW8M Eco-POWER METER 1A/5A CT Input type

## Main unit

Phase and wire system	Operating power supply	Measured voltage input	Measured current input	Terminal type	Model No.
Single-phase two-wire system	100 to 240 V AC, 50/60 Hz	<ul style="list-style-type: none"> <li>• 400 V AC</li> <li>• 100/200 V AC</li> </ul>	Max. 4,000 A (Secondary side of CT: 1A or 5A)	Screw terminal (M3 "+" screw)	AKW8115
Single-phase three-wire system					
Three-phase three-wire system					
Three-phase four-wire system					

## Options

Product name	Model No.
Terminal cover	AKT8801
Mounting frame	AKW8822

## Measurement items

Item	Unit	Data range (Display range)
Integrated electric power	Active power	kWh 0.00 to 9999999.9
	Reactive power	kvarh 0.00 to 9999999.9
	Apparent power	kVAh 0.00 to 9999999.9
Instantaneous electric power	Active power	kW 0.00 to 999999.99
	Reactive power	kvar -99999.99 to 0.00 to 999999.99
	Apparent power	kVA 0.00 to 999999.99
Current	A	0.0 to 6000
Voltage	V	0.0 to 9999
Electricity charge*1		0.00 to 99999999
Power factor		0.00 to 1.00 (Distinguishes if leading-phase (LEAD) or lagging-phase (LAG). (Within range of phase angle $\theta = -90$ to $0$ to $+90^\circ$ )
Frequency	Hz	47.5 to 63.0
Hour meter	ON time	h 0.0 to 99999.9
	OFF time	
Pulse counter		0 to 99999999 (at prescale setting: 1.000)*2

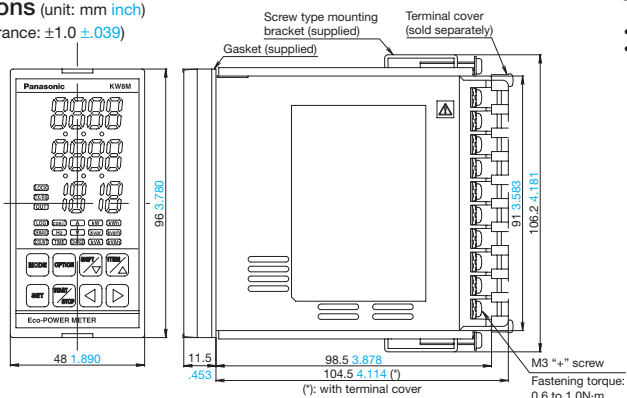
\*1 Eco-POWER METER is designed chiefly for managing energy saving. It is not intended to be used for billing. Also, this instrument has not been certified by an institution designated under the measurement law; therefore, it cannot be used to provide proof of electric power usage.  
\*2 The number of display digits of the pulse counter changes in accordance with the pre-scale value that was set (max. 13 digits).

## Accuracy (without error in CT and VT)

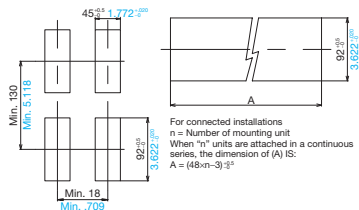
Item	Accuracy
Electric power (active/apparent)	
Integrated electric power (active/apparent)	Max. $\pm (1.5\% \text{ F.S.} + 1 \text{ digit})$
Voltage	(at 20°C 68°F, rated input, rated frequency, power-factor: 1)
Current	*Accuracy coverage: 10 to 100% of rated current
Electricity charge	
Electric power (Reactive)	Max. $\pm (3.0\% \text{ F.S.} + 1 \text{ digit})$
Integrated electric power (Reactive)	(at 20°C 68°F, rated input, rated frequency, power-factor: 1)

## Dimensions (unit: mm inch)

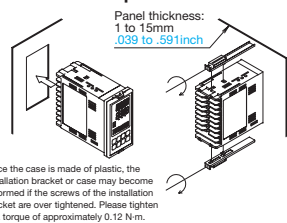
(General tolerance:  $\pm 1.0 \pm .039$ )



## Panel cut-out dimensions



## Dimensions for panel installations



## Wiring diagrams

Be sure to wire according to the terminal arrangement or wiring diagrams.

## Terminal arrangement

Function	Terminal No.	Function	Back view
N.C.	① ⑪	P1	① ⑪
Operating power supply	L ②	P0	② ⑫
	N ③	P2	③ ⑬
Pulse input	+ ④	P3	④ ⑭
	- ⑤	CT1 (+)	⑤ ⑮
Pulse output	+ ⑥	CT1 (-)	⑥ ⑯
	- ⑦	CT2 (+)	⑦ ⑰
RS485	+ ⑧	CT2 (-)	⑧ ⑱
	- ⑨	CT3 (+)	⑨ ⑲
	E ⑩	CT3 (-)	⑩ ⑳

## The input voltage to each terminal is as follows.

Terminal	Phase and wire system	Terminal	Input voltage
Operating power supply input	Single-phase two-wire	②—③	100 to 240VAC (100 to 240V-) (Line voltage)
Measured voltage input	Single-phase two-wire	①⑪—⑫	0 to 440VAC (0 to 440V-) (Line voltage)
	Single-phase three-wire	①⑪—⑫—⑬	0 to 220VAC (0 to 220V-: 3W) (Phase voltage)
	Three-phase three-wire	①⑪—⑫—⑬	0 to 440VAC (0 to 440V 3-) (Line voltage)
	Three-phase four-wire	①⑪—⑫—⑬—⑭	0 to 254VAC (0 to 254V 3N-) (Phase voltage)

## Recommended Current Transformer (CT)

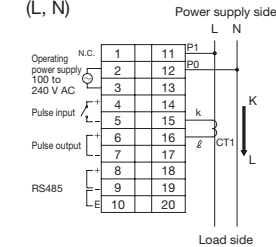
U.R.D. co., ltd. Clamp-on type CTL Series

\*Please check the maker's specifications before using.

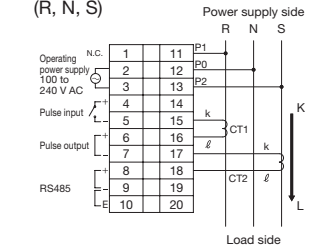
## Terminal arrangement and Wiring diagrams

- In order to promote safety and protect the device, please connect a breaker at the voltage input.
- In low-voltage circuits, grounding on the secondary side is not required for the VT (voltage transformer) and CT (current transformer).

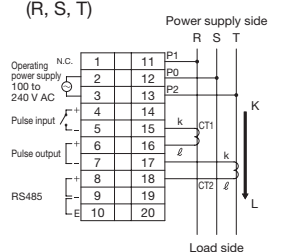
### • Single-phase two-wire system (L, N)



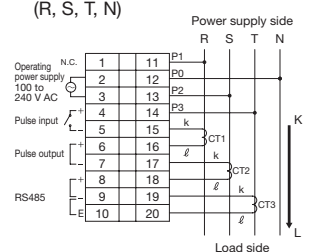
### • Single-phase three-wire system (R, N, S)



### • Three-phase three-wire system (R, S, T)



### • Three-phase four-wire system (R, S, T, N)



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AACT1B66E 201005-12T Printed in Japan.