

KW7M Eco-POWER METER DIN Type

All functions needed for
power measurement now
in a DIN type!



1 Save Space and Install More Easily

- ① Can be installed in control panels
Supports DIN specification (22.5 mm) and is thinnest
in industry with a display (Based on our investigation).
Installable on DIN rail
- ② Can be used with compact dedicated Current
Transformer (CT).

2 Power Measurement Function

- ① Instantaneous electrical power display
- ② Integrated electrical energy display
- ③ Each phase voltage and current display

3 Multiple Inputs

- ① Also supports 5 A CT of secondary current input.
* When inputting a 5 A secondary current, use 2-stage
configuration by combining with a dedicated CT.
- ② Support for 400 V AC
* Use with external voltage transformer (VT)

4 Supports Networking

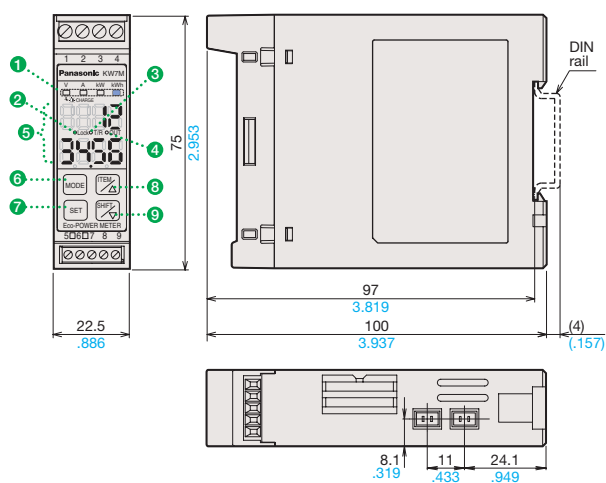
- ① An RS485 communications port comes standard
- ② Comes with MEWTOCOL/Modbus (RTU).
* Modbus Protocol is a communications protocol developed
for PLCs by Modicon Inc.
- ③ Pulse output is standard function.

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ARCT1B281E '07.6

New

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PART NAME AND DIMENSIONS



- 1 Display indicator Lighting or Blinking according to the display
- 2 Lock indicator Lighting while in lock mode.
- 3 T/R indicator Blinking while communication
- 4 OUT indicator Lighting when pulse output
- 5 Value display
 - Displays the instantaneous electrical power, integrated electrical energy, current, voltage and electricity charge.
 - Displays the all settings.

- 6 MODE key
- 7 SET key
- 8 ITEM/Δ key
- 9 SHIFT/▽ key



Terminal layouts

No.	Type
1	R
2	S
3	T
4	No connection
5	Pulse output "+"
6	Pulse output "-"
7	RS485 "+"
8	RS485 "-"
9	RS485 "E"

PRODUCT TYPES AND SPECIFICATIONS

● Main unit

Phase and wire system	Rated input	Current transformer	Part No.
Single-phase two-wire system	100 to 120/200 to 240 V AC	Dedicated CT type (5 A, 50 A (common)/ 100 A/250 A/400 A)	AKW7111
Single-phase three-wire system			
Three-phase three-wire system			

● Dedicated current transformer (CT)

Rated primary current	Part No.
5 A/50 A	AKW4801C
100 A	AKW4802C
250 A	AKW4803C
400 A	AKW4804C

● Measurement items

Item	Unit	Data range
Instantaneous electrical power	kW	0.00 to 999999.99
Integrated electrical energy	kWh	0.00 to 999999.99 to 1000000.0 to 9999999.9
Current	L1 (CT1) phase current	0.0 to 999.9 to 1000 to 6000
	L2 (CT2) phase current	0.0 to 999.9 to 1000 to 6000
Voltage	Voltage between 1-2	0.0 to 999.9 to 1000 to 9999
	Voltage between 2-3	0.0 to 999.9 to 1000 to 9999
Electricity charge*		0.00 to 999999.99 to 1000000.0 to 9999999.9 to 10000000 to 99999999

*Eco-POWER METER is designed chiefly for managing energy saving. It is not intended to be used for billing.

● Main unit

Rated operating voltage	100 to 120/200 to 240V AC
Rated frequency	50/60 Hz common
Rated power consumption	6 VA
Allowable operating voltage range	85 to 132/170 to 264V AC (85% to 110% of rated operating voltage)
Allowable power off time	10 ms
Ambient temperature	-10°C to +50°C +14°F to +122°F (Storage temperature: -25°C to +70°C -13°F to +158°F)
Ambient humidity	30 to 85%RH (at 20°C non-condensing)
Display method	7-segment LED
Power failure memory method	EEP-ROM (Over 100,000 overwrites)

● Communication

Interface	Conforming to RS485
Protocol	MEWTOCOL/Modbus (RTU)
Number of connected units	Max. 99 units

● Input

Input voltage	Rating	Single-phase two-wire system: 100 to 120/200 to 240 V AC (common use) Single-phase three-wire system: 100 to 120 V AC Three-phase three-wire system: 200 to 240 V AC
	Allowable measuring voltage	85% to 110% of rated operating voltage
	VT ratio	1.00 to 99.99 [External voltage transformer (VT) is required.]
	Max. displayed voltage	9999 V
Input current	Rating of primary side	• 5 A/50 A/100 A/250 A/400 A (when using dedicated CT) • 1 to 4000 A (when using secondary 5A CT)
	CT ratio	1 to 4000/5 A (Can be set in setting mode.) (Supported when dedicated CT used in 2-step configuration.)
	Max. displayed current	6000 A (When 400 A or higher, use commercial CT with 5 A rated secondary current.)
Accuracy (Not including CT error) (Not including VT error)	Basic accuracy	Instantaneous electrical power, Integrated electrical energy, Voltage, Current and Electricity charge (±2.5% F.S. ±1 digit (at 20°C rated input, rated frequency, power factor: 1), Guarantee accuracy range: 10 to 100% of a rated current of each CT
	Temperature characteristics	±1.5% F.S./10°C ±1 digit (for -10 to 50°C range, rated input and power factor: 1)
	Frequency characteristics	±1.5% F.S. ±1 digit (for ±5% frequency change, rated input and power factor: 1)

- Please read "Installation instruction" before using to ensure correct usage.
- For details, specifications and handling, please read the KW7M Eco-POWER METER user's manual.
- You can download the user's manual from <http://www.mew.co.jp/ac/e>.

These materials are printed on ECF pulp.
These materials are printed with earth-friendly vegetable-based (soybean oil) ink.



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06/2007

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 ARCT1B281E 200706-0YT