

STATIC WATTHOUR METER WITH ELECTRO-MECHANICAL DISPLAY

DATA SHEET NO. KWHM / 08 / 02



DESCRIPTION

It measures energy (Watthour) consumed by SINGLE PHASE / THREE PHASE, balanced / unbalanced load in power industry. The meter comprises of microcontroller with **DIP switch** provision to accommodate different CT Ratios.

FEATURES

- ◆ True RMS measurement.
- ◆ Current direction reversal indication.
- ◆ Tamper-proof.
- ◆ No need of external power supply (Self – Powered).
- ◆ Indication of energy by six digit electro – mechanical, non-resettable, impulse counter.
- ◆ Isolated solid state pulse output.

OPTIONAL FEATURES

- ◆ MODBUS RTU with / without software package.

ELECTRICAL SPECIFICATIONS

- | | |
|--------------------------|--|
| ◆ TYPE | : 1 Ph / 3 Ph - 2 EL - 3 W / 3 Ph - 3 EI - 4 W |
| ◆ INPUT VOLTAGE | : 63.5V / 110V / 240V / 415V AC, $\pm 20\%$ |
| ◆ INPUT CURRENT | : 1A / 5A (5% to 120%) |
| ◆ OPERATING FREQUENCY | : 50Hz. ± 5 Hz. |
| ◆ OPERATING POWER FACTOR | : 0.5 (Lag) – Unity – 0.8(Lead) |
| ◆ ACCURACY | : $\pm 1.0\%$ of reading |
| ◆ VA BURDEN | : Voltage : 8 VA / Phase |
| ◆ Current | : 0.5 VA / Phase |
| ◆ DISPLAY TYPE | : 6 Digit Impulse Counter, Non-resettable |
| ◆ PULSE OUTPUT | : 100 \pm 10msec. (ON period) |
| ◆ CONTACT RATING | : 24V DC, 100mA DC |
| ◆ INSULATION RESISTANCE | : Greater than 20 M Ω at 500V DC |
| ◆ DIELECTRIC TEST | : 2kV RMS for 1 minute |
| ◆ OPERATING TEMP. | : 0°C to 55°C |
| ◆ STORAGE TEMP. | : -10°C to 70°C |
| ◆ HUMIDITY | : Upto 95% RH |
| ◆ CONFORMS TO | : I.S. 13779 / I.E.C :1036 |

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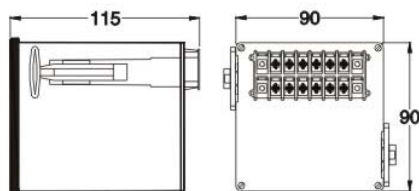
MECHANICAL SPECIFICATIONS

Data Sheet	Model	System	Acc. Class	Size (mm)	Weight (@ gms)	Panel Cutout (mm)
KWHM	KWHM 30132	Single Phase	0.5	96 x 96 x 115	450	92 x 92 ^{+0.8}
	KWHM 30142	Single Phase	1.0			
	KWHM 31332	3Ph – 2EL– 3W	0.5			
	KWHM 31342	3Ph – 2EL– 3W	1.0			
	KWHM 32332	3Ph – 3EL– 4W	0.5			
	KWHM 32342	3Ph – 3EL– 4W	1.0			

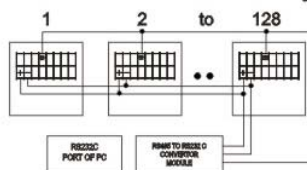
* 72 x72 mm on request

TERMINAL CONNECTIONS

TYPE	VOLTAGE	CURRENT	Pulse Output
Single Phase	L1, N	1S, 1L	+ , -
Three Phase, Two Element, Three Wire	L1, L2, L3	1S, 1L 3S, 3L	
Three Phase, Three Element, Four Wire	L1, L2, L3, N	1S, 1L 2S, 2L 3S, 3L	



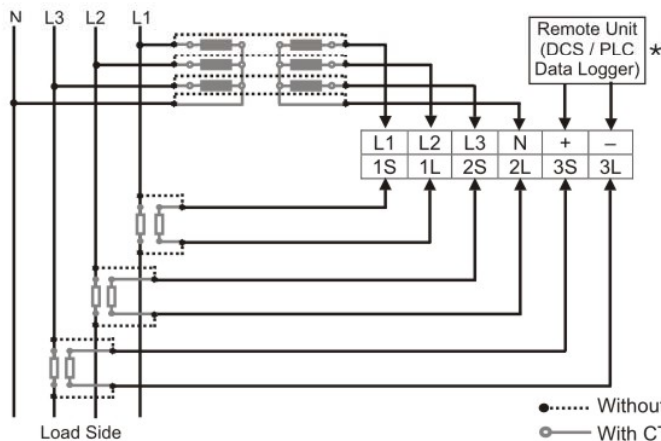
For MODBUS/RTU Protocol type.



TYPICAL WIRING DIAGRAM

For Self Powered type.

Supply Side



CTR SELECTION	RESOLUTION kWh	SWITCH	
		ON	DIP
5 / 5A	0.1	■	■
50 / 5A	1	■	■
60 / 5A	1	■	□
75 / 5A	1	□	□
100 / 5A	1	□	■
125 / 5A	1	■	□
150 / 5A	1	■	□
160 / 5A	1	□	□
200 / 5A	1	■	■
250 / 5A	1	□	□
300 / 5A	1	■	■
400 / 5A	1	□	□
500 / 5A	10	■	■
600 / 5A	10	■	■
800 / 5A	10	■	□
1000 / 5A	10	□	■
1200 / 5A	10	□	□
1500 / 5A	10	■	■
1600 / 5A	10	□	□
2000 / 5A	10	■	■

NOTE: Above selection is applicable for Single Phase & Three Phase 110V & 440V direct operating Meter.

ON DIP

□	■	■	■
1	2	3	4

 Example : Switch setting for CTR 100/5A

* For self excited DCS / PLC / Data logger system, external 24V D. C. supply is not required.

Ordering information

1) Model 2) Input Voltage 3) input Current 4) PTR (if any) 5) CTR (if any)