



Static Watthour Meter with

Instrument
Division

Electro-Mechanical Display

Data sheet No.: KWHM/10/11



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. $\pm 5\text{Hz}$.
- ◆ 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 : $100 \pm 10\text{msec}$. (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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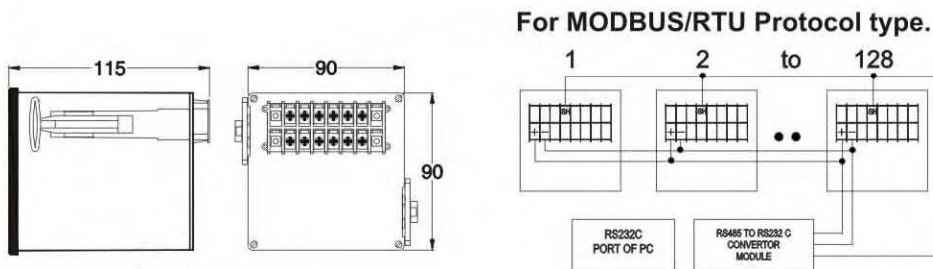
MECHANICAL SPECIFICATIONS

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

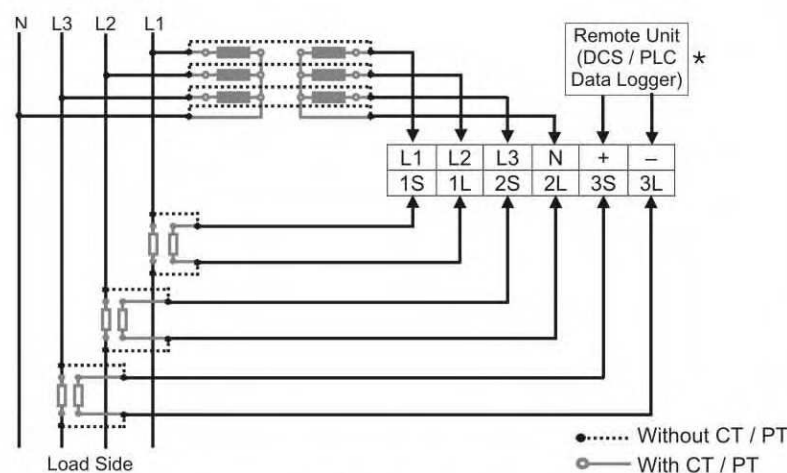
TYPE	VOLTAGE	CURRENT	Pulse Output
Single Phase	L1, N	1S, 1L	+ , -
Three Phase, Two Element, Three Wire	L1, L2, L3	1S, 1L 3S, 3L	
Three Phase, Three Element, Four Wire	L1, L2, L3, N	1S, 1L 2S, 2L 3S, 3L	



TYPICAL WIRING DIAGRAM

For Self Powered type.

Supply Side



kWh CTR SELECTION TABLE		
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)