



## DESCRIPTION

It measures energy (Watt-hour) 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 auxiliary supply (Self –Powered).
- ◆ Indication of energy by six digit, seven segment LED display.
- ◆ Isolated solid-state pulse output.
- ◆ E<sup>2</sup> Prom memory backup for storage of energy reading during power failure.

## OPTIONAL FEATURES

- ◆ MODBUS RTU with / without software package.

## ELECTRICAL SPECIFICATIONS

- |                          |   |
|--------------------------|---|
| ◆ TYPE                   | : 1 Ph / 3 Ph - 2 EL - 3W / 3 Ph - 3 EL - 4 W       |
| ◆ INPUT VOLTAGE          | : 63.5V / 110V / 240V / 415 V AC, ±20%              |
| ◆ INPUT CURRENT          | : 1A / 5A (5% to 120%)                              |
| ◆ OPERATING FREQUENCY    | : 50Hz ±5Hz   |
| ◆ OPERATING POWER FACTOR | : 0.5 (Lag) – Unity – 0.8(Lead)                     |
| ◆ ACCURACY               | : ± 1.0% of reading                                 |
| ◆ AUX. SUPPLY            | : Self- Powered                                     |
| ◆ VA BURDEN              | : Voltage : 12VA / Phase<br>Current : 0.5VA / Phase |
| ◆ DISPLAY COLOUR         | : Red , (Green on request.)                         |
| ◆ DISPLAY TYPE           | : 6 Digit, 7 Segment, 0.3" LED Display              |
| ◆ PULSE OUTPUT           | : 100 ± 10msec. (ON period)                         |
| ◆ CONTACT RATING         | : 24V DC, 100mA DC                                  |
| ◆ INSULATION RESISTANCE  | : Greater than 20 M $\Omega$ 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                           |

# STATIC WATTHOUR METER WITH LED DISPLAY



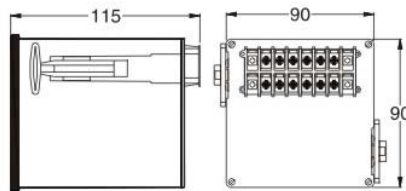
## MECHANICAL SPECIFICATIONS

Data sheet	Model	System	Acc. Class	Size (mm)	Weight (Approx. gms)	Panel Cutout (mm)
KWHD	KWHD 33132	Single Phase	0.5	96 x 96 x 115	450	92 x 92 <sup>+0.8</sup>
	KWHD 33142	Single Phase	1.0			
	KWHD 34332	3Ph - 2EL- 3W	0.5			
	KWHD 34342	3Ph - 2EL- 3W	1.0			
	KWHD 35332	3Ph - 3EL- 4W	0.5			
	KWHD 35342	3Ph - 3EL- 4W	1.0			

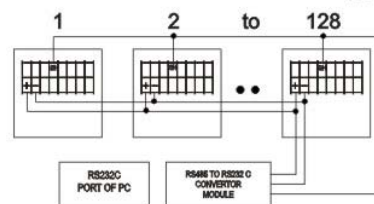
\* 72 x72 mm on request

## 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	



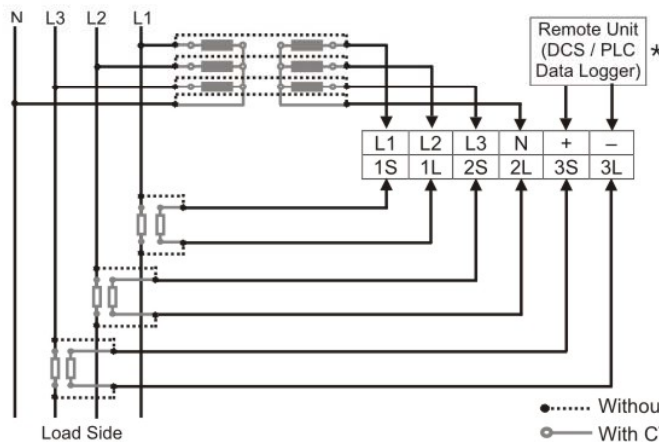
For MODBUS/RTU Protocol type.



## 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)