



Static Watthour Meter

Instrument
Division

With LED Display

Data sheet No. : KWHD /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 auxiliary supply (Self –Powered).
- ◆ Indication of energy by six digit, seven segment LED display.
- ◆ Isolated solid-state pulse output.
- ◆ E² 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 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 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

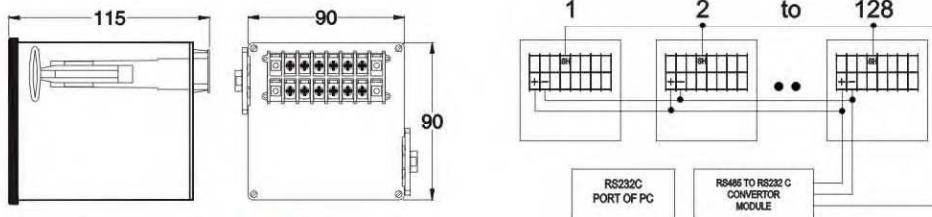
Data sheet	Model	System	Acc. Class	Size (mm)	Weight (Approx. gms)	Panel Cutout (mm)
KWHD	KWHD 33132	Single Phase	0.5	96 x 96 x 115	450	92 x 92 ^{+0.8}
	KWHD 33142	Single Phase	1.0			
	KWHD 34332	3Ph – 2EL– 3W	0.5			
	KWHD 34342	3Ph – 2EL– 3W	1.0			
	KWHD 35332	3Ph – 3EL– 4W	0.5			
	KWHD 35342	3Ph – 3EL–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

* 72 x72 mm on request

TERMINAL CONNECTIONS

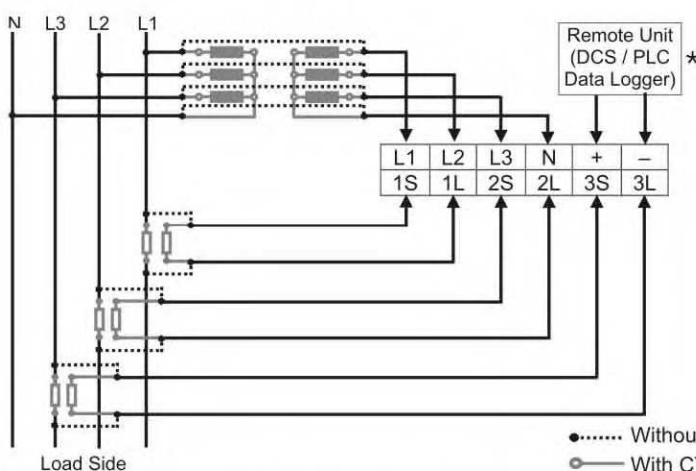
TYPE	VOLTAGE	CURRENT	Pulse Output
Single Phase	L1, N	1S, 1L	+ , -
Three Phase, Two Element, Three Wire	L1, L2, L3	1S, 1L 3S, 3L	
Three Phase, Three Element, Four Wire	L1, L2, L3, N	1S, 1L 2S, 2L 3S, 3L	

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)