



DIN Square LCD Energy (kWh) Meters

Eltime Energy Meters are suitable for the monitoring of active energy (kWh) in all types of sub-metering applications. Models are available for single phase and three phase unbalanced loads. These panel mounting energy meters are accurate to class 1 to IEC1036 and have user programmable CT and PT ratios through push buttons on the front of the meter.

The meters are housed in a compact DIN96 enclosure measuring only 45mm in depth. All meters have an LCD display counter and are self powered, eliminating the need for any auxiliary power supply. All meters are available with an isolated open collector pulsed output for input to data loggers, PLCs, building management systems or computers.

Models Available

- EM12B** Single Phase Energy (kWh) Meter
- EM33U** 3 Phase 3 Wire Energy (kWh) Meter
- EM34U** 3 Phase 4 Wire Energy (kWh) Meter

Product Features

- Active energy (kWh) measurement
- LCD Display
- Standard DIN square size
- True RMS measurement
- Single phase and 3 phase versions
- Programmable CT and PT ratios
- Accuracy class 1 (1%)
- Self powered
- Phase reversal and phase loss indication
- Password protected
- Resettable
- Tamperproof
- Pulsed output

kWh Meters – for measuring energy (kWh) consumption

Specification

Design complies with:

- IS 13779 / IEC1036

Accuracy:

- Class 1.0 to IEC1036

Counter:

- 6/7/8 digit (7mm high) LCD display

Front Panel LED's:

- Forward & reverse LED's indicate correct or incorrect connection of voltage and current
- Pulse LED indicates rate of energy measurement and pulsed output

Enclosure Code:

- Case IP54

Operating Temperature:

- 0°C to 55°C

Storage Temperature:

- -10°C to 70°C

Relative Humidity:

- 0 - 95% non-condensing

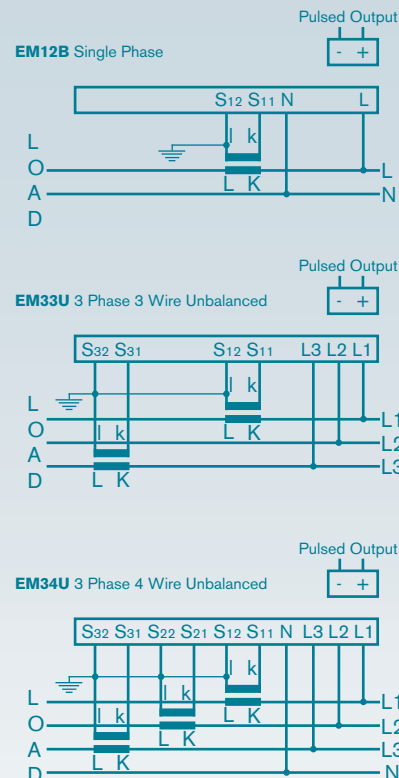
Weight:

- EM12B 250g
- EM33U 300g
- EM34U 300g

Markings:

- CE marked

Connections



Notes:

1. Ensure that current transformers are mounted so that K faces the supply and L faces the load.
2. Secondary windings of the current transformers should be earthed.

Ordering information

Model	Code	Description
	EM12B	96 x 96mm Single Phase Energy Meter
	EM33U	96 x 96mm 3 Phase 3 Wire Energy Meter
	EM34U	96 x 96mm 3 Phase 4 Wire Energy Meter

Example	EM34U
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Specification (AC Measurement)

Input Current, I_n :

- 1A or 5A direct or CT operated

CT Ratio (Programmable):

- 5/5A to 5000/5A or 5/1 to 5000/1A

Starting Current:

- 0.2% of rated current

Input Voltage, U_n :

- 175 to 485VL-L direct or PT ratio
- 100 to 280VL-N direct or PT ratio

PT Ratio (Programmable):

- Up to 9999/100VL-N

Frequency:

- 50/60Hz

Operating Power Factor:

- 0.5lag - Unity - 0.8lead

Overload:

- 1.2 x I_n or U_n continuous
- 6 x I_n for 5 seconds

Test Voltage:

- 2kV rms for 1 minute

Burden:

- Voltage circuit < 8VA
- Current circuit < 2VA

Counter & Pulse Resolution:

- 1Wh
(CT ratio x PT ratio = 1)
- 0.01kWh
(CT ratio x PT ratio = 1.0001 to 10)
- 0.1kWh
(CT ratio x PT ratio = 10.001 to 100)
- 1kWh
(CT ratio x PT ratio = 100.01 to 1000)
- 0.01MWh
(CT ratio x PT ratio = 1000.1 to 10000)
- 0.1MWh
(CT ratio x PT ratio = 10001 to 100000)

Pulsed Output:

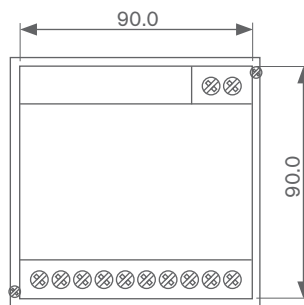
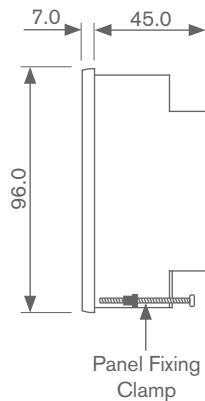
- Isolated open collector pulsed output
- 5A contacts at 250Vac, 200msec

Pulsed Output Ratio:

- 3200/(CTratioxPTRatio) pulses per kWh

Specification subject to change without notice.

Dimensions



Max. Panel Thickness 7mm
Panel Cutout 92mm square

All dimensions in mm