

## EM-400CT

Single Phase 1 module energy meter with CT

### KEY FEATURES

Single phase metering. Simple, kWh reading only!

The EM-400CT is single phase kWh meter with an LCD display in a 1 module (17.5mm) casing, ensuring a high accuracy class (Class1)

Low starting current which makes it exceptionally suited for photovoltaic energy (solar panels) Excellent long-term stability which is designed for DIN rail mounting and is made to IEN and EN standards with a 1 year warranty.

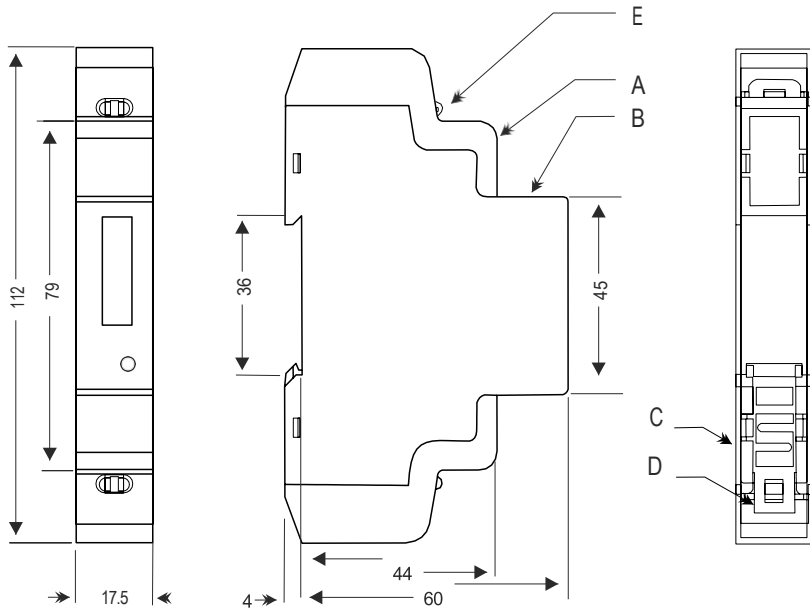
MID B & D approval which ensures the meter is produced to the highest European and International standards and the meter is legally suited for all applications. For connection rate of up to 100A.



### METER SPECIFICATION

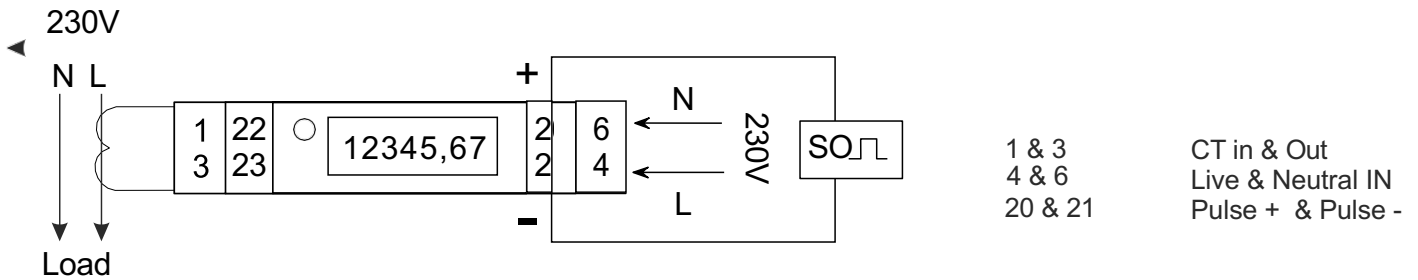
Performance Criteria			
Operating Humidity	≤ 75%		
Storage Humidity	≤ 95%		
Operating Temperature	-25°C to +55°C		
Storage Temperature	-30°C to +70°C		
International Standard	EN50470-1 EN50470-3		
Accuracy Class	B		
Ingress Protection rating	IP51		
Insulating encased meter of protective class	II		
The mechanical and electromagnetic environmental classes	B		
Specifications			
Nominal Voltage (Un)	230V AC	Operational frequency range	50Hz ±10%
Operational Voltage	(-15% ~ +10%) Un	Internal power consumption	≤2W /10VA
AC voltage withstand	2KV for 1 minute	Test output flash rate (RED LED)	100imp/kWh
Impulse voltage withstands	6KV - 1.2μ S waveform	Pulse output rate (pins 20&21)	100imp/kWh
Basic Current (Ib)	1.5/5A	Consumption indicator (RED LED)	Flashing at load
Max. rated current (I <sub>max</sub> )	6/100A		running
Operational Current range	0.4% Ib-I <sub>max</sub>	Dimensions	
Over current withstand	30I <sub>max</sub> for 0.01s	L x W x H(mm)	112 x 17.5 x 64

DIMENSIONS AND INSTALLATION



- A Terminal block
- B LCD
- C Case
- D Protection Cover
- E Security Clasp

Register material: PC inflammable retarding  
 Case/Terminal Block/Cover: ABS inflammable retarding



1 & 3                      CT in & Out  
 4 & 6                      Live & Neutral IN  
 20 & 21                   Pulse + & Pulse -

TECHNICAL DESCRIPTION

**Energy Use indicator**

There is a LED which has two colors (green and red) while flashing in the front panel of EM-400CT. When energy is being used, the LED will flash and display red. The quicker the LED flashes, the more energy is being used.

**Reading the meter**

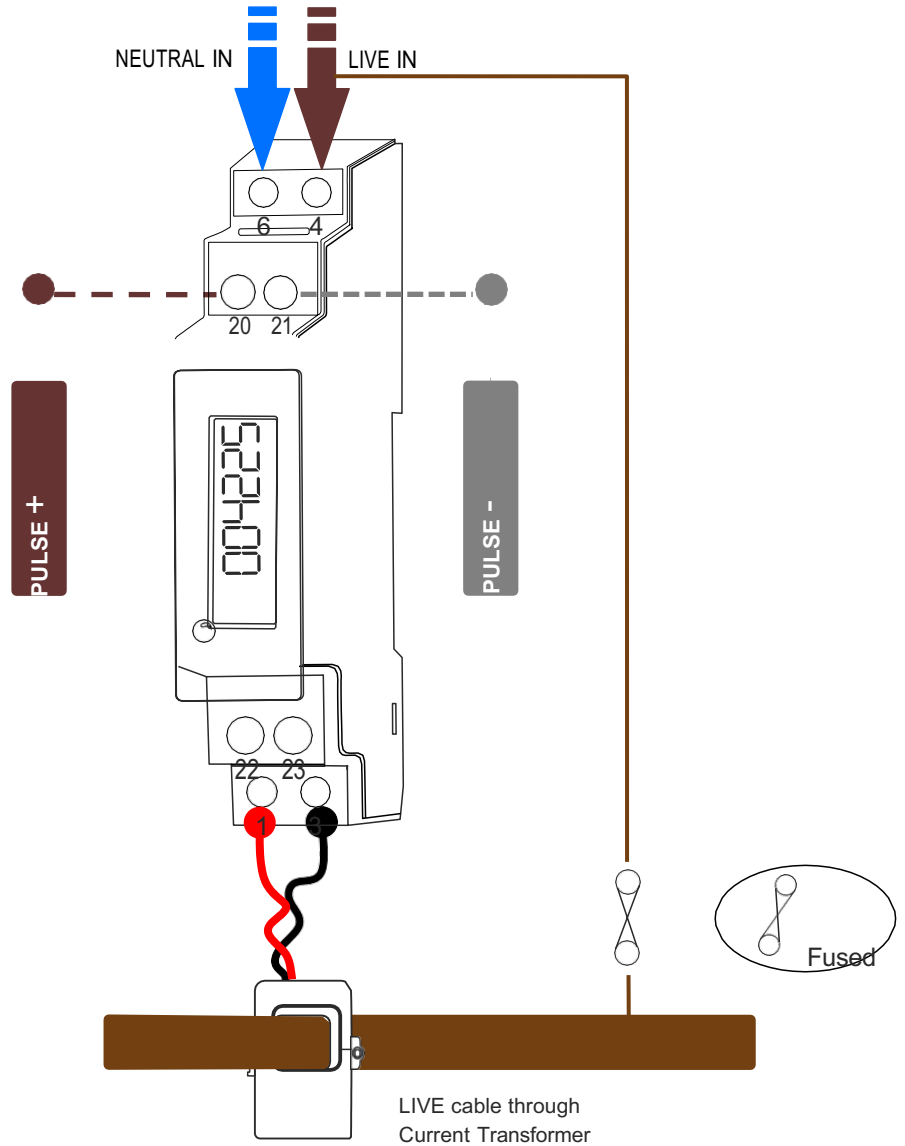
The EM-400CT energy meter is equipped with 5+2 LCD display which displays the amount of energy used.

**Pulse output**

The EM-400CT DIN rail energy meter is equipped with a pulse output which is fully isolated. The pulse output is a **polarity dependent**, passive transistor output requiring an external voltage source for correct operation.

For this external voltage source, the voltage (Ui) should be 5-27V DC, and the maximum input current (Imax) is 27mA DC. To connect the impulse output, connect 5-27V DC to connector 20 (anode), and the signal wire (S) to connector 21 (cathode).

INSTALLATION DIAGRAM



230V

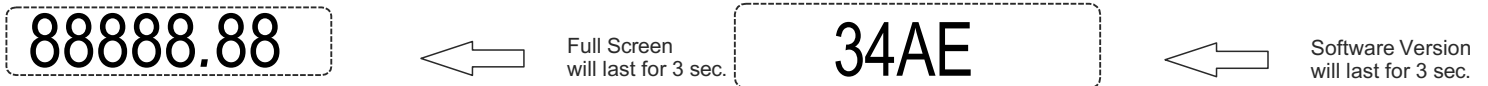
1 & 3 = CT (Red (1), Black (3)) 4 & 6 =

Live & Neutral

20 & 21 = Pulse Cables Set 100 imp/kWh (20+ | 21 -)

DISPLAY FUNCTION

Cycle display status, can be set within 5~20 seconds, with a default of 5 seconds. The following items display as:



SO Output

0.001kWh/imp (default), 0.001kWh/imp, 0.01kWh/imp, 0.1kWh/imp, 5kWh/imp, 10kWh/imp

BASIC ERRORS

0.05lb	Cosφ = 1	± 1.5%	0.1lb - lmax	Cosφ = 1	± 1.0%
0.1lb	Cosφ = 0.5L	± 1.5%	0.2lb - lmax	Cosφ = 0.5L	± 1.0%
	Cosφ = 0.8C	± 1.5%		Cosφ = 0.8C	± 1.0%