

OB111 – OB112

Single phase two wire DIN rail energy meter
(One module)



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User Manual



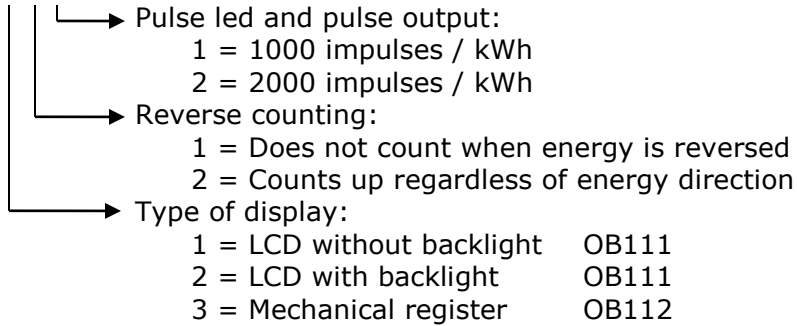
1 Foreword

Thank you for purchasing Owen Brothers Metering OB111 – OB112 series DIN rail single phase four wire energy meter.

This series includes two types of energy meter: one is an analogue meter OB112, and the other has LCD display OB111.

The meter is labeled as follows:

OB111 – OB112 V 01 . x x x



2 Performance criteria:

Operating humidity	≤ 75%
Storage humidity	≤ 95%
Operating temperature	-25°C - +55°C
Storage temperature	-30°C - +70°C
International standard	EN 50470-1 and EN 50470-3
Accuracy class	1
Protection against penetration of dust and water	IP51
Insulating encased meter of protective class	II

3 Specification:

Meter type	OB111 – OB112 series
Nominal voltage (Un)	230V AC
Operational voltage	195-253V AC
Insulation capabilities:	
- AC voltage withstand	4KV for 1 minute
- Impulse voltage withstand	6KV – 1.2µS waveform
Basic current (Ib)	5A
Maximum rated current (Imax)	45A
Operational current range	0.4% Ib- Imax
Over current withstand	30Imax for 0.01s
Operational frequency range	50Hz ±10%
Internal power consumption	≤2W /phase- ≤10VA/phase
Test output flash rate (RED LED)	1000/2000imp/kWh
Pulse output rate (pins 20 & 21)	1000/2000imp/kWh
Consumption indicator (RED LED)	Flashing = load running

4 Basic error:

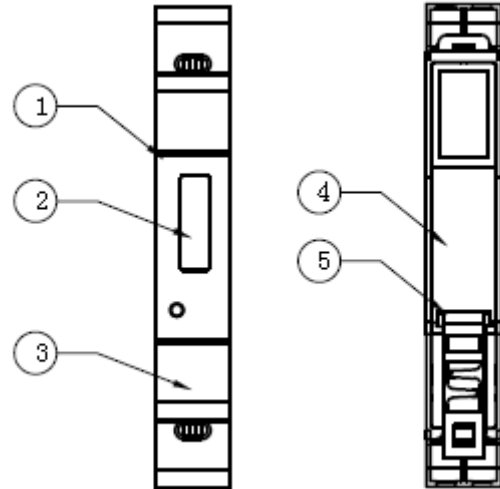
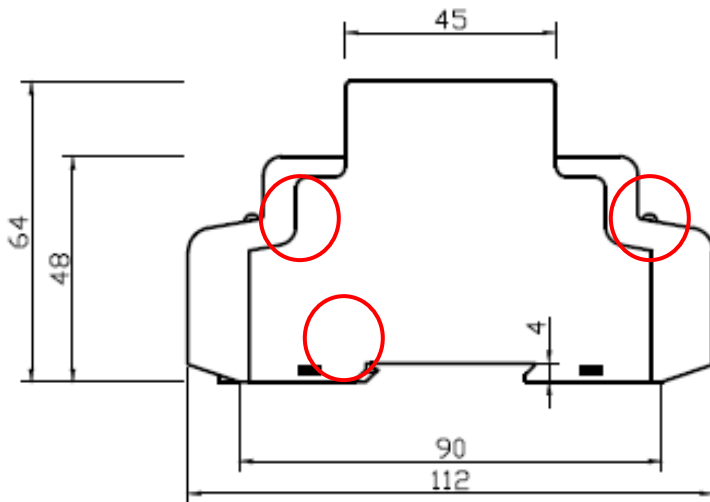
0.05Ib	$\cos\phi = 1$	$\pm 1.5\%$
0.1Ib	$\cos\phi = 0.5L$	$\pm 1.5\%$
	$\cos\phi = 0.8C$	$\pm 1.5\%$
0.1Ib - Imax	$\cos\phi = 1$	$\pm 1.0\%$
0.2Ib - Imax	$\cos\phi = 0.5L$	$\pm 1.0\%$
	$\cos\phi = 0.8C$	$\pm 1.0\%$

5 Description

- ① meter top case
- ② display window
- ③ Protection cover
- ④ meter bottom case
- ⑤ DIN clip
- Lead sealing position

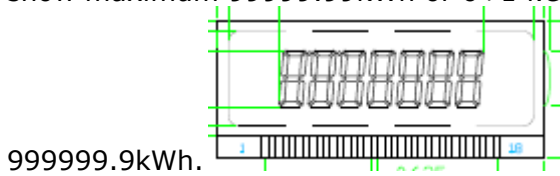
Material

Register	PC flame retardant
Case	ABS flame retardant
Terminal block	ABS flame retardant
Protection cover	ABS flame retardant

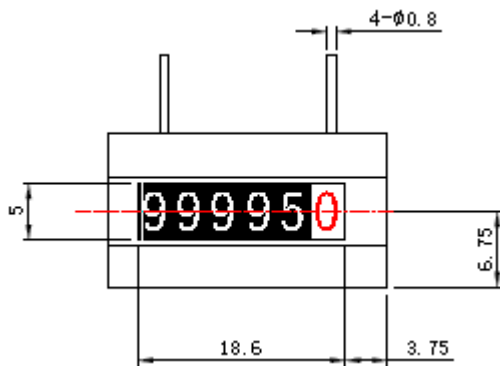


Display information as follows:

OB111 registers show seven digits, you can choose 5+2 i.e.5 integer-bit and 2 decimal place and can show maximum 99999.99kWh or 6+1 i.e. 6 integer-bit and 1 decimal place which shows maximum



OB112 register show two part, black background colour part means integer-bit, white background colour part means tenths unit.



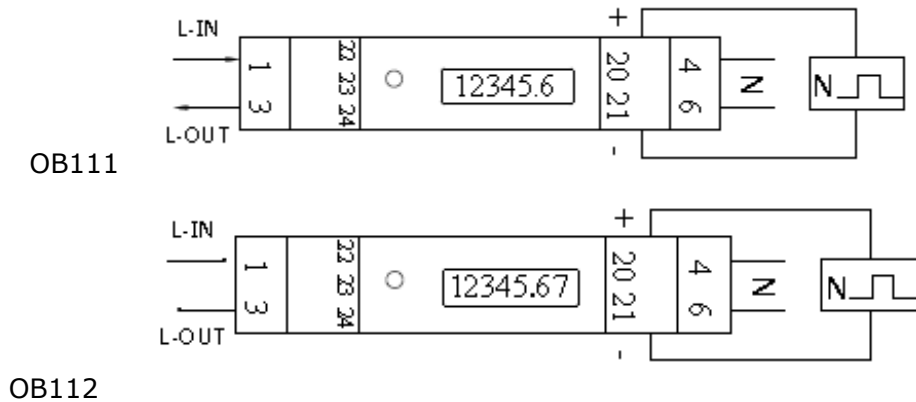
6 Dimensions

Height	112 mm
Width	17.5 mm
Depth	64 mm
Weight	0.12 Kg (net)

7 Installation

⚠ CAUTION
<ul style="list-style-type: none"> ◆ Isolate supply before working on the installation. ◆ Always use a suitable test lamp & proving unit to prove that power is isolated. Such as Cyclim Test lamps.
⚠ WARNING
<ul style="list-style-type: none"> ◆ Installation should be performed by qualified personnel familiar with related procedures, regulations and risks. ◆ Use insulated tools to install the meter. ◆ The case is sealed, do not brake it as this will void MID certification and warranty.

Connection of the wires should be done in accordance with the following connection diagram.



- 1 Inlet phase line
- 4 Inlet neutral line
- 3 Outgoing phase line
- 6 Outgoing neutral line
- 20 and 21 Pulse output contact

8 Operating

Consumption indication

There is a LED which has two colours (green and red) while flashing in the front panel of DRS-201 series. When consumption happens, the LED will flash and display red. The more quickly LED flash, the more consumption there is.

Reading the meter

The OB111 energy meter is equipped with a 5+1 register. Five integers are marked with black colour and one decimal is marked with red.

The OB112 energy meter is equipped with 5+2 LCD display which is used for recording consumption and can't be reset to zero. The reading accuracy is 1/100 kWh.

Pulse output

The LED indicator relates to pulse output. When consumption happens; the LED will flash. More LED flashes means more consumption RI=1000/2000imp/kWh

9 Technical support

Technical support/sales

TEL: +00-44-1616246211

Email: Support: support@owen-brothers.com
Sales: sales@owen-brothers.com

www.owen-brothers.com



