



SGS

EU Type Examination Certificate Number: **0120/SGS0332**

Owen Brothers Metering UK Ltd

New Phoenix Works
Glen Trading Estate
Oldham
OL4 3BF
United Kingdom

Instrument Identification:
OB115-Mod Series

Single Phase, Active Import/Export (kWh), Electricity Meter

Instrument Traceable Number
0120/SGS0332

has been assessed and certified as meeting the requirements of

EU Directive 2014/32/EU

on Measuring Instruments Annex II, Module B

It is certified that the manufacturer's technical design and specimen for the above instrument has been examined and, based on the evidence submitted, it is considered that the instrument conforms to the requirements of Annex V of EU Directive 2014/32/EU

This certificate must be used in conjunction with a certificate covering the product verification as required in Annex II, Module D or Annex II, Module F

This certificate is valid until 25th September 2027
Issue 2

Certification is based on report number(s): SHES170600509001 dated 26th September 2017
EMA244344/1
EMA246172

Authorised Signature

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DU_CST-ME-002 Rev 1

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EU Type Examination Cert.

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EU-Type Examination Certificate Number:

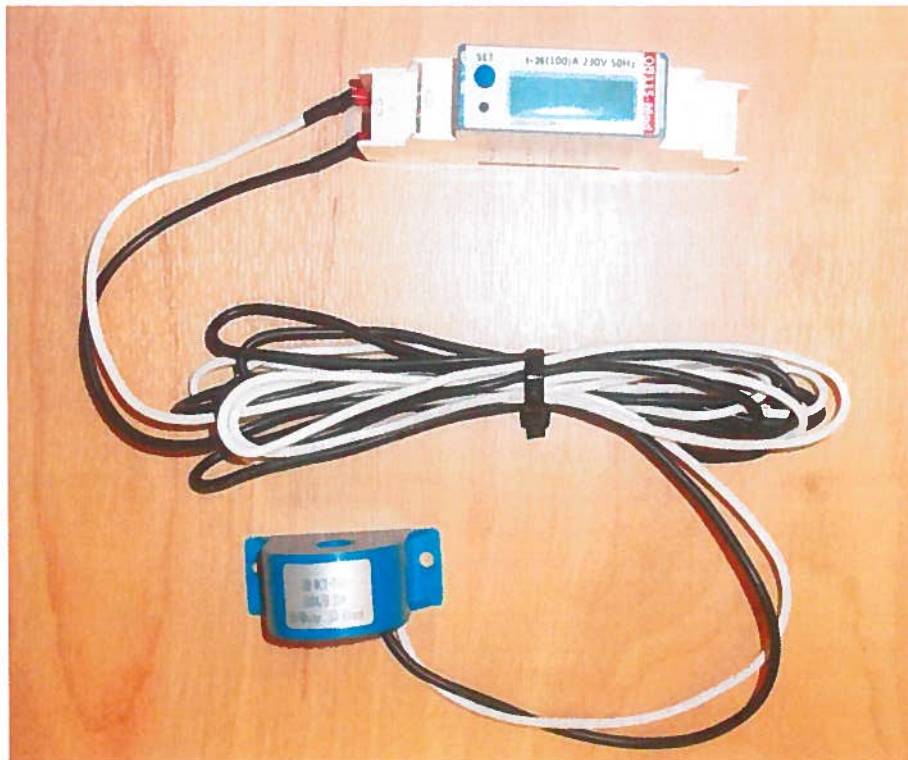
0120/SGS0332

Issue Number: 2

Dated: 14th December 2018**1. Technical Data**

Manufacturer	Owen Brothers Metering UK Ltd
Meter Type	OB115-Mod OB115-Mod-PO OB115-Mod-DO
Voltage Rating (U_n)	230V
Current Rating (I_{min} – I_{ref} (I_{max}))	OB115-Mod: 1-20(100)A OB115-Mod-PO: 0.25-5(6)A OB115-Mod-DO: 0.25-5(6)A
Frequency (F_n)	50Hz
Active Accuracy Class (kWh)	B (kWh)
Type of circuit	1p2w
Temperature Range	-25°C to +55°C
Software/ Firmware Version No	OB115-Mod: 0115.1.1 – Checksum: D8159C09 OB115-Mod-PO: 0115.1.1 – Checksum: 0x30F5C375 OB115-Mod-DO: 0115.2.1 – Checksum: 0xF07A3204
Identification Location	LCD
Bill Of Materials Number	OB115-Mod: FQ-JS-001-062 OB115-Mod-PO: FQJS-001-092 OB115-Mod-DO: FQJS-001-112
IP Rating	IP51 - Must be installed in a suitable IP rated enclosure
Insulation Protective Class	Class II
LED Pulse Constant	1000imp/ kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	Terminal covers are wire & crimp. Main cover clipped in place and sealed with tamper proof sealing tape
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	LCD
Terminal Arrangement(s)	DIN
Location of Manufacturers Address	Associated Documents

2. Photographs of Meter and Sealing Plan



Photographs of OB115-MOD



Photographs of OB115-MOD-PO



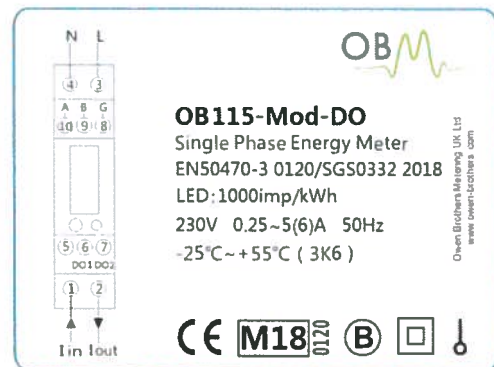
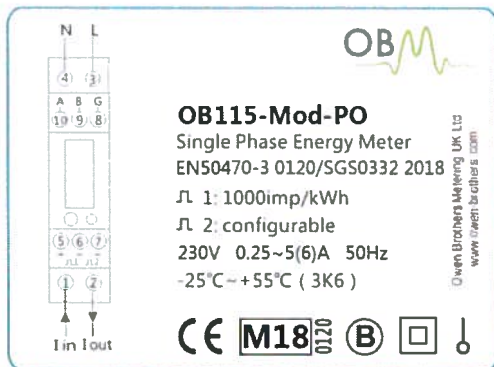
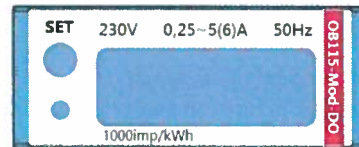
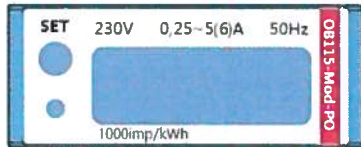
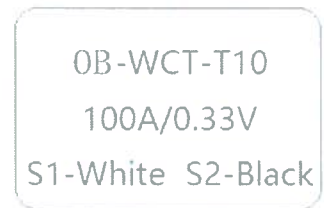
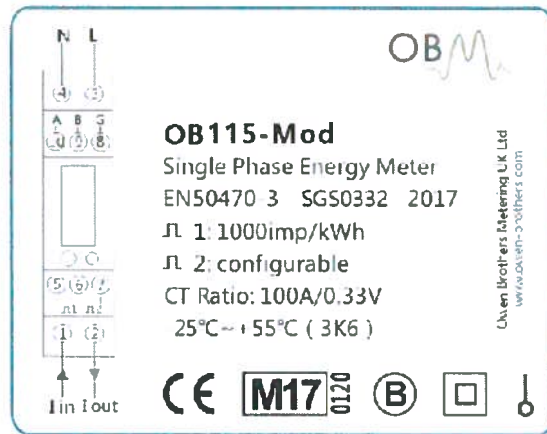
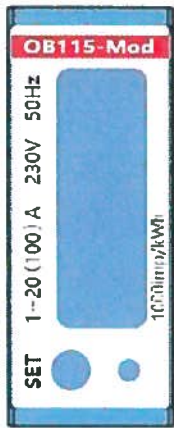
Photographs of OB115-MOD-DO

3. Examples of Nameplates

METER :



CT :



4. Calculation of the composite error/ MPE

During the type approval examination the influence factors for temperature, frequency and voltage are determined per load point. The table below represents the sum of the square values per load, determined via the following formula:-

$$\delta e(T, U, f) = \sqrt{(\delta e^2(T, I, \cos\phi) + \delta e^2(U, I, \cos\phi) + \delta e^2(f, I, \cos\phi))}$$


where

$\delta e(T, I, \cos\phi)$ = Additional error due to variation of the temperature at the same load

$\delta e(U, I, \cos\phi)$ = Additional error due to variation of the voltage at the same load

$\delta e(f, I, \cos\phi)$ = Additional error due to variation of the frequency at the same load

		Influence Factors for Temperature, Voltage & Frequency					
Current	PF Cos	-25°C	-10°C	5°C	30°C	40°C	55°C
I _{min}	1.0	0.60	0.56	0.13	0.45	0.48	0.79
I _{tr}	1.0	0.67	0.58	0.07	0.28	0.46	0.75
10I _{tr}	1.0	0.70	0.58	0.10	0.13	0.44	0.77
I _{max}	1.0	0.78	0.61	0.14	0.09	0.41	0.69
I _{tr}	0.5ind	0.51	0.43	0.23	0.60	0.63	0.92
10I _{tr}	0.5ind	0.44	0.36	0.14	0.38	0.67	0.97
I _{max}	0.5ind	0.55	0.36	0.10	0.33	0.64	0.95
I _{tr}	0.8cap	1.03	0.81	0.39	0.36	0.44	0.67
10I _{tr}	0.8cap	0.95	0.77	0.37	0.31	0.45	0.69
I _{max}	0.8cap	0.91	0.80	0.42	0.34	0.46	0.69


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5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
OB115-Mod	230V, 1-20(100)A, 50Hz, RS485 communication
OB115-Mod-PO	230V, 0.25-5(6)A, 50Hz, Pulse output, RS485 communication
OB115-Mod-DO	230V, 0.25-5(6)A, 50Hz, Digital output, RS485 communication

Modifications to the meter(s) described according to approval No.**0120/SGS0332** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).

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6. Document Revision History

Issue	Date	Comments
1	31/10/2017	Initial Issue
2	14/12/2018	OB115-Mod-PO and OB115-Mod-DO variants added to approval

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END OF CERTIFICATE