



EU Type Examination Certificate Number: **0120/SGS0200**

## **Secure Meters (UK)Ltd**

Secure House  
Moorside Road  
Winchester  
SO23 7RX

Instrument Identification:  
**Liberty 110, 112, 114, 115**

Instrument Traceable Number  
**0120/SGS0200**

Single Phase, Import/Export kWh, Credit/Prepayment, Smart, Static Electricity Meter

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 12<sup>th</sup> April 2025  
Issue 3


Certification is based on report number(s) EMA201664/1 dated 13<sup>th</sup> April 2015, EMA249471/1 dated 12<sup>th</sup> March 2018

Authorised Signature

A handwritten signature in black ink, appearing to be 'AR'.


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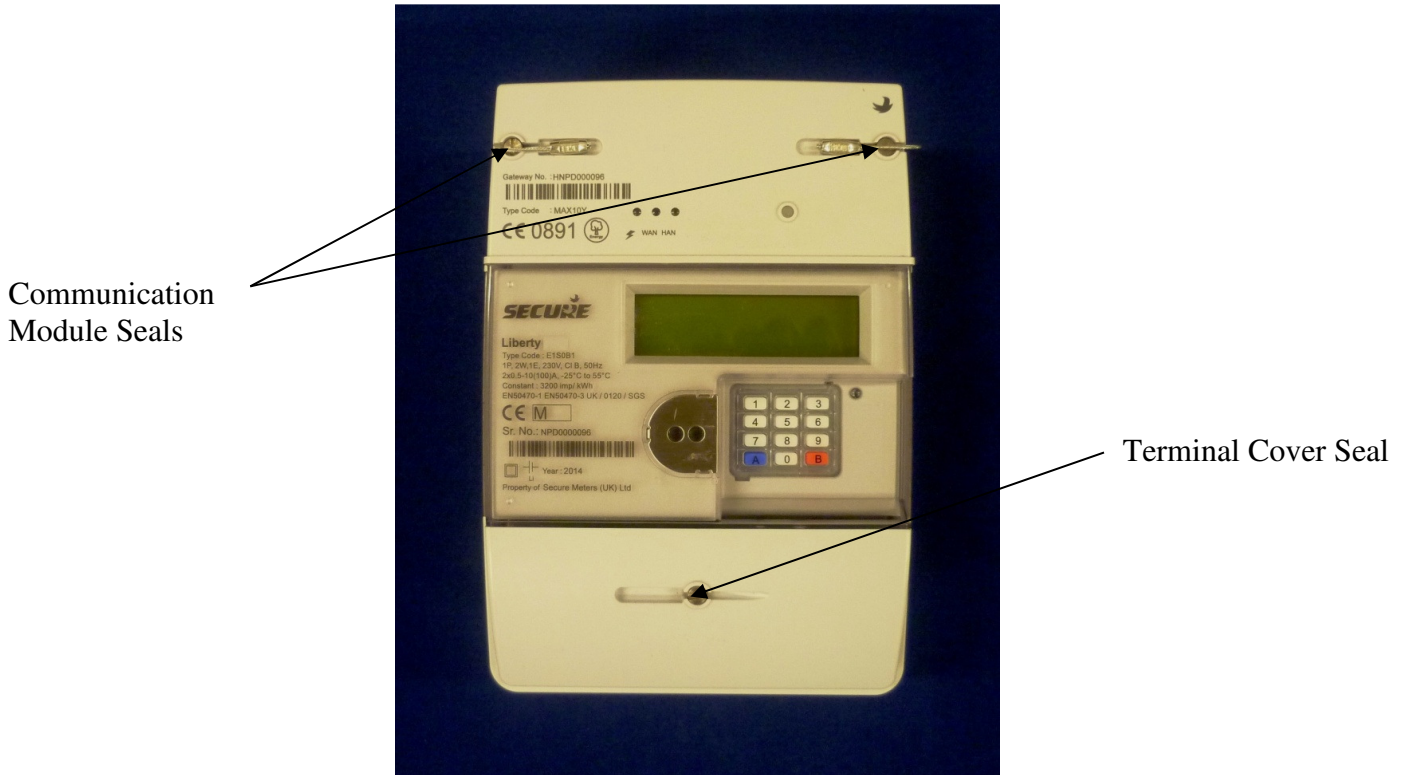
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## 1. Technical Data

<b>Meter Type</b>	E1S0B1 (Liberty 110, Liberty 112, Liberty 114, Liberty 115)
<b>Voltage Rating (<math>U_n</math>)</b>	230V
<b>Current Rating (<math>I_{min} - I_{ref} (I_{max})</math>)</b>	0.5-10(100)A
<b>Frequency (<math>F_n</math>)</b>	50Hz
<b>Active Accuracy Class (<math>kWh</math>)</b>	B ( $kWh$ )
<b>Type of circuit</b>	1p2w
<b>Temperature Range</b>	-25°C to +55°C
<b>Software/ Firmware Version No's</b>	Liberty 110/115: B2.01 Liberty 112/114: B2.03
<b>CRC Checksum No's</b>	Liberty 110/115: 0x731687FD Liberty 112/114: 0x71B1885C
<b>Identification Location</b>	LCD
<b>Bill Of Materials No's</b>	E1S0B1-Z10-R003 (Option: Liberty 110-Radio Comms/Liberty 115-DLC) E1S0B1-Z40-R003 (Option: Liberty 112-2 Switches/Liberty 114-4 Switches)
<b>IP Rating</b>	IP53
<b>Insulation Protective Class</b>	Class II
<b>LED Pulse Constant</b>	3200 imp/ kWh
<b>Impulse Voltage Rating</b>	6kV
<b>AC Voltage Rating</b>	4kV
<b>Main Cover Sealing Type</b>	Wire & Crimp
<b>Integrity of meter</b>	Inaccessible without breaking seals
<b>Intended Location of the Meter</b>	Indoor
<b>Type of Register</b>	LCD
<b>Terminal Arrangement(s)</b>	BS
<b>Location of Manufacturers Address</b>	Associated Documents

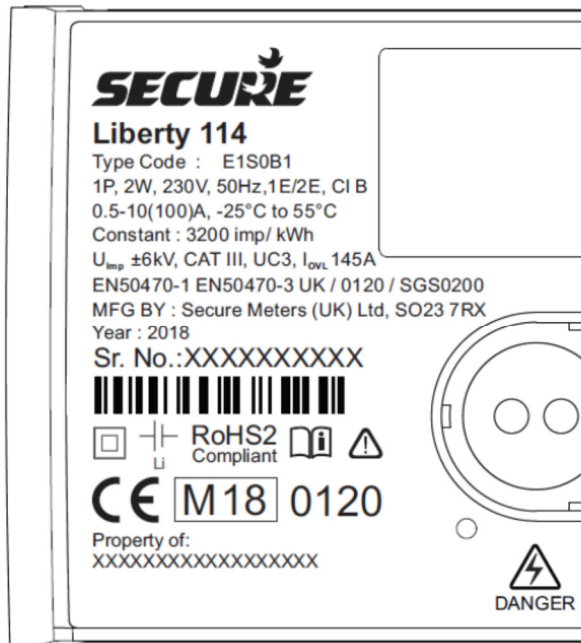
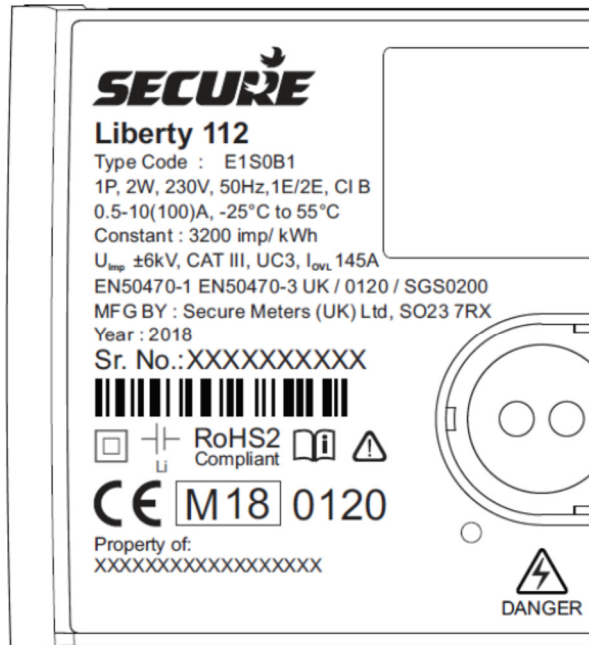
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**2. Photograph of Meter and Sealing Plan**



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### 3. Nameplates



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#### 4. Influence factors for temperature, frequency and voltage


		Influence Factors for temperature, frequency and voltage					
Current	PF Cos	-25	-10	5	30	40	55
I <sub>min</sub>	1.0	0.74	0.50	0.27	0.14	0.18	0.19
I <sub>tr</sub>	1.0	0.67	0.43	0.23	0.13	0.17	0.19
10I <sub>tr</sub>	1.0	0.63	0.42	0.22	0.09	0.13	0.13
I <sub>max</sub>	1.0	0.88	0.63	0.48	0.34	0.32	0.32
I <sub>tr</sub>	0.5ind	0.69	0.42	0.23	0.15	0.19	0.19
10I <sub>tr</sub>	0.5ind	0.58	0.37	0.20	0.17	0.20	0.20
I <sub>max</sub>	0.5ind	0.57	0.38	0.24	0.10	0.09	0.09
I <sub>tr</sub>	0.8cap	0.61	0.37	0.19	0.16	0.20	0.20
10I <sub>tr</sub>	0.8cap	0.58	0.39	0.17	0.11	0.13	0.13
I <sub>max</sub>	0.8cap	0.82	0.57	0.43	0.30	0.30	0.30

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

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

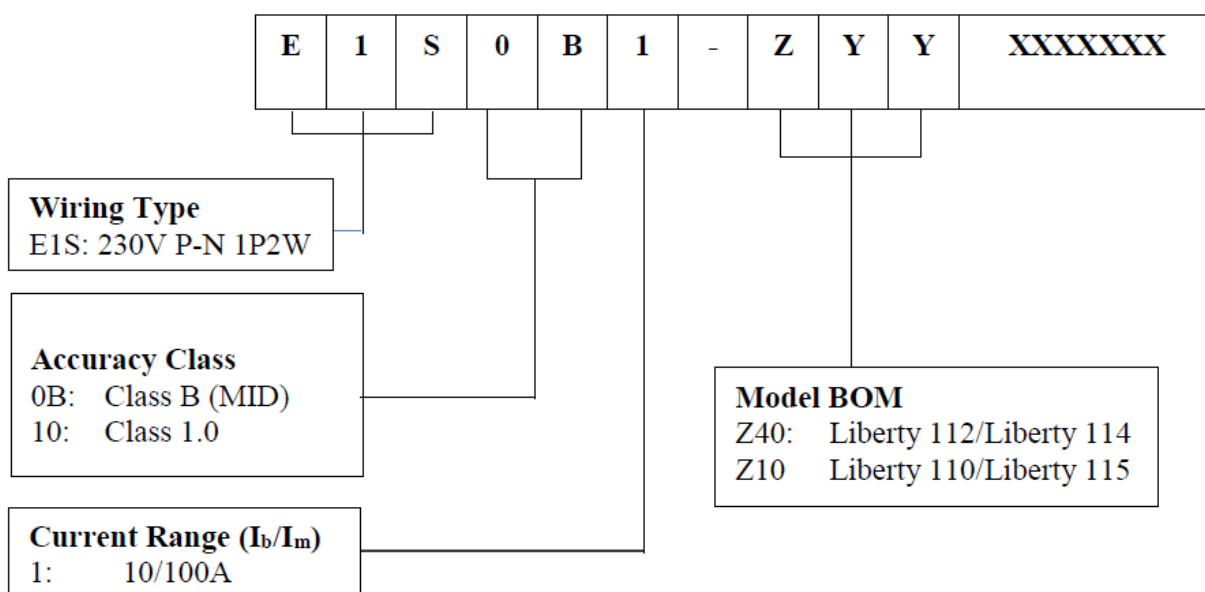
where

$\delta e(T, I, \cos\phi) =$  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

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## 5. Annex of Variants


### Liberty 11X Codification



XXXXXXXX: Factory configurable features

Factory configurable features		
Modular Communication		Configurable
Front Cover opening detection		Configurable
Communication Module opening detection		Configurable
Terminal Cover opening detection		Configurable
Magnet Sensing		Configurable
Auxiliary output		Configurable
Feature1		Optional Communication Module
Modular Communication	Liberty 110/Liberty 112/Liberty 114	1. Zigbee + GPRS
	Liberty 115	2. DLC
Feature2		Optional heating load control switches
Main and heating load control switch	Liberty 110/Liberty 112/Liberty 115	1. Main Switch 1 – 1 N/O. 2. Heating load control switch – 1 NO.
	Liberty 114	1. Main Switch 1 – 1 N/O. 2. Heating load control switch – 3 N/O.

Modifications to the meter(s) described according to approval No.0120/ SGS0200 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	13/04/2015	Initial Issue
2	06/10/2016	New software and BOM revisions
3	12/03/2018	Liberty 112 and Liberty 114 models added to approval

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**END OF CERTIFICATE**