



EU Type Examination Certificate Number: **0120/ SGS0382**

## Secure Meters (UK) Ltd

Secure House  
Moorside Road  
Winnall  
Winchester  
SO23 7RX

Instrument Identification:  
**Liberty 101**

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

Instrument Traceable Number  
**0120/ SGS0382**

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 for 10 years from 23<sup>rd</sup> August 2018 until 22<sup>nd</sup> August 2028  
Issue 1

Certification is based on report number(s) EMA257329/1 dated 21<sup>st</sup> August 2018, EMA257329/1/TR50579 dated 21<sup>st</sup> August 2018, EMA257329/1/iss2 dated 23<sup>rd</sup> August 2018

Authorised Signature


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	Issue Number: 1	Dated: 23 <sup>rd</sup> August 2018

## 1. Technical Data


<b>Manufacturer</b>	Secure Meters (UK)Ltd
<b>Meter Type(s)</b>	Liberty 101
<b>Voltage Rating (<math>U_n</math>)</b>	230 V
<b>Current Rating (<math>I_{min} - I_{ref} (I_{max})</math>)</b>	0.5 A – 10(100) A
<b>Frequency (<math>F_n</math>)</b>	50 Hz
<b>Active Accuracy Class (kWh)</b>	A or B (kWh)
<b>Type of circuit</b>	1p2w
<b>Temperature Range</b>	-25° C to +55° C
<b>Software/ Firmware Version No</b>	B92C010102
<b>CRC Checksum</b>	F6CE
<b>Software Identification Location</b>	LCD
<b>Bill Of Materials Number</b>	E1S0B1-Z30
<b>Mechanical Environment</b>	M1
<b>Electromagnetic Environment</b>	E2
<b>IP Rating</b>	IP51
<b>Insulation Protective Class</b>	Class II
<b>LED Pulse Constant</b>	3200 imp / kWh
<b>Impulse Voltage Rating</b>	6 kV
<b>AC Voltage Rating</b>	4 kV
<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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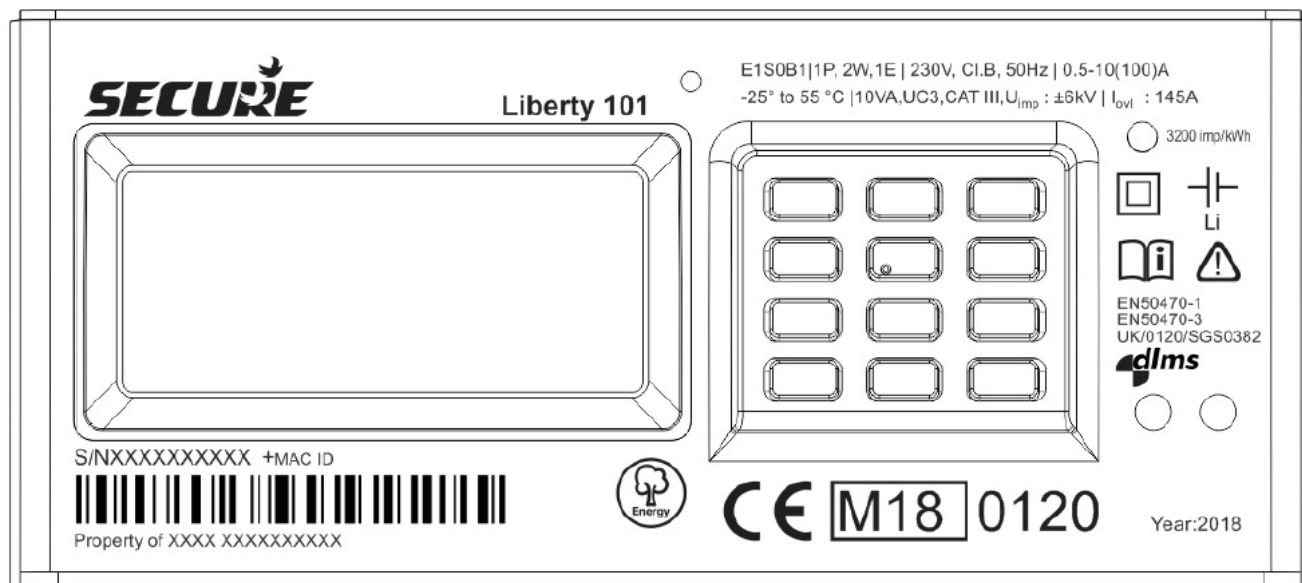
## 2. Photograph of Meter and Sealing Plan




Main cover seal

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### 3. Nameplate



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#### 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

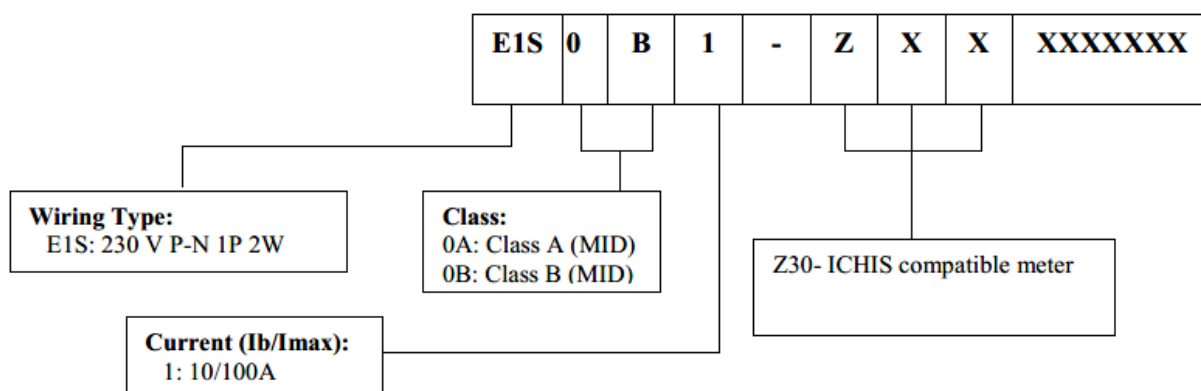
		Influence Factors for Temperature. Frequency & Voltage					
Current	PF Cos	-25°C	-10°C	5°C	30°C	40°C	55°C
I <sub>min</sub>	1.0	0.19	0.14	0.12	0.12	0.19	0.29
I <sub>tr</sub>	1.0	0.20	0.15	0.11	0.11	0.18	0.30
10I <sub>tr</sub>	1.0	0.20	0.12	0.08	0.10	0.16	0.32
I <sub>max</sub>	1.0	0.17	0.14	0.13	0.17	0.25	0.41
I <sub>tr</sub>	0.5ind	0.09	0.09	0.09	0.09	0.11	0.30
10I <sub>tr</sub>	0.5ind	0.59	0.54	0.51	0.54	0.70	0.77
I <sub>max</sub>	0.5ind	0.09	0.06	0.06	0.13	0.06	0.46
I <sub>tr</sub>	0.8cap	0.16	0.05	0.03	0.08	0.17	0.34
10I <sub>tr</sub>	0.8cap	0.18	0.11	0.06	0.09	0.19	0.39
I <sub>max</sub>	0.8cap	0.14	0.10	0.07	0.16	0.25	0.47

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## 5. Annex of Variants

Product Variant Identification Details:

### Codification For Single Phase Liberty 101 Pre-Payment Meter




#### XXXXXXX-Factory configurable features

Factory Configuration Features	
ICHIS COMPATIBLE TOP HAT COMMUNICATION MODULE	Refer table below
SWITCH VENDOR	GRUNER/JOHNSON
AUXILIARY OUTPUT	Present/Absent

**Table:1**

Feature	Options
ICHIS compatible top hat Communication Module	Not present from factory (field installed)
	Toshiba
	EDMI
	WNC

Modifications to the meter(s) described according to approval No.**0120/ SGS0382** 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	23/08/2018	Initial Issue

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