



EU Type Examination Certificate Number: **0120/ SGS0281**

## Holley Technology Ltd

No. 181 Wuchang Avenue  
Yuhang District  
Hangzhou 310023  
China

Instrument Identification:

**AES110B**

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

Instrument Traceable Number

**0120/ SGS0281**

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 19<sup>th</sup> April 2017 until 18<sup>th</sup> April 2027  
Issue 2


Certification is based on report number(s) SHES170100008701 dated 18<sup>th</sup> April 2017, SHES170100008701/iss2 dated 2<sup>nd</sup> March 2018

Authorised Signature

SGS United Kingdom Limited, Notified Body 0120  
Unit 202B Worle Parkway, Weston-super-Mare, BS22 6WA UK  
t +44 (0)1934 522917 f +44 (0)1934 522137 [www.sgs.com](http://www.sgs.com)


Contact Address  
SGS United Kingdom Ltd, Units 12A & 12B, South Industrial Estate, Bowburn, Durham, DH6 5AD UK

t +44 (0)191 377 2000 f +44 (0)191 377 2020 [www.sgs.com](http://www.sgs.com)

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	Issue Number: 2	Dated: 2 <sup>nd</sup> March 2018

## 1. Technical Data

Manufacturer	Holley Technology Ltd
Meter Type(s)	AES110B-HZNS0-B002 AES110B-HZNS1-B002
Voltage Rating ( <i>Un</i> )	230V
Current Rating ( <i>I<sub>min</sub></i> – <i>I<sub>ref</sub></i> ( <i>I<sub>max</sub></i> ))	0.5-10(100)A
Frequency ( <i>Fn</i> )	50Hz
Active Accuracy Class ( <i>kWh</i> )	A or B(kWh)
Type of circuit	1p2w
Temperature Range	-25°C to +55°C
Ambient Humidity	95% non-condensing
Software/ Firmware Version No	ES1BA10T
CRC Checksum	69A87CAB
Identification Location	LCD
Mechanical Environment	M1
Electromagnetic environment	E2
Bill Of Materials Number(s)	Element BOM No.: 3.417.910.QJ V2.1 3.417.910. QJ V2.13 Mechanical BOM No.: 3.417.910.JG V1.4
IP Rating	IP51
Insulation Protective Class	Class II
LED Pulse Constant	1000imp/ kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	Wire & Crimp
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	LCD
Terminal Arrangement(s)	BS
Location of Manufacturers Address	User Manual


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## 2. Photograph of Meter and Sealing Plan

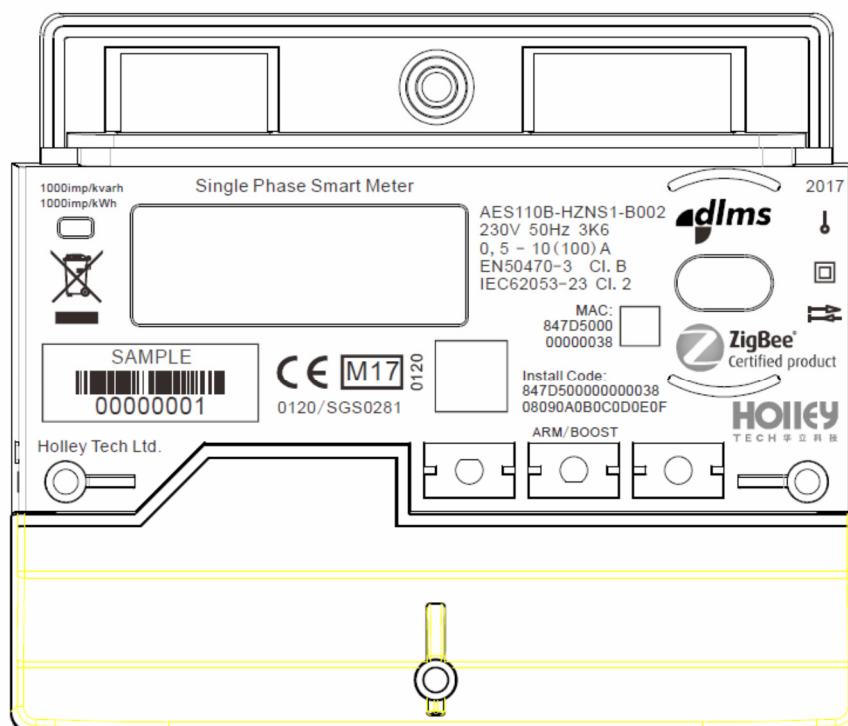
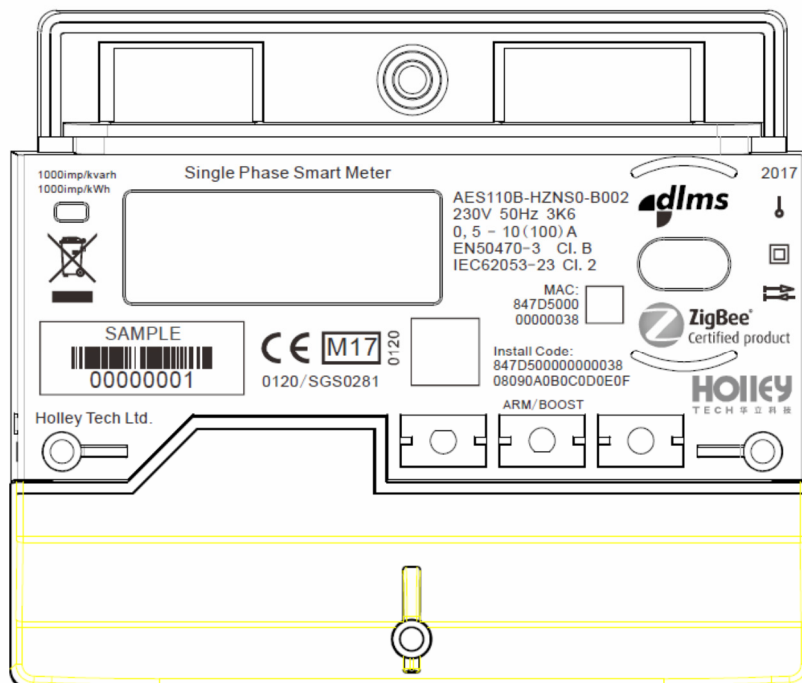



Main cover seals

Terminal cover seal

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### 3. Nameplates



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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 and voltage					
Current	PF Cos	-25 °C	-10 °C	5 °C	30 °C	40 °C	55 °C
I <sub>min</sub>	1.0	0.21	0.17	0.10	0.03	0.07	0.26
I <sub>tr</sub>	1.0	0.21	0.17	0.11	0.01	0.08	0.24
10I <sub>tr</sub>	1.0	0.20	0.17	0.11	0.03	0.10	0.24
I <sub>max</sub>	1.0	0.07	0.09	0.07	0.04	0.09	0.20
I <sub>tr</sub>	0.5ind	0.26	0.23	0.17	0.08	0.09	0.21
10I <sub>tr</sub>	0.5ind	0.23	0.20	0.14	0.05	0.11	0.22
I <sub>max</sub>	0.5ind	0.11	0.13	0.10	0.04	0.08	0.16
I <sub>tr</sub>	0.8cap	0.18	0.15	0.10	0.03	0.10	0.26
10I <sub>tr</sub>	0.8cap	0.18	0.15	0.10	0.07	0.13	0.28
I <sub>max</sub>	0.8cap	0.06	0.08	0.07	0.05	0.09	0.22


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## 5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
AES110B-HZNS0-B002	Single Phase, Active Import/Export (kWh), 230V, 0.5-10(100)A
AES110B-HZNS1-B002	Single Phase, Active Import/Export (kWh), 230V, 0.5-10(100)A, With relay

Modifications to the meter(s) described according to approval No.**0120/SGS0281** 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	19/04/2017	Initial Issue
2	02/03/2018	New BOM number revision due to component change

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