

EU Type Examination Certificate Number: 0120/SGS0609

# Zhejiang Eastron Electronic Co.,Ltd.

No. 52  
Dongjin Road  
Nanhu, Jiaxing  
Zhejiang  
China

Instrument Identification:  
**SDM210 Series**

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

Instrument Traceable Number  
**0120/SGS00609**

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 9 June 2023 until 9 June 2033  
Issue 1

Certification is based on report number(s):  
EMA302597/1 dated 21<sup>st</sup> April 2023

Authorised Signature



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**0120/SGS0609**

Issue Number: 1

Dated: 09<sup>th</sup> June 2023**1. Technical Data**

<b>Manufacturer</b>	Zhejiang Eastron Electronic Co.,Ltd
<b>Meter Type(s)</b>	SDM210-DR, SDM210-BI, SDM210-M
<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 (kWh)</b>	A or B (kWh)
<b>Type of circuit</b>	1p2w
<b>Temperature Range</b>	-40°C to +70°C
<b>Software/ Firmware Version No's</b>	SDM210-M: V01.01 SDM210-DR: V21.01 SDM210-BI: V11.01
<b>CRC Checksums</b>	SDM210-M: D716FCA7 SDM210-DR: 2d24de72 SDM210-Bi: 2d24de72
<b>Identification Location</b>	LCD
<b>Bill of Materials No's</b>	SDM210-DR: DH-JS-210025 V1.3 SDM210-Bi: DH-JS-210025 V1.3 SDM210-M: DH-JS-220089 V1.0
<b>IP Rating</b>	IP51 Must be installed in a suitable IP rated enclosure
<b>Insulation Protective Class</b>	Class II
<b>LED Pulse Constant</b>	1000imp/kWh
<b>Impulse Voltage Rating</b>	6kV
<b>AC Voltage Rating</b>	4kV
<b>Main Cover Sealing Type</b>	Main cover clipped in place and sealed with tamper proof sealing tape
<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>	DIN
<b>Location of Manufacturers Address</b>	Nameplate or Associated Documents

# SGS

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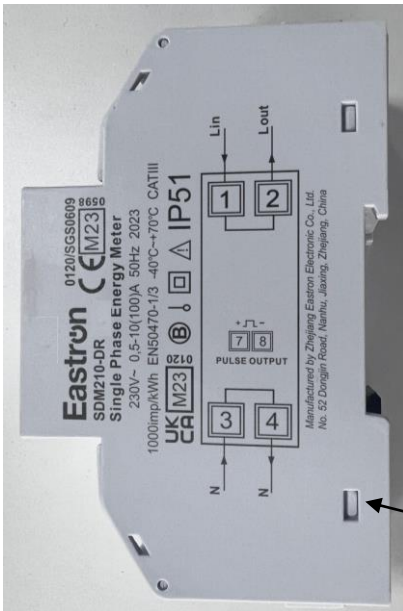
Issue Number: 1

Dated: 09<sup>th</sup> June 2023

## 2. Photograph of Meter and Sealing Plan



Terminal Cover  
Sealing Points

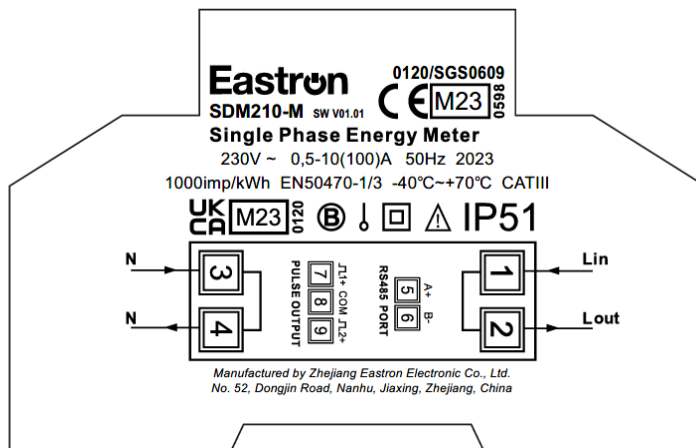
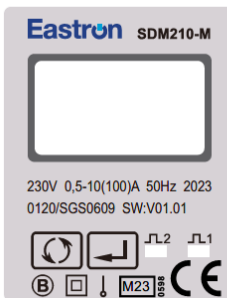
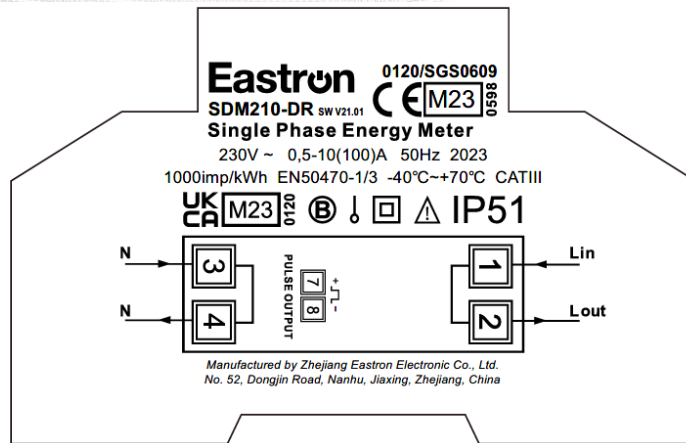
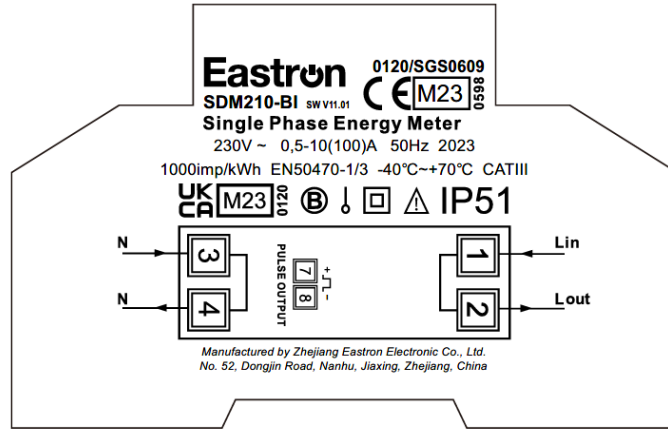


Main Cover  
Sealing Points





**3. Examples of Nameplates**



**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	-40°C	-25°C	-10°C	5°C	30°C	40°C	55°C	70°C
I <sub>min</sub>	1.0	<b>0.14</b>	<b>0.19</b>	<b>0.17</b>	<b>0.16</b>	<b>0.12</b>	<b>0.13</b>	<b>0.12</b>	<b>0.36</b>
I <sub>tr</sub>	1.0	<b>0.15</b>	<b>0.19</b>	<b>0.17</b>	<b>0.15</b>	<b>0.13</b>	<b>0.13</b>	<b>0.12</b>	<b>0.24</b>
10I <sub>tr</sub>	1.0	<b>0.15</b>	<b>0.18</b>	<b>0.16</b>	<b>0.14</b>	<b>0.12</b>	<b>0.12</b>	<b>0.12</b>	<b>0.13</b>
I <sub>max</sub>	1.0	<b>0.43</b>	<b>0.33</b>	<b>0.33</b>	<b>0.33</b>	<b>0.34</b>	<b>0.34</b>	<b>0.34</b>	<b>0.33</b>
I <sub>tr</sub>	0.5ind	<b>0.13</b>	<b>0.11</b>	<b>0.12</b>	<b>0.12</b>	<b>0.13</b>	<b>0.12</b>	<b>0.15</b>	<b>0.44</b>
10I <sub>tr</sub>	0.5ind	<b>0.14</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.11</b>	<b>0.11</b>	<b>0.13</b>	<b>0.21</b>
I <sub>max</sub>	0.5ind	<b>0.16</b>	<b>0.15</b>	<b>0.13</b>	<b>0.14</b>	<b>0.16</b>	<b>0.17</b>	<b>0.17</b>	<b>0.14</b>
I <sub>tr</sub>	0.8cap	<b>0.25</b>	<b>0.21</b>	<b>0.18</b>	<b>0.17</b>	<b>0.13</b>	<b>0.13</b>	<b>0.12</b>	<b>0.21</b>
10I <sub>tr</sub>	0.8cap	<b>0.24</b>	<b>0.22</b>	<b>0.19</b>	<b>0.15</b>	<b>0.13</b>	<b>0.11</b>	<b>0.10</b>	<b>0.10</b>
I <sub>max</sub>	0.8cap	<b>0.28</b>	<b>0.21</b>	<b>0.22</b>	<b>0.23</b>	<b>0.26</b>	<b>0.26</b>	<b>0.25</b>	<b>0.20</b>



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## 5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
SDM210-M	Single Tariff, Total Active Energy, Import/Export Active Energy, Voltage, Current, Power, Apparent Power, Power Demand, Frequency, RS485 Modbus Communication
SDM210-DR	Single Tariff, Voltage, Current, Total Active Energy, Import/Export Active Energy, Resettable Energy, Active Power
SDM210-BI	Single Tariff, Voltage, Current, Total Active Energy, Import/Export Active Energy, Import/Export Active Power, Resettable Energy

Modifications to the meter(s) described according to approval No. **0120/SGS0609** 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	09/06/2023	Initial Issue

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**END OF CERTIFICATE**