



EU Type Examination Certificate Number: **0120/ SGS0213**

## **Zhejiang Eastron Electronic Co.,Ltd**

No. 1369, Chengnan Road,  
Nanhu, Jiaxing  
Zhejiang  
China  
314001

Instrument Identification:  
**SDM72D, SDM72DR, SDM72D-M, SDM72Bi**

Instrument Traceable Number  
**0120/ SGS0213**

**Polyphase, Active Import/Export (kWh), 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 for 10 years from 21<sup>st</sup> April 2016 until 20<sup>th</sup> April 2026  
Issue 5

Certification is based on report number(s) SHES151000648101 dated 19<sup>th</sup> April 2016

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)

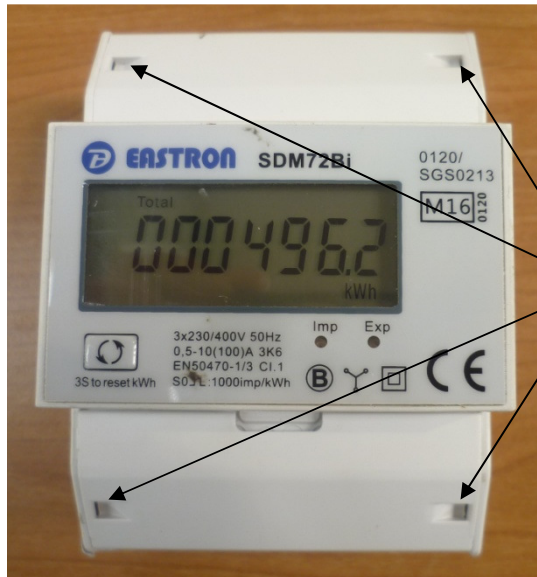
	EU-Type Examination Certificate Number:	
	<b>0120/ SGS0213</b>	
	Issue Number: 5	Dated: 7 <sup>th</sup> August 2019

## 1. Technical Data

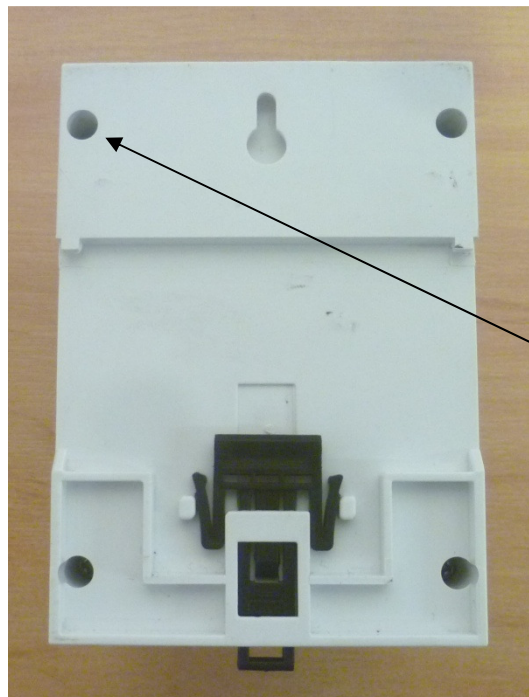
<b>Manufacturer</b>	Zhejiang Eastron Electronic Co Ltd
<b>Meter Types</b>	SDM72D, SDM72DR, SDM72D-M, SDM72Bi
<b>Voltage Rating (<math>U_n</math>)</b>	3 x 230/400V
<b>Current Rating (<math>I_{min} - I_{ref} (I_{max})</math>)</b>	0,5-10(100)A & 0.5-10(80)A
<b>Frequency (<math>F_n</math>)</b>	50Hz
<b>Active Accuracy Class (<math>kWh</math>)</b>	B ( $kWh$ )
<b>Type of circuit</b>	3p4w
<b>Temperature Range</b>	-25°C to +55°C
<b>Software/ Firmware Version No's</b>	SDM72D: V1.1 SDM72DR: V1.1 SDM72Bi: V1.1 SDM72D-M: V1.2
<b>Identification Location</b>	LCD
<b>Bill Of Materials No's</b>	SDM72D: V1.2 SDM72DR: V1.2, SDM72Bi: V1.2 SDM72D-M: DH-JS-170016-1.0
<b>IP Rating</b>	IP51
<b>Insulation Protective Class</b>	Class II
<b>LED Pulse Constant</b>	1000 imp/kWh or 100imp/kWh
<b>Impulse Voltage Rating</b>	6kV
<b>AC Voltage Rating</b>	4kV
<b>Main Cover Sealing Type</b>	Wire & Crimp on terminal cover Meter case sealed with screws
<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>	Associated documents

	EU-Type Examination Certificate Number:	
	<b>0120/ SGS0213</b>	
	Issue Number: 5	Dated: 7 <sup>th</sup> August 2019


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



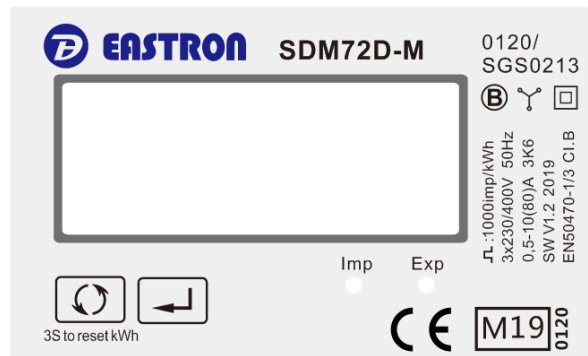
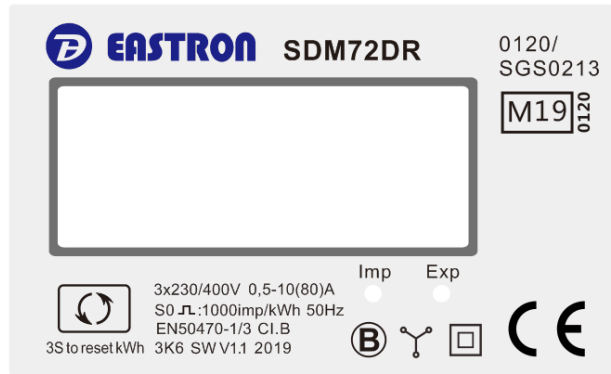
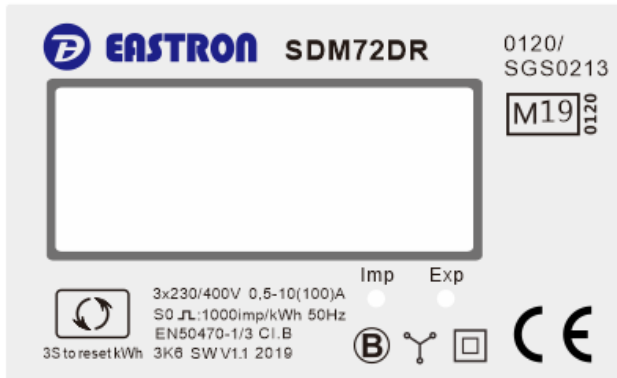
Terminal cover sealing points



Meter case sealing point

	EU-Type Examination Certificate Number:	
	0120/ SGS0213	
	Issue Number: 5	Dated: 7 <sup>th</sup> August 2019

### 3. Nameplates



# SGS

EU-Type Examination Certificate Number:

## 0120/ SGS0213

Issue Number: 5

Dated: 7<sup>th</sup> August 2019

**EASTRON** SDM72Bi 0120/SGS0213

M19 0120

Imp Exp

3x230/400V 0,5-10(100)A  
S0 JL :100imp/kWh 50Hz  
EN50470-1/3 Cl.B  
3S to reset kWh 3K6 SW V1.1 2019

CE

**EASTRON** SDM72D 0120/SGS0213

M19 0120

Imp Exp

3x230/400V 0,5-10(100)A 50Hz  
S0 JL :100imp/kWh SW V1.1  
EN50470-1/3 Cl.B 3K6 2019

CE

**EASTRON** SDM72D-M 0120/SGS0213

M19 0120

Imp Exp

JL :100imp/kWh  
3x230/400V 50Hz  
0,5-10(100)A 3K6  
SW V1.2 2019  
EN50470-1/3 Cl.B

3S to reset kWh

CE

**EASTRON** SDM72DR 0120/SGS0213

M19 0120

Imp Exp

3x230/400V 0,5-10(100)A  
S0 JL :100imp/kWh 50Hz  
EN50470-1/3 Cl.B  
3S to reset kWh 3K6 SW V1.1 2019

CE

**EASTRON** SDM72Bi 0120/SGS0213

M19 0120

Imp Exp

3x230/400V 0,5-10(80)A  
S0 JL :100imp/kWh 50Hz  
EN50470-1/3 Cl.B  
3S to reset kWh 3K6 SW V1.1 2019

CE

**EASTRON** SDM72D 0120/SGS0213

M19 0120

Imp Exp

3x230/400V 0,5-10(80)A 50Hz  
S0 JL :100imp/kWh SW V1.1  
EN50470-1/3 Cl.B 3K6 2019

CE

**EASTRON** SDM72DR 0120/SGS0213

M19 0120

Imp Exp

3x230/400V 0,5-10(80)A  
S0 JL :100imp/kWh 50Hz  
EN50470-1/3 Cl.B  
3S to reset kWh 3K6 SW V1.1 2019

CE

**EASTRON** SDM72D-M 0120/SGS0213

M19 0120

Imp Exp

JL :100imp/kWh  
3x230/400V 50Hz  
0,5-10(80)A 3K6  
SW V1.2 2019  
EN50470-1/3 Cl.B

3S to reset kWh

CE



EU-Type Examination Certificate Number:


**0120/ SGS0213**

Issue Number: 5

Dated: 7<sup>th</sup> August 2019

**4. Calculation of the composite error/ MPE**

		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	<b>0.32</b>	<b>0.24</b>	<b>0.15</b>	<b>0.12</b>	<b>0.15</b>	<b>0.26</b>	
I <sub>tr</sub>	1.0	<b>0.34</b>	<b>0.24</b>	<b>0.15</b>	<b>0.10</b>	<b>0.15</b>	<b>0.30</b>	
10I <sub>tr</sub>	1.0	<b>0.37</b>	<b>0.28</b>	<b>0.17</b>	<b>0.10</b>	<b>0.15</b>	<b>0.28</b>	
I <sub>max</sub>	1.0	<b>0.30</b>	<b>0.24</b>	<b>0.19</b>	<b>0.15</b>	<b>0.17</b>	<b>0.24</b>	
I <sub>tr</sub>	0.5ind	<b>0.51</b>	<b>0.45</b>	<b>0.37</b>	<b>0.30</b>	<b>0.30</b>	<b>0.36</b>	
10I <sub>tr</sub>	0.5ind	<b>0.40</b>	<b>0.32</b>	<b>0.25</b>	<b>0.18</b>	<b>0.22</b>	<b>0.32</b>	
I <sub>max</sub>	0.5ind	<b>0.66</b>	<b>0.62</b>	<b>0.58</b>	<b>0.52</b>	<b>0.51</b>	<b>0.50</b>	
I <sub>tr</sub>	0.8cap	<b>0.44</b>	<b>0.34</b>	<b>0.26</b>	<b>0.16</b>	<b>0.17</b>	<b>0.24</b>	
10I <sub>tr</sub>	0.8cap	<b>0.37</b>	<b>0.25</b>	<b>0.15</b>	<b>0.09</b>	<b>0.15</b>	<b>0.27</b>	
I <sub>max</sub>	0.8cap	<b>0.48</b>	<b>0.42</b>	<b>0.38</b>	<b>0.33</b>	<b>0.31</b>	<b>0.32</b>	
L1								
I <sub>tr</sub>	1.0	<b>0.37</b>	<b>0.33</b>	<b>0.29</b>	<b>0.26</b>	<b>0.28</b>	<b>0.38</b>	
10I <sub>tr</sub>	1.0	<b>0.30</b>	<b>0.21</b>	<b>0.15</b>	<b>0.10</b>	<b>0.17</b>	<b>0.29</b>	
I <sub>max</sub>	1.0	<b>0.23</b>	<b>0.18</b>	<b>0.17</b>	<b>0.11</b>	<b>0.14</b>	<b>0.23</b>	
I <sub>tr</sub>	0.5ind	<b>0.44</b>	<b>0.38</b>	<b>0.35</b>	<b>0.34</b>	<b>0.38</b>	<b>0.44</b>	
10I <sub>tr</sub>	0.5ind	<b>0.31</b>	<b>0.24</b>	<b>0.22</b>	<b>0.19</b>	<b>0.26</b>	<b>0.38</b>	
I <sub>max</sub>	0.5ind	<b>0.29</b>	<b>0.26</b>	<b>0.25</b>	<b>0.22</b>	<b>0.24</b>	<b>0.34</b>	
L2								
I <sub>tr</sub>	1.0	<b>0.61</b>	<b>0.61</b>	<b>0.61</b>	<b>0.61</b>	<b>0.61</b>	<b>0.61</b>	
10I <sub>tr</sub>	1.0	<b>0.19</b>	<b>0.19</b>	<b>0.19</b>	<b>0.19</b>	<b>0.19</b>	<b>0.20</b>	
I <sub>max</sub>	1.0	<b>0.16</b>	<b>0.14</b>	<b>0.12</b>	<b>0.12</b>	<b>0.12</b>	<b>0.12</b>	
I <sub>tr</sub>	0.5ind	<b>0.76</b>	<b>0.77</b>	<b>0.77</b>	<b>0.76</b>	<b>0.77</b>	<b>0.77</b>	
10I <sub>tr</sub>	0.5ind	<b>0.31</b>	<b>0.30</b>	<b>0.30</b>	<b>0.30</b>	<b>0.31</b>	<b>0.32</b>	
I <sub>max</sub>	0.5ind	<b>0.30</b>	<b>0.28</b>	<b>0.27</b>	<b>0.27</b>	<b>0.27</b>	<b>0.27</b>	
L3								
I <sub>tr</sub>	1.0	<b>0.80</b>	<b>0.52</b>	<b>0.38</b>	<b>0.27</b>	<b>0.37</b>	<b>0.54</b>	
10I <sub>tr</sub>	1.0	<b>0.86</b>	<b>0.64</b>	<b>0.50</b>	<b>0.42</b>	<b>0.48</b>	<b>0.63</b>	
I <sub>max</sub>	1.0	<b>1.09</b>	<b>0.97</b>	<b>0.90</b>	<b>0.87</b>	<b>0.89</b>	<b>0.95</b>	
I <sub>tr</sub>	0.5ind	<b>1.04</b>	<b>0.92</b>	<b>0.82</b>	<b>0.79</b>	<b>0.82</b>	<b>0.92</b>	
10I <sub>tr</sub>	0.5ind	<b>1.03</b>	<b>0.88</b>	<b>0.78</b>	<b>0.74</b>	<b>0.78</b>	<b>0.88</b>	
I <sub>max</sub>	0.5ind	<b>1.02</b>	<b>0.92</b>	<b>0.92</b>	<b>0.83</b>	<b>0.87</b>	<b>0.94</b>	


	EU-Type Examination Certificate Number:	
	<b>0120/ SGS0213</b>	
	Issue Number: 5	Dated: 7 <sup>th</sup> August 2019

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

	EU-Type Examination Certificate Number:	
	<b>0120/ SGS0213</b>	
	Issue Number: 5	Dated: 7 <sup>th</sup> August 2019


## 5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
SDM72D	3x230/400V, 0.5-10(100)A or 0.5-10(80)A 1000imp/kWh or 100imp/kWh Shows only total active energy, without resettable kWh
SDM72DR	3x230/400V, 0.5-10(100)A or 0.5-10(80)A 1000imp/kWh or 100imp/kWh Shows total active energy, resettable kWh, total active power
SDM72D-M	3x230/400V, 0.5-10(100)A or 0.5-10(80)A 1000imp/kWh or 100imp/kWh Shows total active energy, total active power, import and export energy, resettable import and export energy. RS485 communication.
SDM72Bi	3x230/400V, 0.5-10(100)A or 0.5-10(80)A 1000imp/kWh or 100imp/kWh Shows total active energy, total active power, import and export energy, resettable import and export energy.

Modifications to the meter(s) described according to approval No. **0120/ SGS0213** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).



	EU-Type Examination Certificate Number:	
	<b>0120/ SGS0213</b>	
	Issue Number: 5	Dated: 7 <sup>th</sup> August 2019

## 6. Document Revision History

Issue	Date	Comments
1	21/04/2016	Initial Issue
2	18/07/2016	Revised BOM numbers
3	26/03/2018	Model SDM72D-M added to approval
4	07/05/2019	Additional variants 0.5-10(80)A added to approval
5	07/08/2019	Meter constant 100imp/kWh variant added to approval

This document is issued by the Company subject to its General Conditions for Certification Services, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>.

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested *and such sample(s) are retained for 28 days only.*

**END OF CERTIFICATE**