



EU Type Examination Certificate Number: 0120/SGS0701

Zhejiang Eastron Electronic Co., Ltd

No.52, Dongjin Road
Nanhu
Jiaxing
Zhejiang
China

Instrument Identification:
SDM120 Series

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

Instrument Traceable Number
0120/SGS0701

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 from 3 May 2024 until 2 May 2034
Issue 1


Certification is based on report number(s): SHES231202449601 Dated 23rd April 2024, SHES231202449602 Dated 23rd April 2024
EMA324803/1

Authorised Signature

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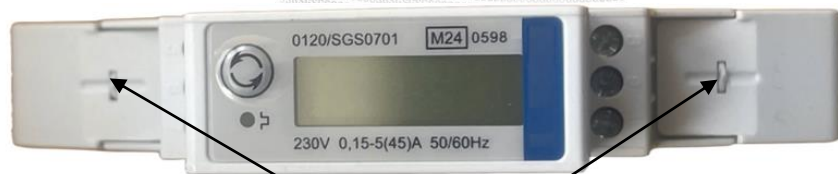


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	0120/SGS0701	
	Issue Number: 1	Dated: 03 rd May 2024

1. Technical Data

Manufacturer	Zhejiang Eastron Electronic Co., Ltd.
Meter Type(s)	SDM120-M, SDM120-MB, SDM120-P, SDM120-DB, SDM120-D, SDM120-A
Voltage Rating (<i>Un</i>)	230V
Current Rating (<i>I_{min}</i> – <i>I_{ref}</i> (<i>I_{max}</i>))	0.15-5(45)A
Frequency (<i>Fn</i>)	50/60Hz
Active Accuracy Class (<i>kWh</i>)	A or B or C (kWh)
Type of circuit	1p2w
Temperature Range	-40°C to +70°C
Software/ Firmware Version No's	V02.04
CRC Checksum No's	SDM120-M: EDB2448D SDM120-MB: 35053407 SDM120-P: 4F6B493C SDM120-DB: 56F9F020 SDM120-D: 56F9F020 SDM120-A: 161E1878
Identification Location	Nameplate
Bill of Materials No's	SDM120-M: DH-JS-230052 V1.0 SDM120-MB: DH-JS-230071 V1.0 SDM120-P: DH-JS-230070 V1.0 SDM120-DB: DH-JS-230041 V1.0 SDM120-D: DH-JS- 230042 V1.0 SDM120-A: DH-JS-230040 V1.0
IP Rating	IP51 Front Display Meter body not rated. Must be installed in a suitable IP rated enclosure
Insulation Protective Class	Class II
LED Pulse Constant	1000imp/ kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	Main cover clipped in place and sealed with tamper proof sealing tape
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	SDM120-A: Mechanical LCD: SDM120-M, SDM120-MB, SDM120-P, SDM120-DB, SDM120-D,

2. Photograph of Meter and Sealing Plan



Terminal Cover Sealing Points



Main Cover Sealing Points

SGS

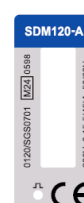
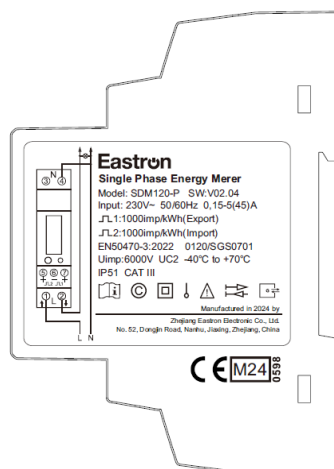
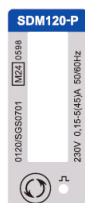
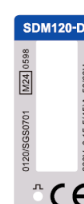
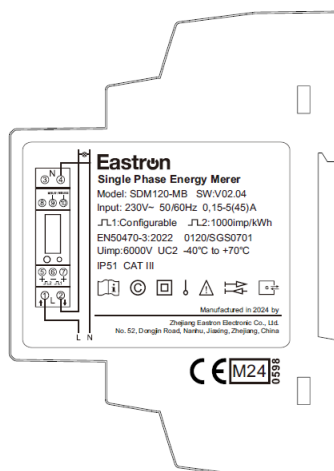
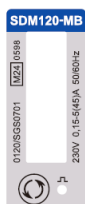
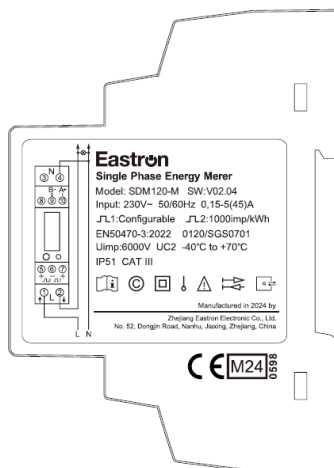
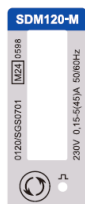
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3. Examples of Nameplates





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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 & Voltage							
Current	PF Cos	-40°C	-25°C	-10°C	5°C	30°C	40°C	55°C	70°C
I _{min}	1.0	0.07	0.06	0.05	0.05	0.08	0.09	0.14	0.20
I _{tr}	1.0	0.08	0.04	0.03	0.03	0.07	0.09	0.15	0.24
10I _{tr}	1.0	0.06	0.04	0.02	0.02	0.02	0.04	0.11	0.15
I _{max}	1.0	0.05	0.07	0.05	0.05	0.06	0.08	0.14	0.20
I _{tr}	0.5ind	0.15	0.28	0.12	0.12	0.07	0.05	0.03	0.10
10I _{tr}	0.5ind	0.15	0.14	0.13	0.14	0.10	0.07	0.01	0.08
I _{max}	0.5ind	0.12	0.13	0.17	0.19	0.21	0.16	0.12	0.07
I _{tr}	0.8cap	0.03	0.02	0.05	0.07	0.14	0.16	0.21	0.29
10I _{tr}	0.8cap	0.03	0.02	0.05	0.06	0.11	0.14	0.21	0.29
I _{max}	0.8cap	0.14	0.13	0.11	0.10	0.09	0.12	0.17	0.23


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5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
SDM120-A	Single Phase 230V, 0.15-5(45)A, Active (kWh), Mechanical Register, Pulse Output
SDM120-D	Single Phase 230V, 0.15-5(45)A, Active (kWh), LCD, Pulse Output
SDM120-DB	Single Phase 230V, 0.15-5(45)A, Active (kWh), LCD with Backlight, Pulse Output
SDM120-P	Single Phase 230V, 0.15-5(45)A, Active (kWh), Reactive (kvarh), Multi-parameters, LCD with Backlight, Pulse Output
SDM120-M	Single Phase 230V, 0.15-5(45)A, Active (kWh), Reactive (kvarh) LCD with Backlight, Pulse Output, RS485
SDM120-MB	Single Phase 230V, 0.15-5(45)A, Active (kWh), Reactive (kvarh) LCD with Backlight, Pulse Output, Mbus

Modifications to the meter(s) described according to approval No.**0120/SGS0701** 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	03/05/2024	Initial Issue



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END OF CERTIFICATE