



EU Type Examination Certificate Number: 0120/SGS0702

Zhejiang Eastron Electronic Co., Ltd

No.52, Dongjin Road
Nanhu
Jiaxing
Zhejiang
China

Instrument Identification:
SDM120CT Series

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

Instrument Traceable Number
0120/SGS0702

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

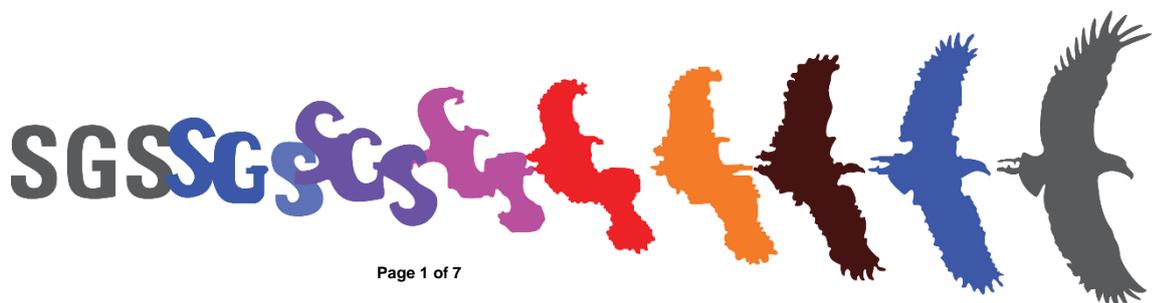
This certificate is valid from 14 August 2024 until 13 August 2034
Issue 1

Certification is based on report number(s): SHES231202449801 Dated 25th July 2024, SHES231202449802 Dated 25th July 2024
EMA327320/1

Authorised Signature

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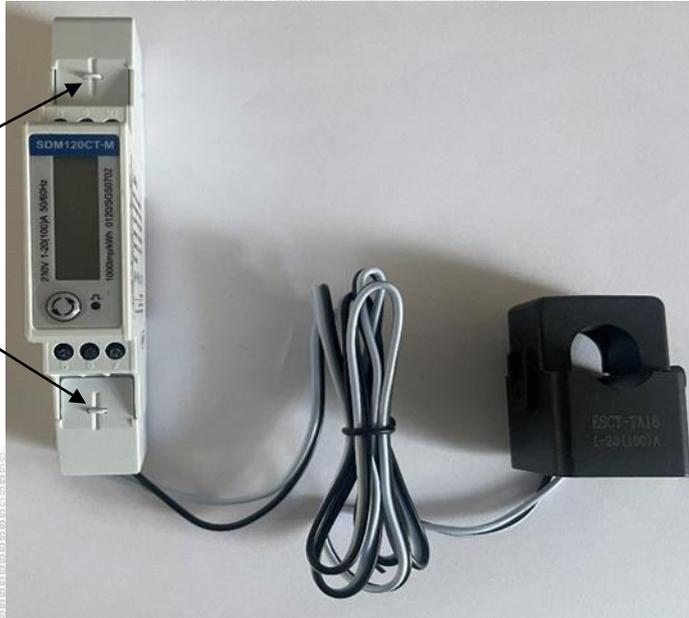
Issue Number: 1

Dated: 14 August 2024

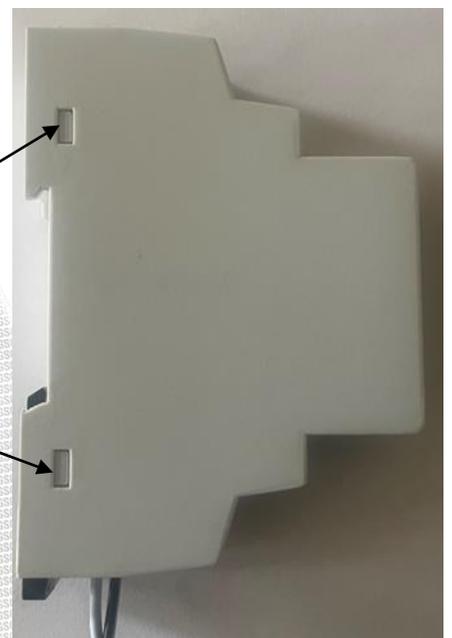
1. Technical Data

Manufacturer	Zhejiang Eastron Electronic Co., Ltd.
Meter Type(s)	SDM120CT-M, SDM120CT-MA, SDM120CT-S, SDM120CT-MB, SDM120CT-P, SDM120CT-RJ
Voltage Rating (U_n)	230V
Current Rating ($I_{min} - I_{ref} (I_{max})$)	1-20(100)A
Frequency (F_n)	50/60Hz
Active Accuracy Class (kWh)	A or B (kWh)
Type of circuit	1p2w
Temperature Range	-40°C to +70°C
Software/ Firmware Version No's	V02.06
CRC Checksum No's	SDM120CT-M, SDM120CT-MA, SDM120CT-S, SDM120CT-RJ: 8c3c7433 SDM120CT-MB: 2418A0C5 SDM120CT-P: 069DA60E
Identification Location	Nameplate
Bill of Materials No's	SDM120CT-M: DH-JS-230046 V1.0 SDM120CT-MA: DH-JS-230046 V1.0 SDM120CT-MB: DH-JS-230054 V1.0 SDM120CT-P: DH-JS-230055 V1.0 SDM120CT-RJ: DH-JS-230053 V1.0 SDM120CT-S: DH-JS-230072 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	LCD

2. Photograph of Meter and Sealing Plan



Terminal Cover Sealing Points



Main Cover Sealing Points

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	0.59	0.37	0.21	0.11	0.16	0.22	0.23	0.42
I _{tr}	1.0	0.54	0.37	0.21	0.12	0.10	0.14	0.15	0.31
10I _{tr}	1.0	0.37	0.27	0.17	0.11	0.10	0.13	0.16	0.31
I _{max}	1.0	0.15	0.12	0.12	0.11	0.12	0.16	0.12	0.22
I _{tr}	0.5ind	0.60	0.48	0.36	0.34	0.33	0.34	0.59	0.72
10I _{tr}	0.5ind	0.31	0.29	0.28	0.28	0.32	0.36	0.41	0.51
I _{max}	0.5ind	0.31	0.30	0.28	0.27	0.29	0.35	0.44	0.72
I _{tr}	0.8cap	1.00	0.68	0.37	0.15	0.06	0.09	0.06	0.16
10I _{tr}	0.8cap	0.57	0.39	0.21	0.10	0.05	0.06	0.08	0.23
I _{max}	0.8cap	0.11	0.07	0.08	0.06	0.06	0.06	0.06	0.06



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5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
SDM120CT-M	Single Phase 230V, 1-20(100)A, Active Import/Export (kWh), 2 Electrical Pulse Outputs, RS485 Communication, Concave Cover
SDM120CT-MA	Single Phase 230V, 1-20(100)A, Active Import/Export (kWh), 2 Electrical Pulse Outputs, RS485 Communication, Concave Cover
SDM120CT-S	Single Phase 230V, 1-20(100)A, Active Import/Export (kWh), 2 Electrical Pulse Outputs, RS485 Communication
SDM120CT-MB	Single Phase 230V, 1-20(100)A, Active Import/Export (kWh), 2 Electrical Pulse Outputs, Mbus Communication, Concave Cover
SDM120CT-P	Single Phase 230V, 1-20(100)A, Active Import/Export (kWh), 2 Electrical Pulse Outputs, Concave Cover
SDM120CT-RJ	Single Phase 230V, 1-20(100)A, Active Import/Export (kWh), RS485 Communication, Concave Cover

Modifications to the meter(s) described according to approval No. **0120/SGS0702** 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	14/08/2024	Initial Issue

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