



EU Type Examination Certificate Number: **0120/SGS0141**

Zhejiang Eastron Electronic Co., Ltd

No 1369 Chengnan Road
Jiaxing
Zhejiang
China

Instrument Identification
SDM120 Series

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

Instrument Traceable Number
0120/ SGS0141

has been assessed and certified as meeting the requirements of

EU Directive 2014/32/EU **on Measuring Instruments 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 until 17th February 2024
Issue 4

Certification is based on report number(s) SHES130800321401 dated 18th February 2014


EMA241425

Authorised Signature

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1. Technical Data

	EU-Type Examination Certificate Number:	
	0120/SGS0141	
	Issue Number: 4	Dated: 9 th August 2019

Manufacturer	Zhejiang Eastron Electronic Co., Ltd.
Meter Types	SDM120A, SDM120D, SDM120DB, SDM120M, SDM120MB, SDM120P, SDM120CTM, SDM120CTMB, SDM120CTP
Voltage Rating (U_n)	230V
Current Rating ($I_{min} - I_{ref} (I_{max})$)	Direct Connected 0.25-5(45)A CT Connected 0.25-5(6)A
Frequency (F_n)	50Hz
Active Accuracy Class (kWh)	A or B (kWh)
Type of circuit	1p2w
Temperature Range	-25°C to +55°C
Software/ Firmware Version No's	SDM120A, SDM120D, SDM120DB: V1.2 SDM120M : V2.4 SDM120MB : V2.4 SDM120P : V2.4 SDM120CTM : V2.5 SDM120CTMB : V2.5 SDM120CTP : V2.5 SDM120A V2, SDM120D V2, SDM120DB V2: V2.4
CRC Checksum No's	SDM120A, SDM120D, SDM120DB: 0x00008E1E SDM120M, SDM120MB, SDM120P : 0x0000272C SDM120CTM, SDM120CTMB, SDM120CTP: 0x0000B594 SDM120A V2, SDM120D V2, SDM120DB V2: 0x0000272C
Identification Location	Meter Case
Bill Of Materials No's	SDM120A: DH-JS-150002-1.5 SDM120A V2: DH-JS-190006-1.0 SDM120D/DB: DH-JS-150003-1.5 SDM120D V2: DH-JS-180033-1.0 SDM120M : DH-JS-170009-1.2 SDM120DB V2: DH-JS-190009-1.0 SDM120MB : DH-JS-170026-1.0 SDM120P : DH-JS-170021-1.0 SDM120CTM : DH-JS-170014-1.1 SDM120CTMB : DH-JS-170027-1.0 SDM120CTP : DH-JS-170025-1.0
IP Rating	IP51
Insulation Protective Class	Class II
LED Pulse Constant	1000imp/ kWh & 100imp/kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	4 x Wire & Crimp
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	LCD: SDM120D, SDM120DB, SDM120M, SDM120MB, SDM120P, SDM120CTM, SDM120CTMB, SDM120CTP Mechanical: SDM120A

2. Example of Meter Sealing Points

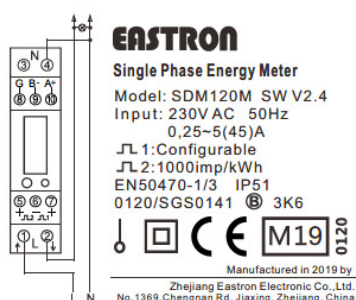
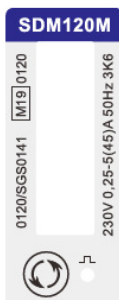
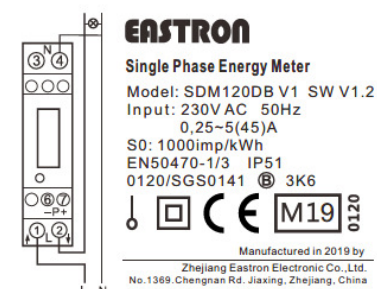
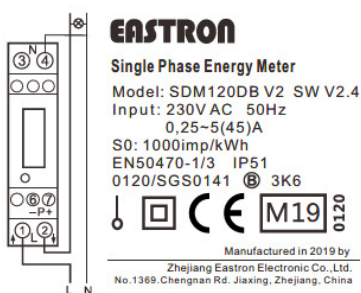
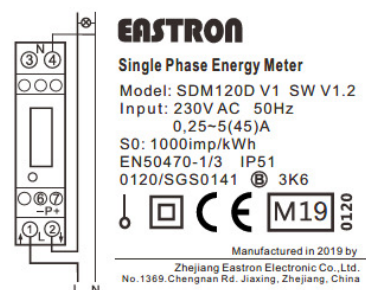
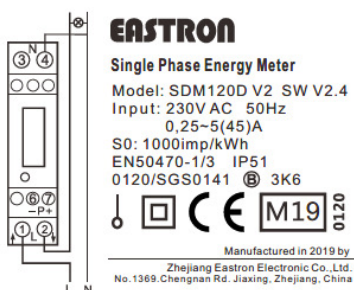
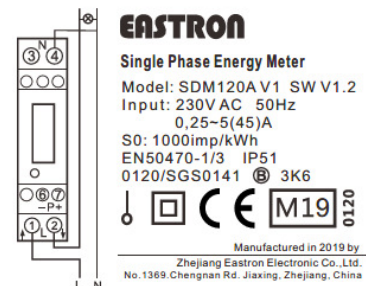
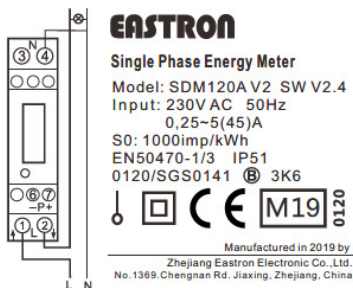
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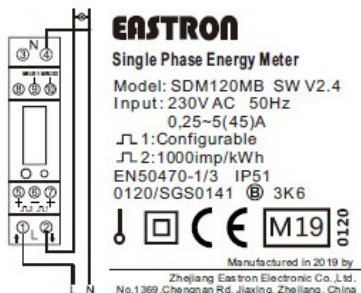
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EASTRON

Single Phase Energy Meter

Model: SDM120MB SW V2.4

Input: 230V AC 50Hz

0,25~5(45)A

1: Configurable

2: 1000imp/kWh

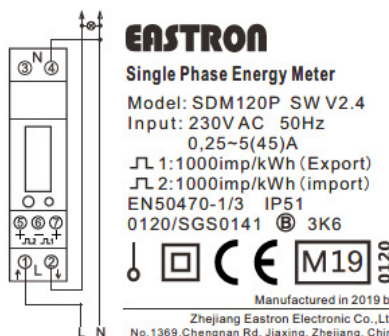
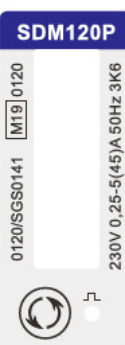
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0120/SGS0141 3K6

Manufactured in 2019 by

Zhejiang Eastron Electronic Co., Ltd.

No.1369.Chengnan Rd. Jiaxing, Zhejiang, China



EASTRON

Single Phase Energy Meter

Model: SDM120P SW V2.4

Input: 230V AC 50Hz

0,25~5(45)A

1: 1000imp/kWh (Export)

2: 1000imp/kWh (import)

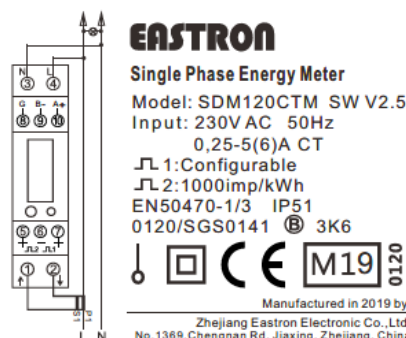
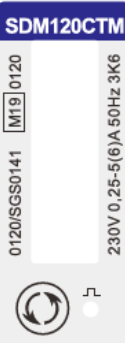
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Manufactured in 2019 by

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No.1369.Chengnan Rd. Jiaxing, Zhejiang, China



EASTRON

Single Phase Energy Meter

Model: SDM120CTM SW V2.5

Input: 230V AC 50Hz

0,25-5(6)A CT

1: Configurable

2: 1000imp/kWh

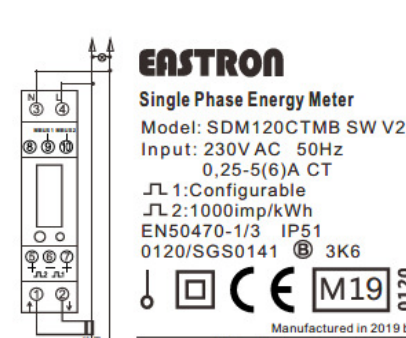
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Manufactured in 2019 by

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No.1369.Chengnan Rd. Jiaxing, Zhejiang, China



EASTRON

Single Phase Energy Meter

Model: SDM120CTMB SW V2.5

Input: 230V AC 50Hz

0,25-5(6)A CT

1: Configurable

2: 1000imp/kWh


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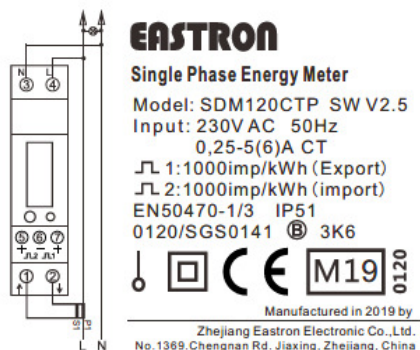
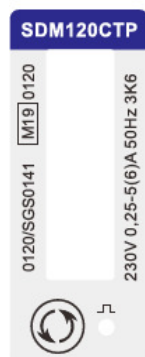
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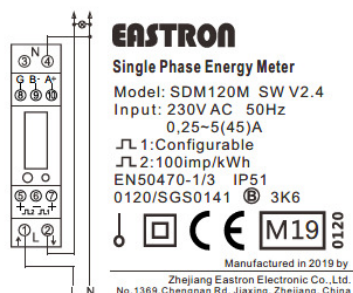
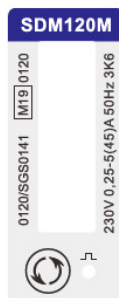
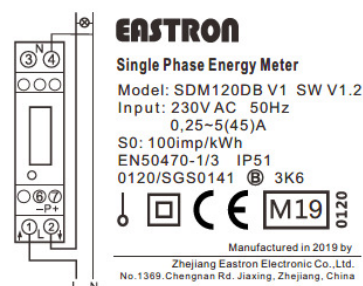
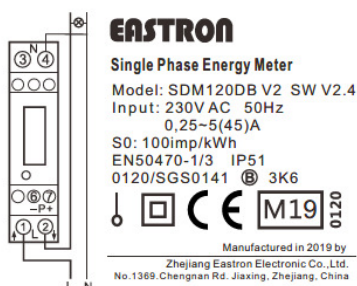
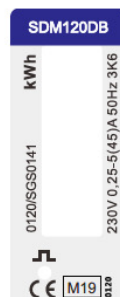
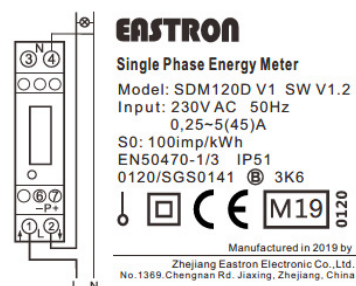
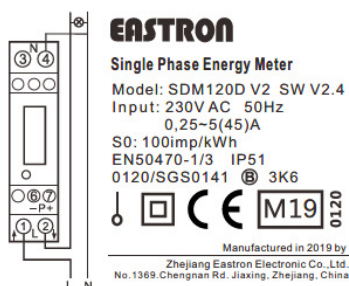
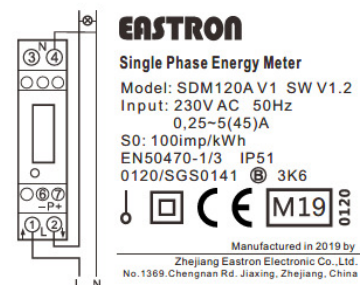
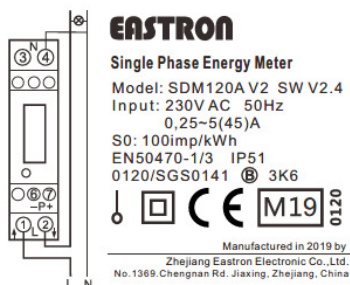
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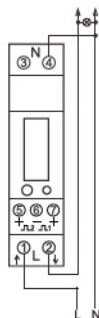
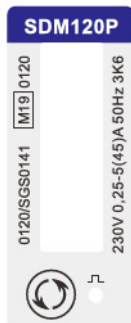
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EASTRON

Single Phase Energy Meter

Model: SDM120P SW V2.4

Input: 230V AC 50Hz

0,25-5(45)A

⌚ 1:100imp/kWh (Export)

⌚ 2:100imp/kWh (import)

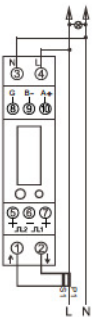
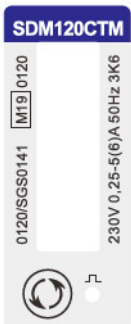
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EASTRON

Single Phase Energy Meter

Model: SDM120CTM SW V2.5

Input: 230V AC 50Hz

0,25-5(6)A CT

⌚ 1:Configurable

⌚ 2:100imp/kWh

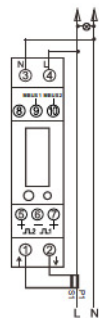
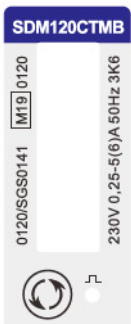
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EASTRON

Single Phase Energy Meter

Model: SDM120CTMB SW V2.5

Input: 230V AC 50Hz

0,25-5(6)A CT

⌚ 1:Configurable

⌚ 2:100imp/kWh

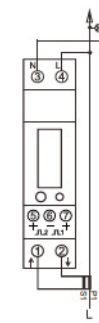
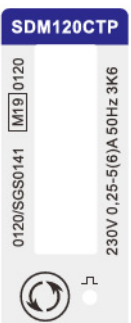
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EASTRON

Single Phase Energy Meter

Model: SDM120CTP SW V2.5

Input: 230V AC 50Hz

0,25-5(6)A CT

⌚ 1:100imp/kWh (Export)

⌚ 2:100imp/kWh (import)


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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 _{min}	1.0	0.12	0.12	0.12	0.13	0.12	0.12
I _{tr}	1.0	0.16	0.16	0.16	0.16	0.16	0.16
10I _{tr}	1.0	0.17	0.16	0.16	0.16	0.16	0.16
I _{max}	1.0	0.13	0.13	0.13	0.13	0.13	0.13
I _{tr}	0.5ind	0.29	0.29	0.29	0.29	0.29	0.29
10I _{tr}	0.5ind	0.40	0.40	0.40	0.40	0.40	0.40
I _{max}	0.5ind	0.16	0.16	0.16	0.16	0.16	0.16
I _{tr}	0.8cap	0.24	0.24	0.24	0.24	0.24	0.24
10I _{tr}	0.8cap	0.31	0.31	0.31	0.31	0.31	0.31
I _{max}	0.8cap	0.09	0.09	0.09	0.09	0.09	0.09


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5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
SDM120D	Single Phase 230V, 0.25-5(45)A
SDM120DB	Single Phase 230V, 0.25-5(45)A, backlight
SDM120A	Single Phase 230V, 0.25-5(45)A Mechanical register
SDM120M	Single Phase 230V, 0.25-5(45)A, RS485 Modbus
SDM120P	Single Phase, 230V, 0.25-5(45)A
SDM120MB	Single Phase, 230V, 0.25-5(45)A, Mbus EN13757-3
SDM120A V2	Single Phase 230V, 0.25-5(45)A Mechanical register
SDM120D V2	Single Phase 230V, 0.25-5(45)A
SDM120DB V2	Single Phase 230V, 0.25-5(45)A backlight
SDM120CTP	Single Phase 230V, 0.25-5(6)A
SDM120CTM	Single Phase 230V, 0.25-5(6)A. RS485, Modbus
SDM120CTMB	Single Phase 230V, 0.25-5(6)A. M-Bus EN13757-3

Modifications to the meter(s) described according to approval No.**0120/ SGS0141** 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	18/02/2014	Initial Issue
2	27/11/2015	Version SDM120-Modbus added to approval
3	09/01/2018	SDM120CT models added to approval
4	09/08/2019	Case modification. SDM120A V2, SDM120D V2, SDM120DB V2. 100imp/kWh option included

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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