EU Type Examination Certificate Number: **0120/SGS0206**

Zhejiang Eastron Electronic Co.,Ltd.

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

Instrument Identification:
SDM230 Series

Instrument Traceable Number
0120/SGS0206

Single Phase, Active Import/ Export (kWh), Indoor, 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 30th September 2015 to 29th September 2025
Issue 5

Certification is based on report number(s) SHES141200649301 issued 16th April 2015
EMA207767 issued 9th October 2015
EMA281302/1

Authorised Signature

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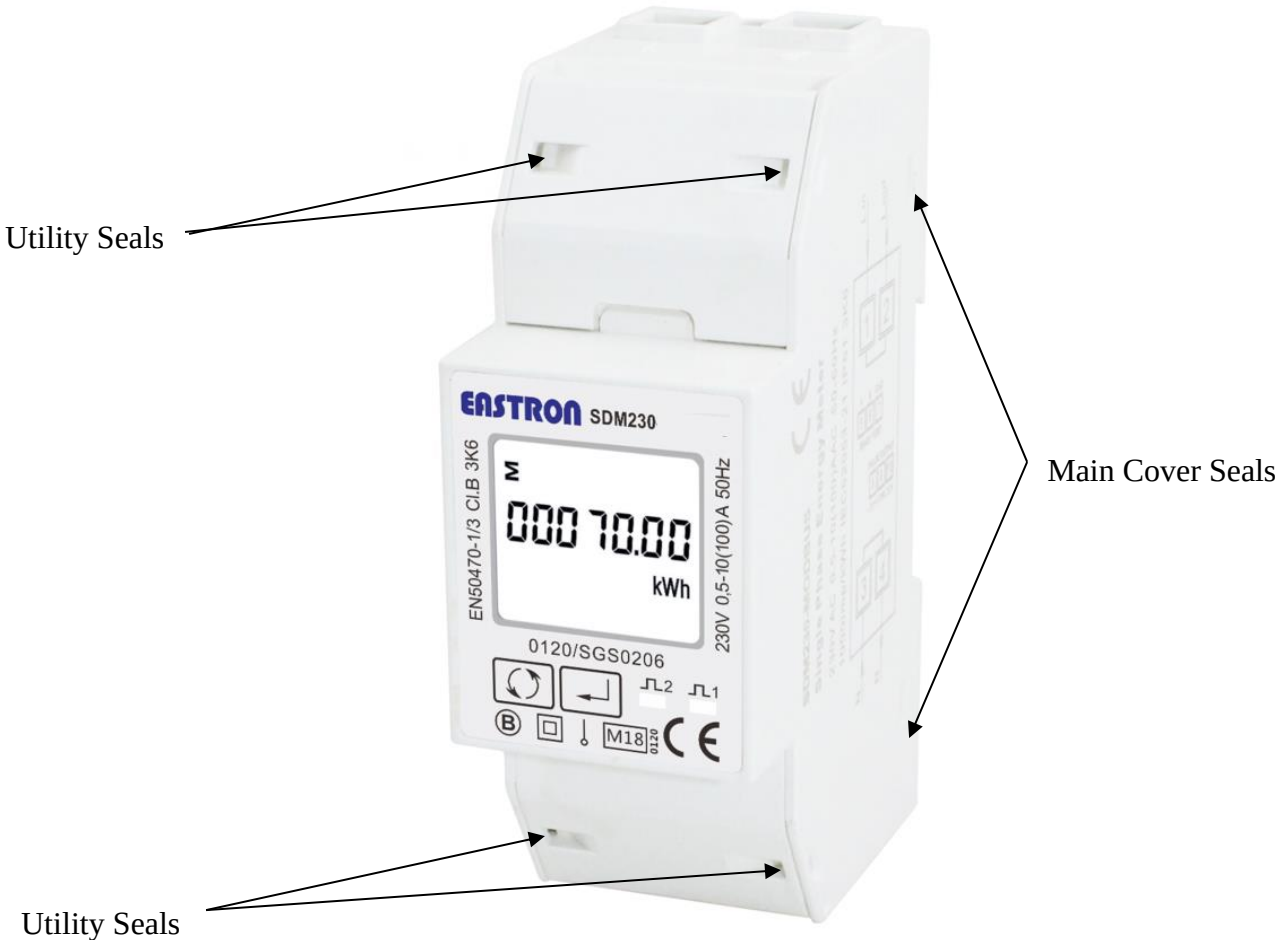
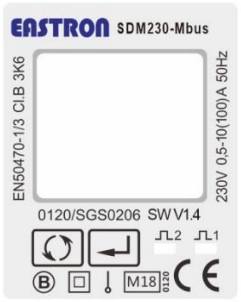
1. Technical Data

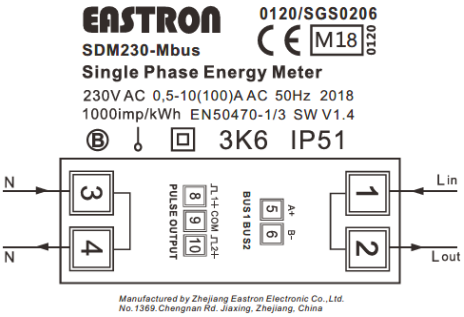
Manufacturer	Zhejiang Eastron Electronic Co.,Ltd
Meter Type(s)	SDM230-Modbus, SDM230-Bi, SDM230-DR,SDM230-Pulse, SDM230-Mbus V1, SDM230-Mbus V2, SDM230-2T, SDM230M-DI, SDM230-LoRa
Voltage Rating *(Un)*	230V
Current Rating *(Imin – Iref (Imax))*	0.5-10(100)A
Frequency *(Fn)*	50Hz
Active Accuracy Class *(kWh)*	A or B (kWh)
Type of circuit	1p2w
Temperature Range	-25ºC to +55ºC
Software Version No's	SDM230-Modbus, SDM230-Bi, SDM230-DR, SDM230-Pulse:V1.2 SDM230-2T: V1.3 SDM230-Mbus V1, SDM230-Mbus V2: V1.4 SDM230M-DI: V1.1 SDM230-LoRa: V2.3
Checksum No's	SDM230-Modbus, SDM230-Bi, SDM230-DR, SDM230-Pulse, SDM230-Mbus: 0x000052F2 SDM230-2T: 0x00001AD5 SDM230-Mbus V1, SDM230-Mbus V2: 0x00004D23 SDM230M-DI: 0X2547 SDM230-LoRa: 0XB1F2
Identification Location	Nameplate
Bill Of Materials No.'s	SDM230-Modbus, SDM230 Bi, SDM230 DR, SDM230 Pulse: 20150929 SDM230-2T: DH-JS-180009-1.0 SDM230-Mbus: DH-JS-180017-V1.0 SDM230-Mbus V2: DH-JS-180029-V1.0 SDM230M-DI: DH-JS-200012 SDM230-LoRa: DH-JS200010
IP Rating	IP51
Insulation Protective Class	Class II
LED Pulse Constant	1000imp/ kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Terminal Cover Sealing Type	4 x Wire & Crimp
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	LCD

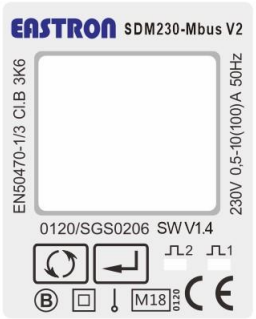
2. Photograph of Meter and Sealing Plan

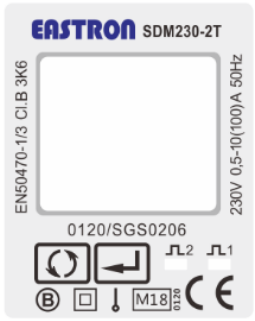


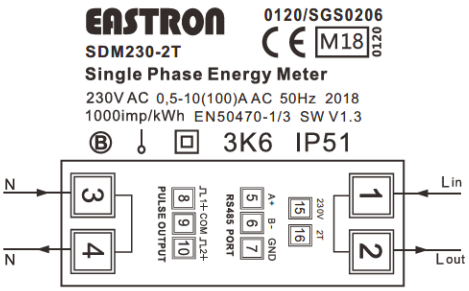
3. Nameplates and Markings

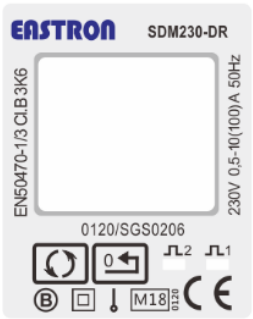


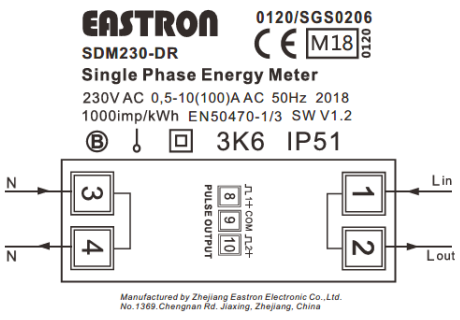


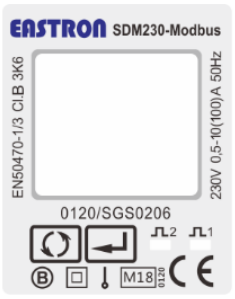


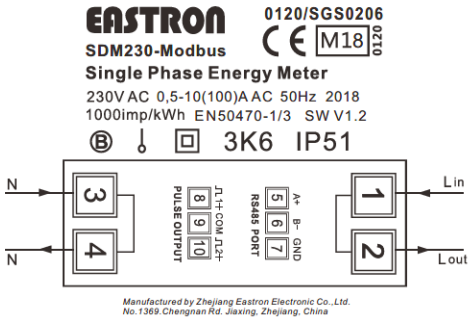


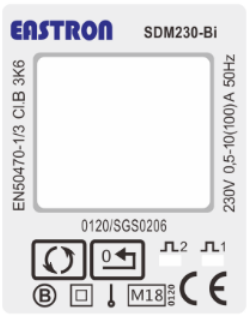







EASTRON SDM230-Modbus
EN50470-1/3 Cl.B 3K6
230V 0,5-10(100)A 50Hz
0120/SGS0206
M18


EASTRON
0120/SGS0206
SDM230-Modbus
M18
Single Phase Energy Meter
230V AC 0,5-10(100)A AC 50Hz 2018
1000imp/kWh EN50470-1/3 SW V1.2
3K6 IP51
N
N
Lin
Lout
PULSE OUTPUT
RS485 PORT
GND
Manufactured by Zhejiang Eastron Electronic Co.,Ltd.
No.1369.Chengnan Rd. Jiaxing, Zhejiang, China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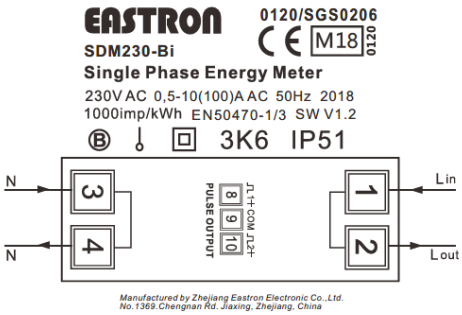
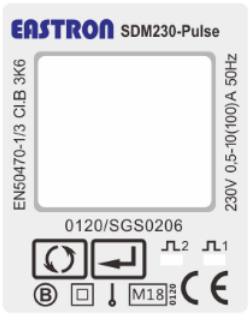
EN50470-1/3 Cl.B 3K6
230V 0,5-10(100)A 50Hz
0120/SGS0206
M18


EASTRON
0120/SGS0206
SDM230-Bi
M18
Single Phase Energy Meter
230V AC 0,5-10(100)A AC 50Hz 2018
1000imp/kWh EN50470-1/3 SW V1.2
3K6 IP51
N
N
Lin
Lout
PULSE OUTPUT
Manufactured by Zhejiang Eastron Electronic Co.,Ltd.
No.1369.Chengnan Rd. Jiaxing, Zhejiang, China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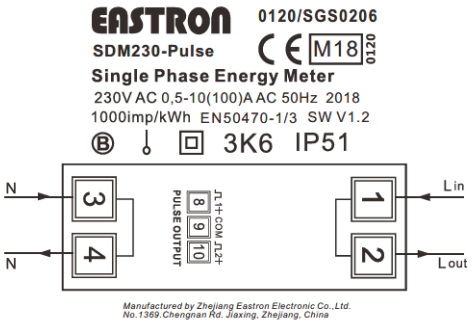
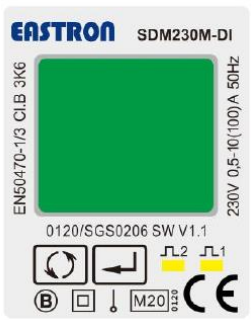
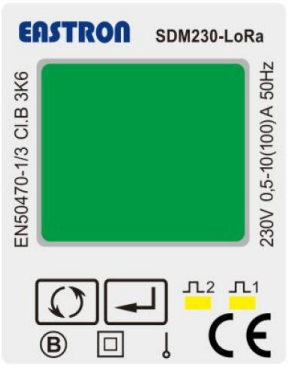
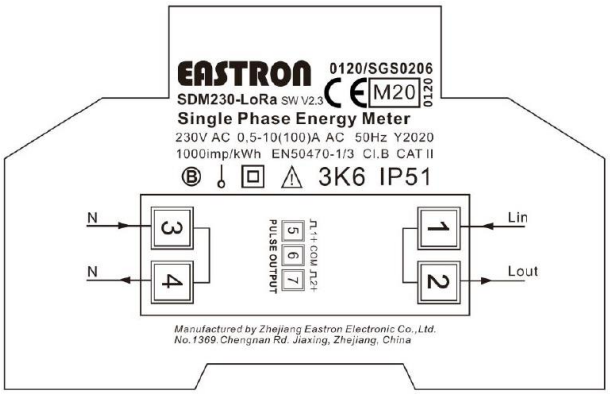
EN50470-1/3 Cl.B 3K6
230V 0,5-10(100)A 50Hz
0120/SGS0206
M18


EASTRON
0120/SGS0206
SDM230-Pulse
M18
Single Phase Energy Meter
230V AC 0,5-10(100)A AC 50Hz 2018
1000imp/kWh EN50470-1/3 SW V1.2
3K6 IP51
N
N
Lin
Lout
PULSE OUTPUT
Manufactured by Zhejiang Eastron Electronic Co.,Ltd.
No.1369.Chengnan Rd. Jiaxing, Zhejiang, China


EASTRON SDM230M-DI
EN50470-1/3 Cl.B 3K6
230V 0,5-10(100)A 50Hz
0120/SGS0206 SW V1.1
M20


EASTRON
0120/SGS0206
SDM230M-DI SW V1.1
M20
Single Phase Energy Meter
230V AC 0,5-10(100)A AC 50Hz 2020
1000imp/kWh EN50470-1/3 CAT II
3K6 IP51
Lout
Nout
Lin
Nin
RS485 PORT
GND
Manufactured by Zhejiang Eastron Electronic Co.,Ltd.
No.1369.Chengnan Rd. Jiaxing, Zhejiang, China


EASTRON
SDM230-LoRa
EN50470-1/3 Cl.B 3K6
230V 0,5-10(100)A 50Hz
2
1


EASTRON
0120/SGS0206
SDM230-LoRa SW V2.3
M20
0120
Single Phase Energy Meter
230V AC 0,5-10(100)A AC 50Hz Y2020
1000imp/kWh EN50470-1/3 Cl.B CAT II
3K6 IP51
N
N
3
4
5
6
7
PULSE OUTPUT
1
2
Lin
Lout
Manufactured by Zhejiang Eastron Electronic Co.,Ltd.
No.1369 Chengnan Rd. Jiaxing, Zhejiang, China

4. Influence factors for temperature, frequency and voltage

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:-

$$\delta e\,(T, U, f) = \sqrt{(\delta e^2\,(T, I, \cos\varphi)\,,\ \delta e^2\,(U, I, \cos\varphi)\,,\ \delta e^2\,(f, I, \cos\varphi))}$$

where

$\delta e(T, I, \cos\varphi)$ = Additional error due to variation of the temperature at the same load
$\delta e(U, I, \cos\varphi)$ = Additional error due to variation of the voltage at the same load
$\delta e(f, I, \cos\varphi)$ = Additional error due to variation of the frequency at the same load

Current	**PF Cos**	-25°C	-10°C	5°C	30°C	40°C	55°C
Imin	1.0	0.45	0.33	0.23	0.15	0.17	0.23
Itr	1.0	0.44	0.31	0.19	0.07	0.10	0.18
10Itr	1.0	0.42	0.29	0.18	0.03	0.08	0.16
Imax	1.0	0.27	0.19	0.12	0.03	0.06	0.12
Itr	0.5ind	0.48	0.36	0.27	0.17	0.18	0.22
10Itr	0.5ind	0.41	0.28	0.17	0.03	0.08	0.17
Imax	0.5ind	0.27	0.18	0.12	0.04	0.07	0.13
Itr	0.8cap	0.45	0.31	0.20	0.09	0.12	0.18
10Itr	0.8cap	0.40	0.27	0.16	0.04	0.10	0.19
Imax	0.8cap	0.26	0.19	0.11	0.05	0.08	0.15

5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
SDM230-Modbus:	Single tariff, total active energy, resettable active energy, import active energy, export active energy, total reactive energy, import reactive energy, export reactive energy, active power, reactive power, voltage, current, frequency, power factor, power demand, RS485 Modbus communication
SDM230-Mbus	Single tariff, total active energy, resettable active energy, import active energy, export active energy, total reactive energy, import reactive energy, export reactive energy, active power, reactive power, voltage, current, frequency, power factor, power demand, Mbus communication
SDM230-Pulse:	Single tariff, total active energy, resettable active energy, import active energy, export active energy total reactive energy import reactive energy export reactive energy active, power reactive, power, voltage, current, frequency, power factor, power demand.
SDM230-DR:	Single tariff, total active energy, resettable energy, active power
SDM230-Bi:	Single tariff, import active energy, export active energy, import active power, export active power, total active energy, total active power
SDM230-2T:	Two tariff, total active energy, resettable active energy, import active energy, export active energy, total reactive energy, import reactive energy, export reactive energy, active power, reactive power, voltage, current, frequency, power factor, power demand, RS485 Modbus communication
SDM230M-DI	Single tariff, total active energy, resettable active energy, import active energy, export active energy, total reactive energy, import reactive energy, export reactive energy, active power, reactive power, voltage, current, frequency, power factor, power demand RS485 Modbus communication, digital inputs.
SDM230-LoRa	Single tariff, total active energy, resettable active energy, import active energy, export active energy, total reactive energy, import reactive energy, export reactive energy, active power, reactive power, voltage, current, frequency, power factor, power demand with built in LoRaWAN Communications

Modifications to the meter(s) described according to approval No.**0120/SGS0206** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).

6. Document Revision History

Issue	Date	Comments
1	09/10/2015	Initial Issue
2	23/11/2015	Meter types SDM230-Pulse, SDM230-DR and SDM230-Bi added to approval
3	06/06/2018	Meter type SDM230-2T and SDM230-Mbus added to approval
4	29/11/2018	Meter type SDM230-Mbus V2 added to approval
5	09/09/2020	Meter type SDM230M-DI & SDM230-LoRa added to approval

END OF CERTIFICATE