



EU Type Examination Certificate Number: 0120/SGS0533

Zhejiang Eastron Electronic Co., Ltd.

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

Instrument Identification:
SDM54 Series

Polyphase, Active Import/Export (kWh), DIN Rail, Electricity Meter

Instrument Traceable Number
0120/SGS0533

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 4th March 2022 until 2st March 2032
Issue 1

Certification is based on report number(s):EMA298120/1 dated 21st February 2022,
EMA298120/1/TR50579 dated 15th February 2022

Authorised Signature

Tuomas Hänninen

SGS Fimko OY, Notified Body 0598
Takomotie 8, FI-00380 Helsinki, Finland
t +358 9 6963 61 www.sgs.fi





EU-Type Examination Certificate Number:

0120/SGS0533

Issue Number: 1

Dated: 4th March 2022

1. Technical Data

| | |
|--|--|
| Manufacturer | Zhejiang Eastron Electronic Co., Ltd |
| Meter Type(s) | SDM54-2T, SDM54-M, SDM54-MB-2T, SDM54-MB, SDM54-P, SDM54-DI |
| Voltage Rating (<i>Un</i>) | 3*230/400V |
| Current Rating (<i>I_{min}</i> – <i>I_{ref}</i> (<i>I_{max}</i>)) | 0.5-10(100)A |
| Frequency (<i>Fn</i>) | 50Hz |
| Active Accuracy Class (<i>kWh</i>) | A or B (kWh) |
| Type of circuit | 1p2w, 3p4w |
| Temperature Range | -40°C to +70°C |
| Software/ Firmware Version & CRC Checksum No's | SDM54-2T: 01.00 CRC:B21D85D5 SDM54-M: 01.00 CRC:B21D85D5 SDM54-MB: 01.01 CRC:30C71E61 SDM54MB-2T: 01.01 CRC:30C71E61 SDM54-P: 01.02 CRC:D3B5468C SDM54-DI: 01.03 CRC:35176753 |
| Identification Location | LCD & Meter Case |
| Bill of Materials No's | SDM54-2T: DH-JS-210067 V1.0 SDM54-M: DH-JS-210076 V1.0 SDM54-MB: DH-JS-210077 V1.0 SDM54MB-2T: DH-JS-210091 V1.0 SDM54-P: DH-JS-220006 V1.0 SDM54-DI: DH-JS-220007 V1.0 |
| IP Rating | Must be installed in a suitable IP rated enclosure |
| Insulation Protective Class | Class II |
| LED Pulse Constant | 400 imp/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 |
| Terminal Arrangement(s) | DIN |
| Location of Manufacturers Address | Nameplate or Associated Documents |

SGS

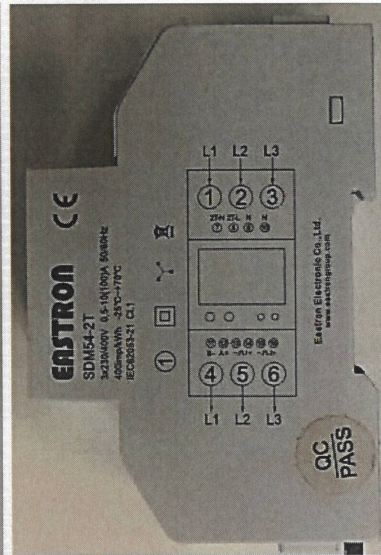
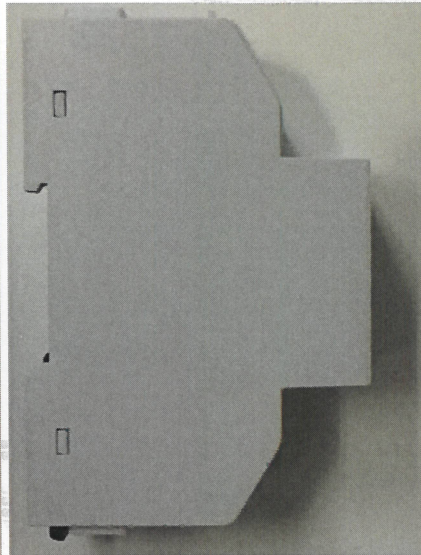
EU-Type Examination Certificate Number:

0120/SGS0533

Issue Number: 1

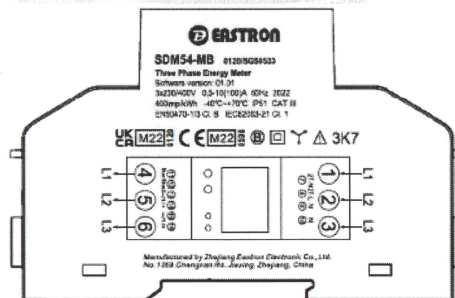
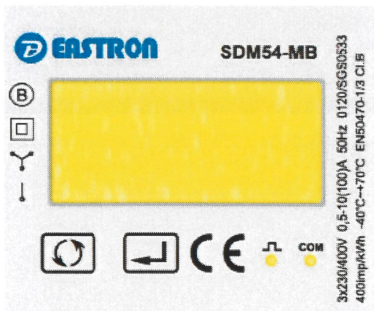
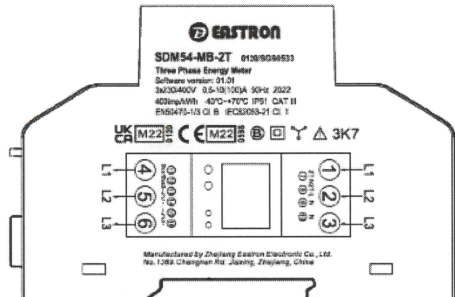
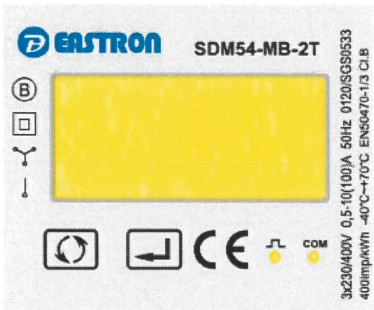
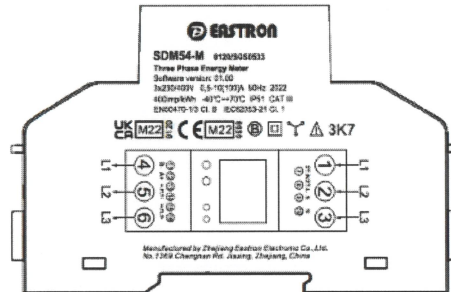
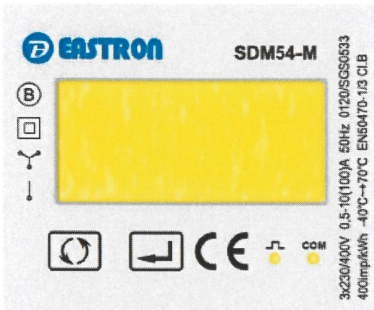
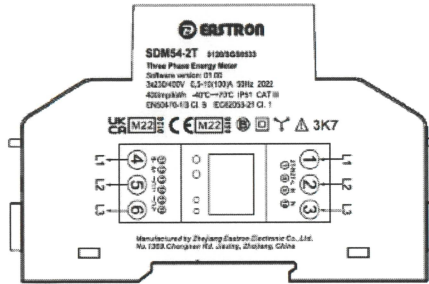
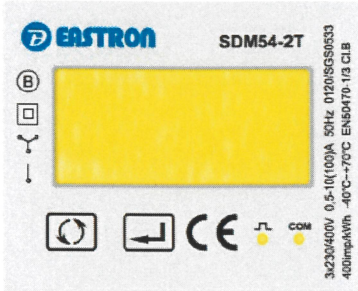
Dated: 4th March 2022

2. Photograph of Meter and Sealing Plan



Main Cover Seal

3. Examples of Nameplates



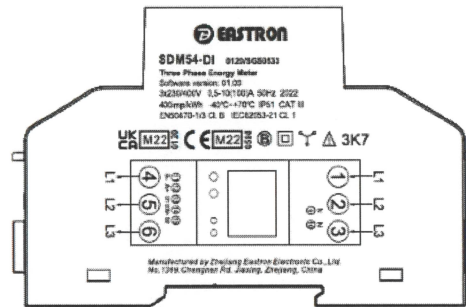
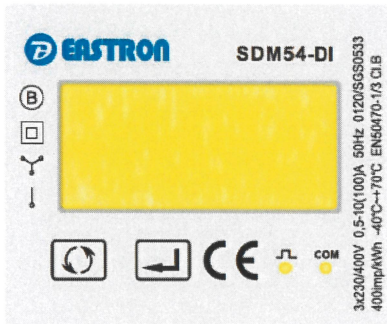
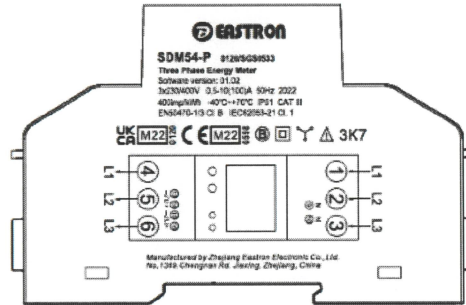
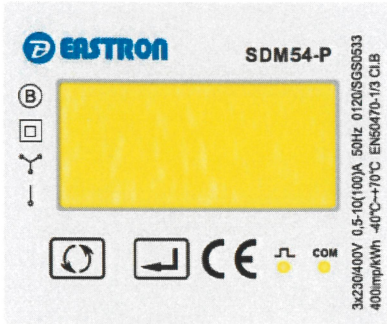
SGS

EU-Type Examination Certificate Number:

0120/SGS0533

Issue Number: 1

Dated: 4th March 2022



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 |
| Imin | 1.0 | 0.71 | 0.63 | 0.67 | 0.81 | 0.79 | 0.68 | 0.47 | 0.67 |
| Itr | 1.0 | 0.77 | 0.64 | 0.55 | 0.80 | 0.56 | 0.03 | 0.44 | 0.65 |
| 10Itr | 1.0 | 0.76 | 0.63 | 0.45 | 0.29 | -0.11 | 0.20 | 0.45 | 0.66 |
| Imax | 1.0 | 0.85 | 0.76 | 0.66 | 0.52 | 0.13 | 0.30 | 0.28 | 0.40 |
| Itr | 0.5ind | 0.77 | 0.64 | 0.46 | 0.55 | 0.89 | 0.16 | 0.13 | 0.62 |
| 10Itr | 0.5ind | 0.75 | 0.61 | 0.43 | 0.31 | 0.01 | 0.26 | 0.15 | 0.69 |
| Imax | 0.5ind | 0.92 | 1.09 | 0.73 | 0.61 | 0.29 | 0.34 | 0.36 | 0.36 |
| Itr | 0.8cap | 0.75 | 0.14 | 0.43 | 0.36 | 0.06 | 0.26 | 0.13 | 0.69 |
| 10Itr | 0.8cap | 0.76 | 0.61 | 0.44 | 0.28 | -0.06 | 0.28 | 0.14 | 0.69 |
| Imax | 0.8cap | 0.93 | 0.84 | 0.74 | 0.61 | 0.29 | 0.35 | 0.45 | 0.38 |
| L1 | | | | | | | 0.00 | 0.00 | 0.00 |
| Itr | 1.0 | 0.45 | 0.36 | 0.26 | 0.33 | 0.82 | 0.07 | 0.21 | 0.34 |
| 10Itr | 1.0 | 0.42 | 0.34 | 0.24 | 0.18 | 0.09 | 0.13 | 0.25 | 0.38 |
| Imax | 1.0 | 1.16 | 1.17 | 1.18 | 1.19 | -0.63 | 1.27 | 1.33 | 1.40 |
| Itr | 0.5ind | 0.46 | 0.36 | 0.38 | 0.53 | 0.66 | 0.05 | 0.20 | 0.31 |
| 10Itr | 0.5ind | 0.43 | 0.34 | 0.27 | 0.37 | -0.58 | 0.14 | 0.26 | 0.38 |
| Imax | 0.5ind | 0.47 | 0.46 | 0.45 | 0.45 | 0.12 | 0.38 | 0.38 | 0.41 |
| L2 | | | | | | | | | |
| Itr | 1.0 | 1.12 | 0.88 | 0.62 | 0.61 | -0.05 | 0.26 | 0.59 | 0.88 |
| 10Itr | 1.0 | 1.09 | 0.86 | 0.59 | 0.36 | -0.12 | 0.32 | 0.62 | 0.92 |
| Imax | 1.0 | 0.80 | 0.65 | 0.47 | 0.30 | -0.23 | 0.45 | 0.69 | 0.96 |
| Itr | 0.5ind | 1.86 | 1.67 | 1.45 | 1.27 | 0.56 | 0.89 | 0.83 | 0.88 |
| 10Itr | 0.5ind | 0.97 | 0.77 | 0.54 | 0.40 | -0.30 | 0.58 | 0.86 | 1.13 |
| Imax | 0.5ind | 0.87 | 0.72 | 0.54 | 0.40 | -0.15 | 0.44 | 0.66 | 0.91 |
| L3 | | | | | | | | | |
| Itr | 1.0 | 0.83 | 0.68 | 0.47 | 0.30 | 0.05 | 0.27 | 0.47 | 0.71 |
| 10Itr | 1.0 | 0.80 | 0.65 | 0.45 | 0.25 | 0.13 | 0.27 | 0.51 | 0.75 |
| Imax | 1.0 | 0.87 | 0.79 | 0.66 | 0.54 | 0.31 | 0.26 | 0.29 | 0.45 |
| Itr | 0.5ind | 0.84 | 0.67 | 0.49 | 0.26 | 0.05 | 0.28 | 0.43 | 0.71 |
| 10Itr | 0.5ind | 0.81 | 0.65 | 0.47 | 0.29 | 0.16 | 0.29 | 0.52 | 0.76 |
| Imax | 0.5ind | 0.94 | 0.85 | 0.74 | 0.79 | 0.27 | 0.32 | 0.30 | 0.42 |


| | | |
|---|---|-----------------------------------|
|  | EU-Type Examination Certificate Number: | |
| | 0120/SGS0533 | |
| | Issue Number: 1 | Dated: 4 th March 2022 |

5. Annex of Variants

Product Variant Identification Details:

| Type Designation | Description of meter |
|------------------|---|
| SDM54-2T | 3x230/400V, 0.5-10(100)A, 2 Pulse Outputs, RS485 Modbus, Double Tariffs |
| SDM54- M | 3x230/400V, 0.5-10(100)A, 2 Pulse Outputs, RS485 Modbus, Single Tariff |
| SDM54-MB-2T | 3x230/400V, 0.5-10(100)A, 2 Pulse Outputs, M-Bus, Double Tariff |
| SDM54-MB | 3x230/400V, 0.5-10(100)A, 2 Pulse Outputs, M-Bus, Single Tariff |
| SDM54-MB-2T | 3x230/400V, 0.5-10(100)A, 2 Pulse Outputs, M-Bus, Double Tariff |
| SDM54-P | 3x230/400V, 0.5-10(100)A, 2 Pulse Outputs, Single Tariff |
| SDM54-DI | 3x230/400V, 0.5-10(100)A, 2 Digital Inputs, RS485 Modbus, Single Tariff |

Modifications to the meter(s) described according to approval No.**0120/SGS0533** 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: | |
| | 0120/SGS0533 | |
| | Issue Number: 1 | Dated: 4 th March 2022 |

6. Document Revision History

| Issue | Date | Comments |
|-------|------------|---------------|
| 1 | 04/03/2022 | Initial Issue |
| | | |

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