

EU Type Examination Certificate Number: 0120/SGS0151

Zhejiang Eastron Electronic Co.,Ltd.

No. 1369, Chengnan Road
Jiaxing
Zhejiang
China
314001

Instrument Identification:
SDM630 100A Series Version 1
SDM630 100A Series Version 2
SDM630 100A Series Version 3

Polyphase, Active Import / Export (kWh), Multifunction, Indoor, Electricity Meter

Instrument Traceable Number
0120/SGS0151

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 6th January 2015 to 5th January 2025
Issue 1

Certification is based on report number(s): SHES130800321501 dated 26th December 2014
EMA198278/1 dated 26th December 2014 EMA198278/2 dated 21st June 2016
EMA288737/2 dated 1st April 2021 EMA29036/1 dated 26th June 2021
EMA293203/1 dated 4th August 2021

Authorised Signature

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EU-Type Examination Certificate Number:

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Dated: 31st August 2021

1. Technical Data

Manufacturer	Zhejiang Easton Electronic Co.,Ltd.
Meter Types Version 1 & Version 2	SDM630-Standard, SDM630-MT, SDM630-MODBUS
Meter Types Version 3	SDM630-Mbus, SDM630-Pulse, SDM630-2T, SDM630-DI, SDM630Mbus-2T, SDM630-MODBUS V2.2 SDM630-Modbus V3 and the SDM630M -DI V3
Voltage Rating (Un)	3x230/400V
Current Rating (Imin – Iref (Imax))	0.5-10(100)A & 0.5-10(80)A
Frequency (Fn)	50Hz
Active Accuracy Class (kWh) V1 & V2	A or B (kWh)
Active Accuracy Class (kWh) V3	B or C (kWh)
Type of circuit	3p4w, 3p3w, 1p2w
Temperature Range	-40°C to +70°C
Software Version No's. V1 & V2	SDM630-Standard, SDM630-MT, SDM630-Modbus, SDM630-Mbus, SDM630-Pulse : V1.3 SDM630-2T: V1.4 SDM630-DI: V1.5 SDM630Mbus-2T: V1.6 SDM630-Modbus V2.2: V1.3
Checksum No's.	SDM630-Standard, SDM630-MT, SDM630-Modbus, SDM630-Pulse: 0x0000AFF9 SDM630-Mbus.: 0x00003C02 SDM630-2T: 0x0009DF4 SDM630-DI: 0x00000A31 SDM630Mbus-2T: 0x000075BC SDM630-Modbus V2.2: 0x00003C02
Identification Location	Nameplate
Software Version No's. V3	SDM630Modbus V3: V1.7 SDM630-2T V3: V1.8 SDM630M-DI V3: V1.9
Checksum No's.	SDM630Modbus V3: 0x00762C9F SDM630-2T V3: 0x008A04A7 SDM630M-DI V3: 0x007BCB8F
Identification Location	Nameplate
Bill Of Materials Version 1 No.'s	SDM630-Standard V2.1 SDM630-MT V2.1 SDM630-MODBUS V2.1 SDM630-MBUS V2.1 SDM630-Pulse V2.1
Bill Of Materials Version 2 No.'s	SDM630Modbus: DH-JS-170020-1.5 SDM630-Standard: DH-JS-170021-1.5 SDM630-MT: DH-JS-170022-1.5 SDM630-Pulse: DH-JS-170023-1.5 SDM630-Mbus: DH-JS-170024-1.5
Bill Of Materials Version 3 No.'s	SDM630-Modbus V3: DH-JS-190022-1.0 SDM630-2T V3: DH-JS-190036-1.0 SDM630M-DI V3: DH-JS-210024-1.0
IP Rating	IP51



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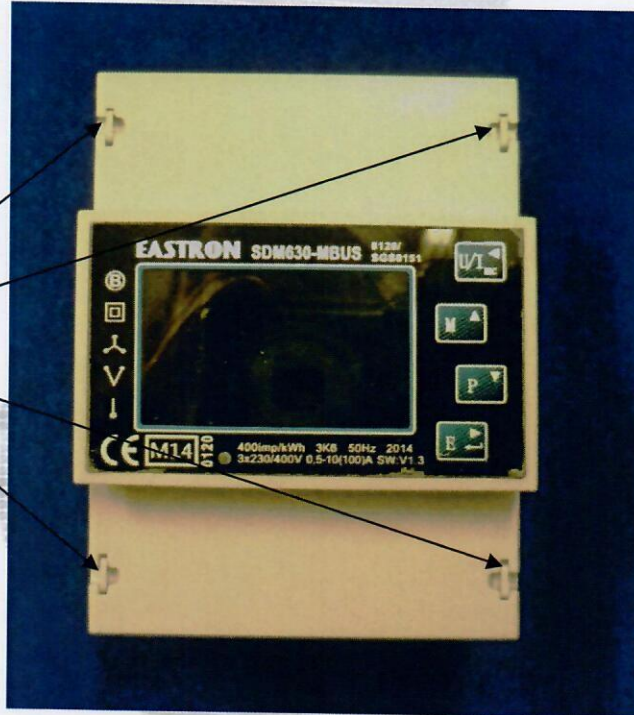
Dated: 31st August 2021

Insulation Protective Class	Class II
LED Pulse Constant	400imp/ kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	Plastic plug
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	LCD
Location of Distributors Name and Address	On accompanying documentation

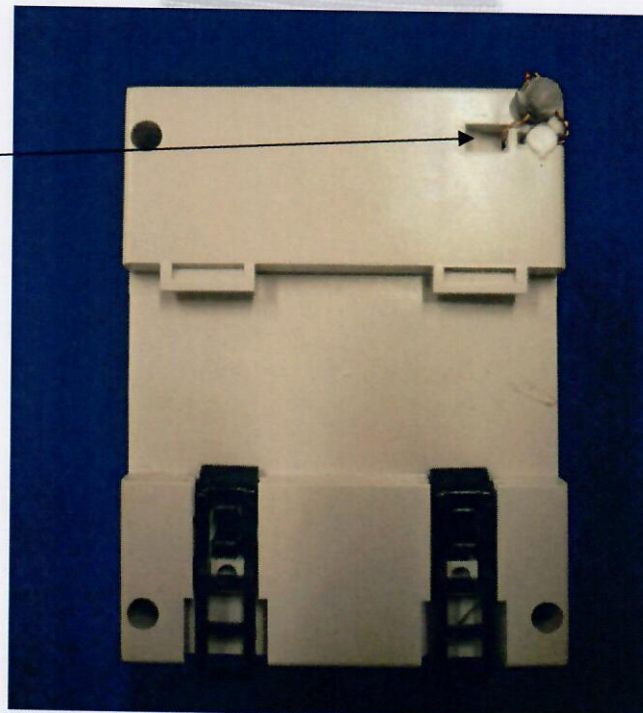
Photograph of Meter and Sealing Plan

Photographs of Original Meter Casing – SDM630 V1

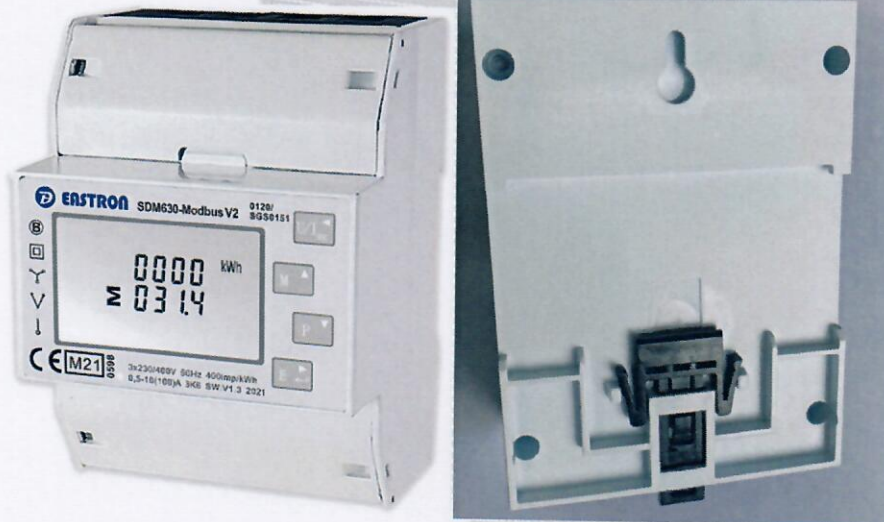
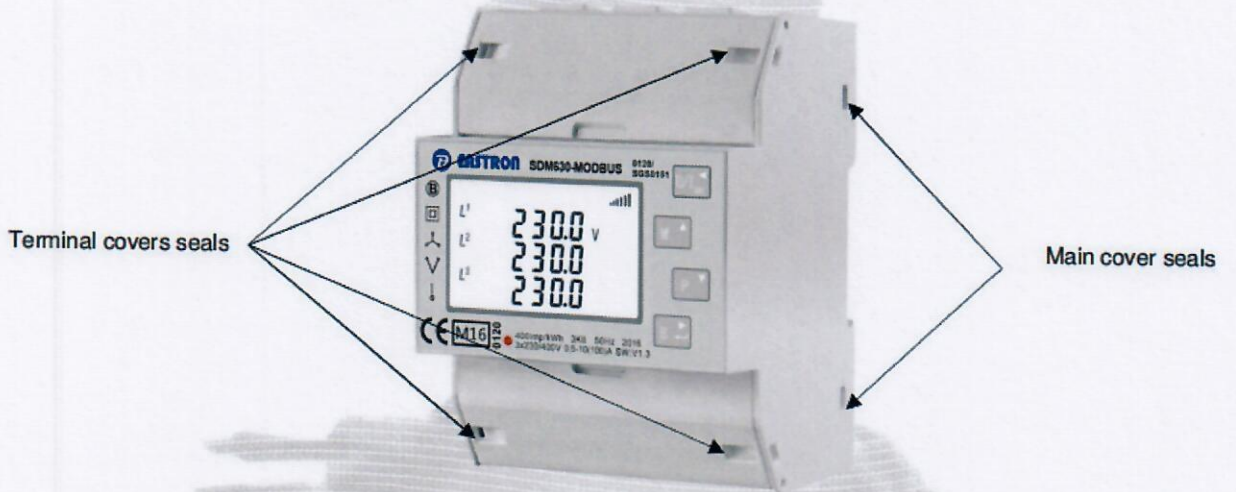
Terminal
Covers
Sealing
Points



Main Cover
Sealing Point



Photograph of Redesigned Meter Case – SDM 630 V2



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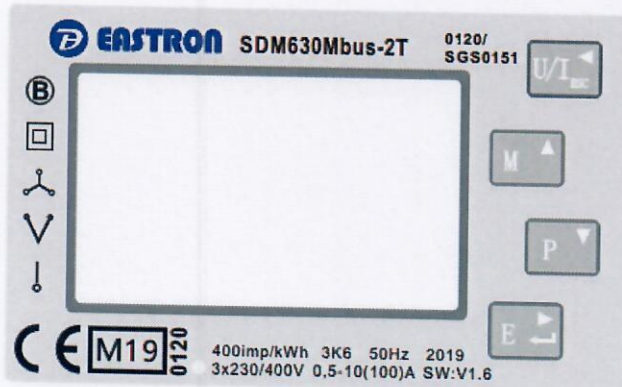
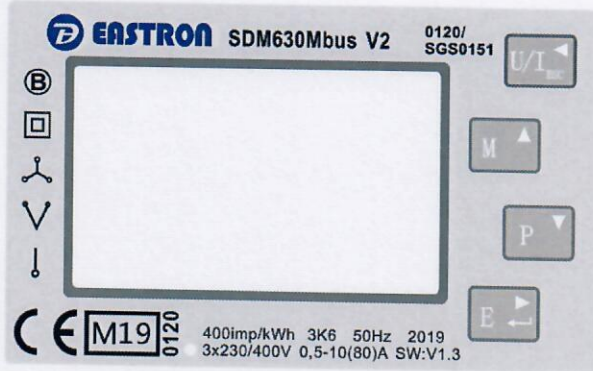
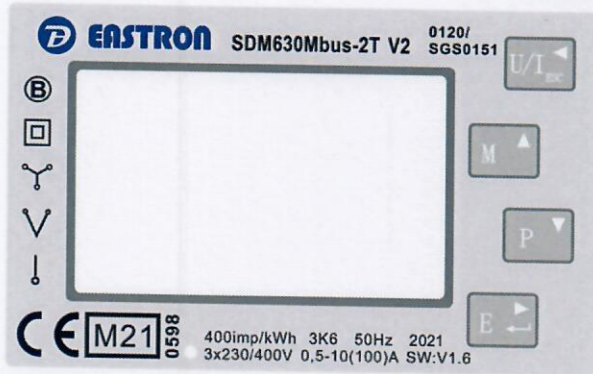
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2. Examples of Nameplates



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EASTRON
SDM630-Modbus-V3 0120/SGS0151
Three Phase Energy Meter
3x230/400V AC 0,5-10(100)AAC 50Hz 2021
400imp/kWh EN50470-1/3 IP51 SW:V1.7 CAT III
CE M21 0588 B □ Y Δ 3K6
Manufactured by Zhejiang Eastron Electronic Co., Ltd.
No.1369.Chengnan Rd. Jiaxing, Zhejiang, China

EASTRON
SDM630-Modbus-V3 0120/SGS0151
Three Phase Energy Meter
3x230/400V AC 0,5-10(100)AAC 50Hz 2021
400imp/kWh EN50470-1/3 IP51 SW:V1.7 CAT III
CE M21 0588 B □ Y Δ 3K7
Manufactured by Zhejiang Eastron Electronic Co., Ltd.
No.1369.Chengnan Rd. Jiaxing, Zhejiang, China



EASTRON
SDM630-2T-V3 0120/SGS0151
Three Phase Energy Meter
3x230/400V AC 0,5-10(100)AAC 50Hz 2021
400imp/kWh EN50470-1/3 IP51 SW:V1.8 CAT III
CE M21 0588 B □ Y Δ 3K6
Manufactured by Zhejiang Eastron Electronic Co., Ltd.
No.1369.Chengnan Rd. Jiaxing, Zhejiang, China

EASTRON
SDM630-2T-V3 0120/SGS0151
Three Phase Energy Meter
3x230/400V AC 0,5-10(100)AAC 50Hz 2021
400imp/kWh EN50470-1/3 IP51 SW:V1.8 CAT III
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Manufactured by Zhejiang Eastron Electronic Co., Ltd.
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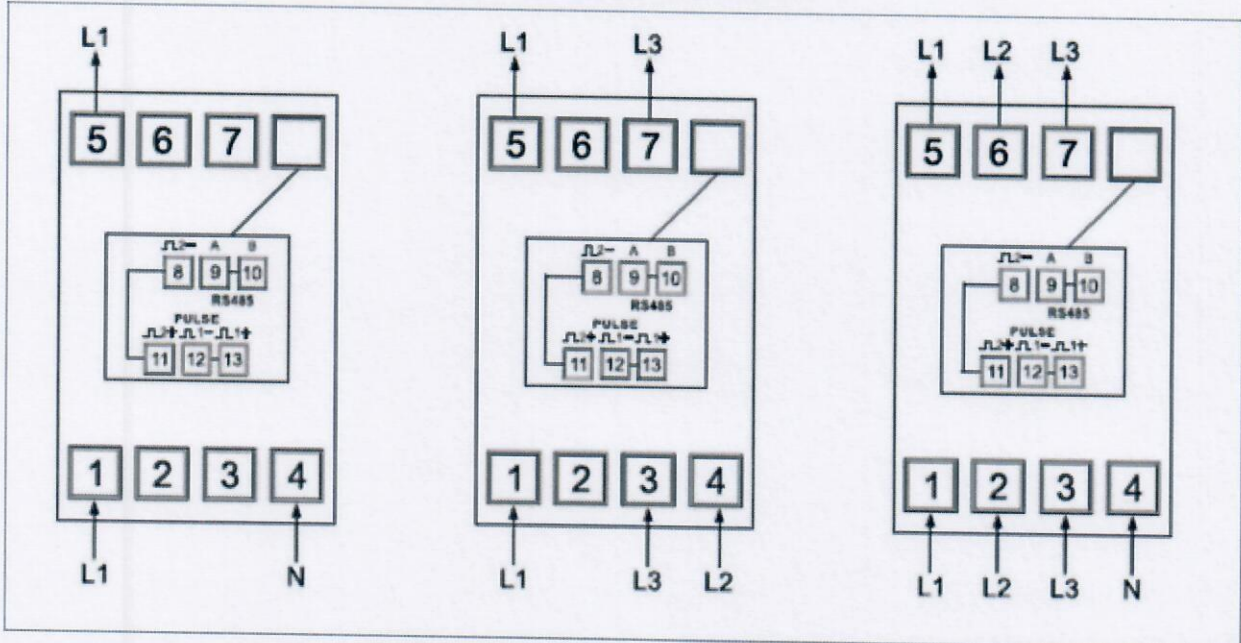
EASTRON
SDM630M-DI-V3 0120/SGS0151
Three Phase Energy Meter
3x230/400V AC 0,5-10(100)AAC 50Hz 2021
400imp/kWh EN50470-1/3 IP51 SW:V1.9 CAT III
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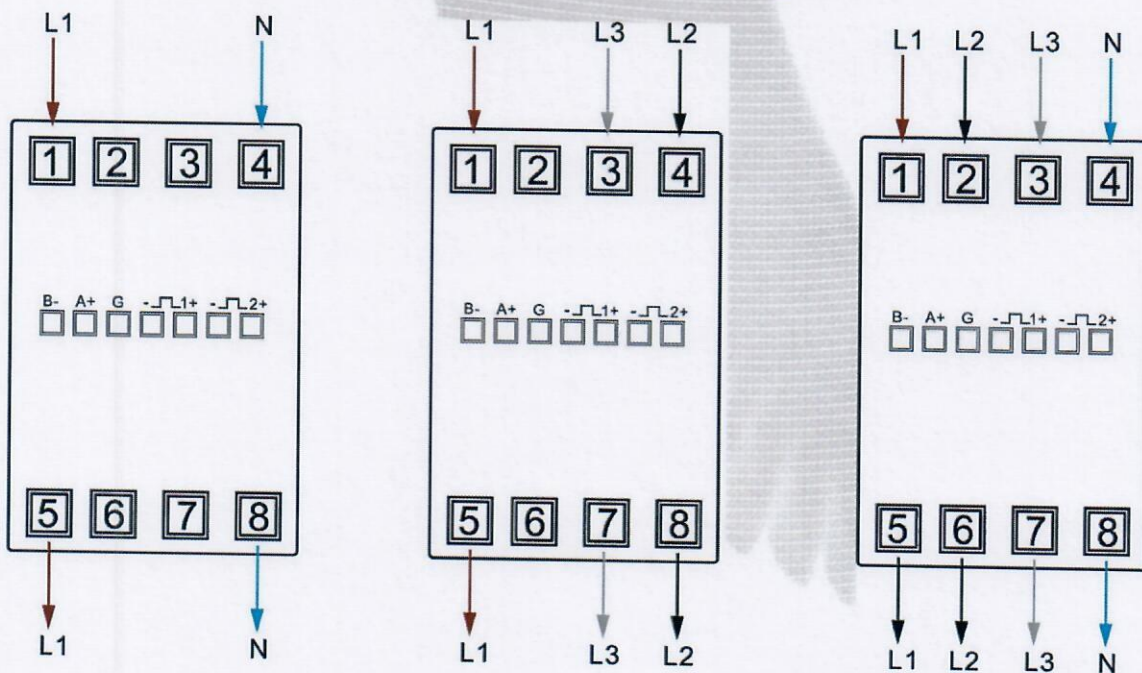


4. **Wiring Diagrams**

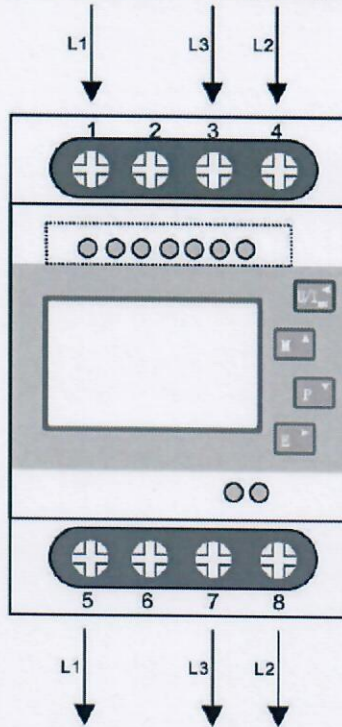
SDM 630 V1 Wiring Diagram



SDM 630 V2 & V3 Wiring Diagram



SDM 630 V2.2 Wiring Diagram



3. 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	1.10	0.46	0.34	0.14	0.18	0.29	0.52	0.10
I _{tr}	1.0	1.03	0.57	0.39	0.19	0.11	0.24	0.46	0.21
10I _{tr}	1.0	0.97	0.64	0.45	0.25	0.06	0.20	0.42	0.29
I _{max}	1.0	0.96	0.75	0.60	0.44	0.26	0.23	0.30	0.25
I _{tr}	0.5ind	1.08	0.56	0.40	0.20	0.14	0.24	0.49	0.15
10I _{tr}	0.5ind	0.89	0.60	0.43	0.23	0.11	0.23	0.45	0.36
I _{max}	0.5ind	0.81	0.62	0.47	0.30	0.05	0.10	0.28	0.06
I _{tr}	0.8cap	1.06	0.65	0.46	0.27	0.11	0.21	0.43	0.12
10I _{tr}	0.8cap	0.93	0.62	0.44	0.24	0.12	0.24	0.46	0.30
I _{max}	0.8cap	0.94	0.69	0.55	0.37	0.16	0.14	0.28	0.17
L1									0.00
I _{tr}	1.0	0.23	0.84	0.60	0.32	0.08	0.20	0.48	0.18
10I _{tr}	1.0	1.19	0.97	0.71	0.46	0.10	0.13	0.36	0.12
I _{max}	1.0	1.16	0.93	0.70	0.48	0.16	0.06	0.25	0.24
I _{tr}	0.5ind	1.14	0.60	0.32	0.09	0.25	0.42	0.66	0.18
10I _{tr}	0.5ind	1.26	0.79	0.56	0.29	0.12	0.27	0.53	0.10
I _{max}	0.5ind	1.25	0.84	0.63	0.40	0.10	0.11	0.33	0.25
L2									
I _{tr}	1.0	0.93	0.40	0.26	0.09	0.08	0.16	0.37	0.67
10I _{tr}	1.0	1.13	0.42	0.31	0.19	0.08	0.17	0.36	0.48
I _{max}	1.0	1.09	0.44	0.36	0.25	0.08	0.08	0.23	0.20
I _{tr}	0.5ind	0.88	0.20	0.09	0.24	0.27	0.35	0.53	0.78
10I _{tr}	0.5ind	1.17	0.43	0.30	0.17	0.10	0.20	0.40	0.51
I _{max}	0.5ind	1.20	0.46	0.35	0.25	0.09	0.06	0.20	0.16
L3									
I _{tr}	1.0	0.73	0.55	0.37	0.15	0.14	0.30	0.51	0.10
10I _{tr}	1.0	0.77	0.51	0.33	0.11	0.20	0.33	0.56	0.04
I _{max}	1.0	0.59	0.55	0.39	0.21	0.10	0.21	0.52	0.32
I _{tr}	0.5ind	0.30	0.41	0.24	0.06	0.32	0.46	0.66	0.26
10I _{tr}	0.5ind	0.41	0.41	0.22	0.04	0.31	0.46	0.67	0.23
I _{max}	0.5ind	0.32	0.43	0.30	0.34	0.17	0.30	0.53	0.18

4. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
SDM630-MT:	Three phase, multi-function, multi-tariff, 2 pulse outputs and 1 RS485 Modbus communication port
SDM630-Modbus:	Three phase, multi-function, 2 pulse outputs and 1 RS485 communication port
SDM630-Mbus:	Three phase, multi-function, 2 pulse outputs and 1 Mbus communication port
SDM630-Pulse:	Three phase, multi-function, 2 pulse outputs
SDM630-Standard:	Three phase, 2 pulse outputs and 1 RS485 communication port
SDM630-2T:	Three phase, multi-function, dual tariffs, 2 pulse outputs and 1 RS485 communication port
SDM630-DI:	Three phase, multi-function, 1 RS485 Modbus communication port, Digital inputs
SDM630Mbus-2T:	Three phase, multi-function, dual tariffs, 2 pulse outputs and 1 Mbus communication port
SDM630 M-DI:	Three phase, multi-function, 1 RS485 Modbus communication port, Digital inputs
SDM630-Modbus V2.2:	Three phase, Three Wire, multi-function, 2 pulse outputs and 1 RS485 communication port

Modifications to the meter(s) described according to approval No. **0120/SGS0151** 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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	0120/SGS0151	
	Issue Number: 1	Dated: 31 st August 2021

5. Document Revision History

Issue	Date	Comments
1	06/01/2015	Original Issue
2	21/06/2016	Addition of redesigned meter case with new terminal layout and wiring diagrams. Updated EC Directive to 2014/32/EU
3	24/05/2018	Meter type SDM630-2T added to approval
4	08/05/2019	Additional variants 0.5-10(80)A added to approval
5	07/08/2019	Meter types SDM630-DI and SDM630Mbus-2T added to approval
6	07/05/2021	Temperature range extended to -40°C to +70°C and change of Notified Body reference
7	05/08/2021	Meter types SDM630 Modbus V3, SDM630-2T V3, SDM630M-DI V3, SDM630-Modbus V2.2 added to approval
1	31/08/2021	Issue 1 for SGS Fimko NB 0598 The original approval certificate issued 06/01/2015 The modifications listed above were made prior to the transfer to SGS Fimko

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END OF CERTIFICATE