



5386



UKCA 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

Measuring Instruments Regulations 2016 (as amended)

on Active electrical energy meters, Schedule 1, 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, as referenced in the UK Measuring Instruments Regulations 2016, as amended

This certificate must be used in conjunction with a certificate covering the product verification as required in Schedule 1, Module D or Schedule 1, Module F

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

This certificate is valid until 5th January 2025

Issue 1


Authorised Signature

Rae Jackson

Contact Address




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1. Technical Data

Manufacturer	Zhejiang Eastron 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 (U_n)	3x230/400V
Current Rating ($I_{min} - I_{ref} (I_{max})$)	0.5-10(100)A & 0.5-10(80)A
Frequency (F_n)	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

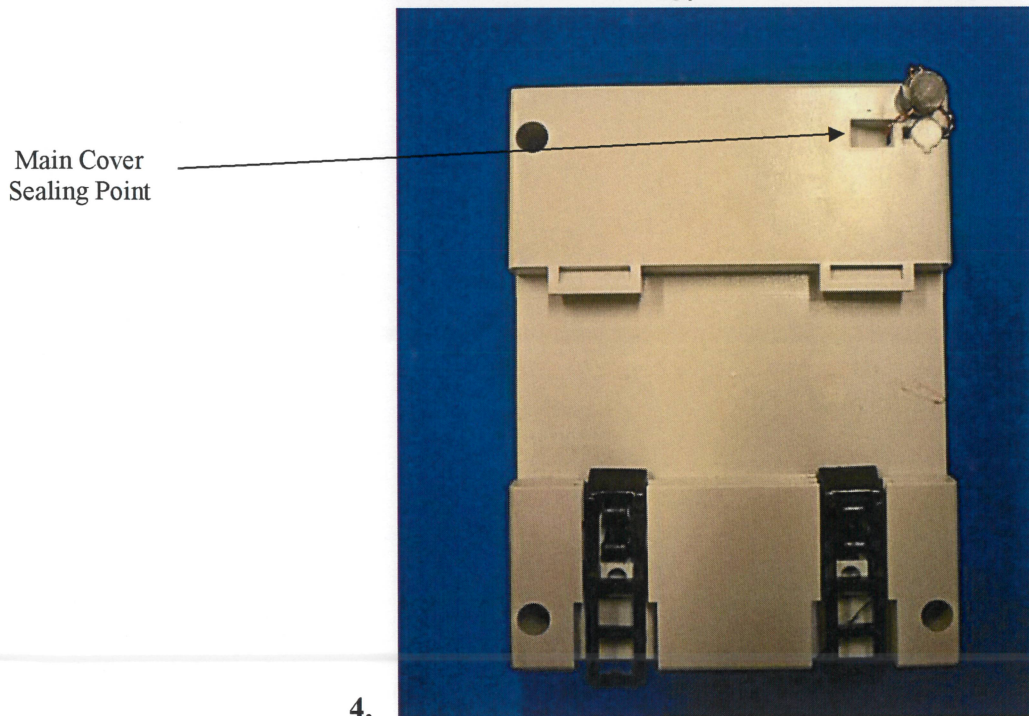
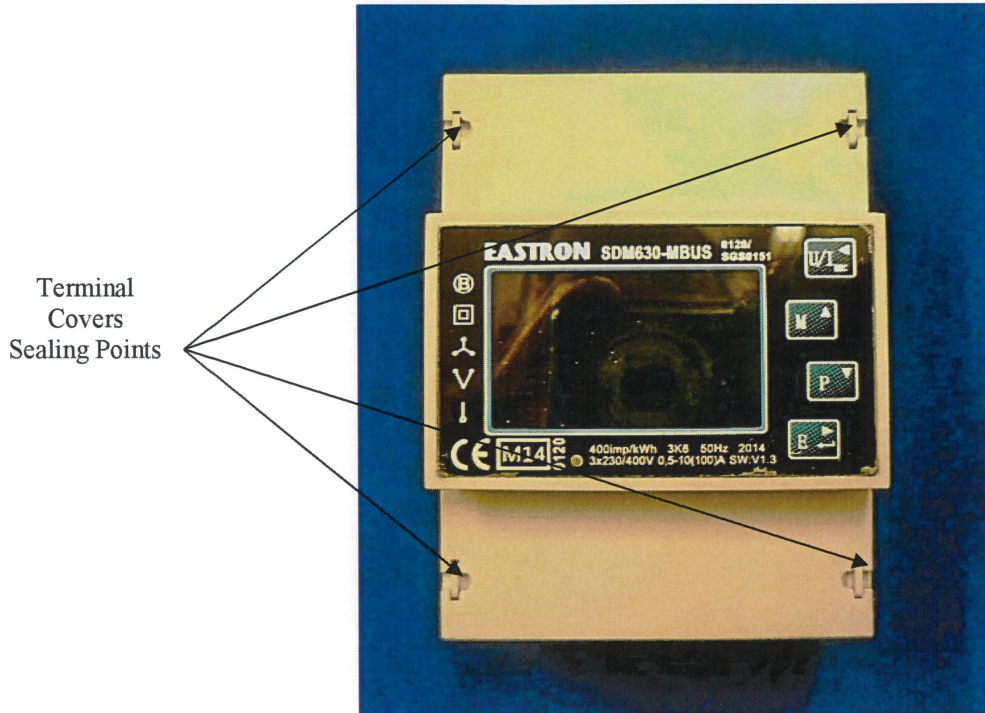
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Insulation Protective Class	Class II
LED Pulse Constant	400imp/ kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	Plastic plug
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type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

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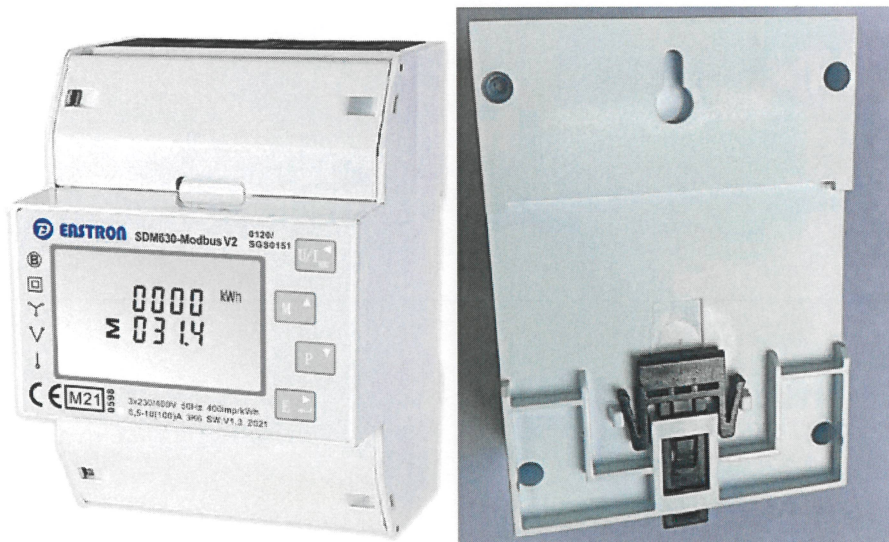
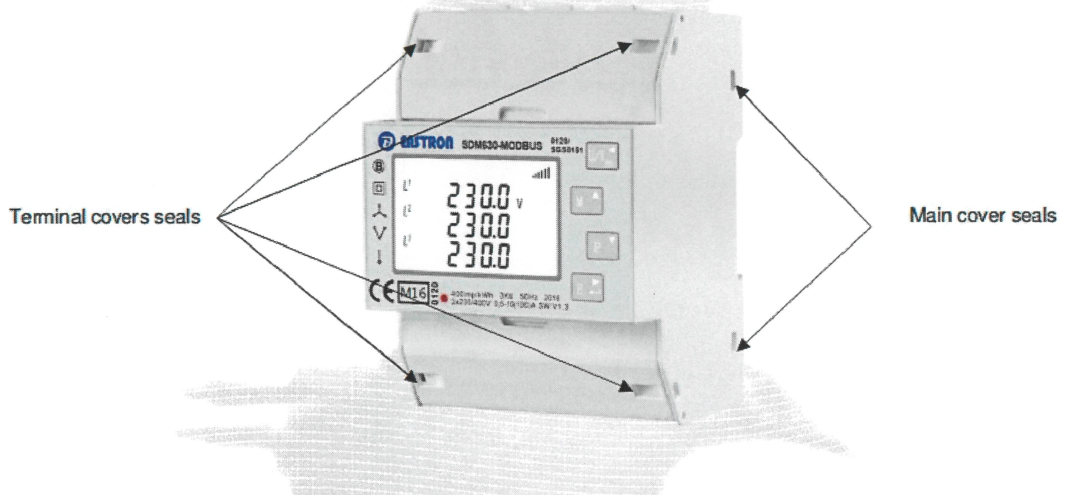
2. Photograph of Meter and Sealing Plan


Photographs of Original Meter Casing – SDM630 V1



5.

Photograph of Redesigned Meter Case – SDM 630 V2



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3. Examples of Nameplates



Three Phase Energy Meter 0120/SGS0151
 3x230/400V AC 0,5-10(100)AAC 50Hz 2022
 400imp/kWh EN50470-1/3 IP51 CAT III







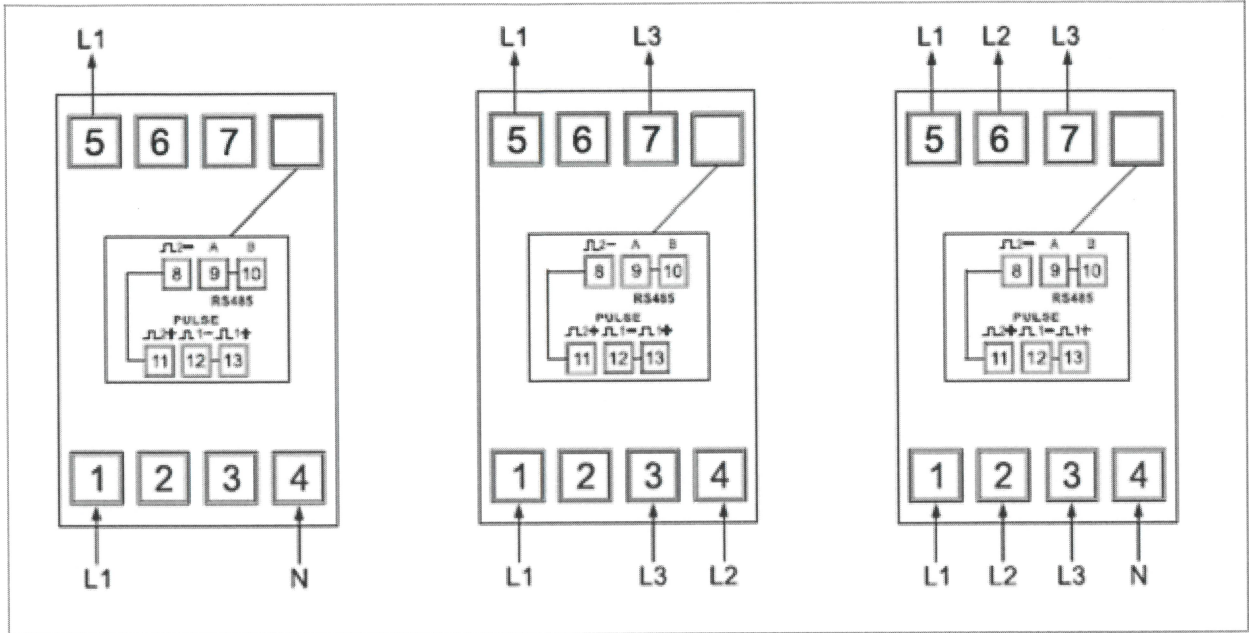
3K7

Manufactured by Zhejiang Eastron Electronic Co., Ltd.
 No. 1389, Chongnan Rd. Jiaxing, Zhejiang, China

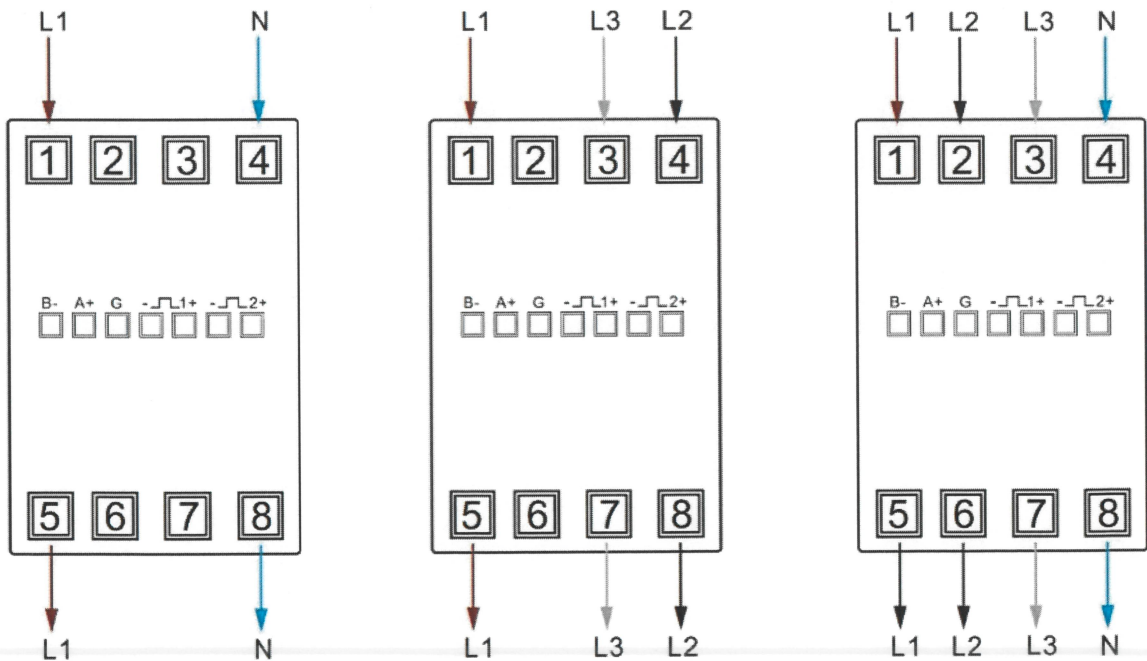


4. Wiring Diagrams

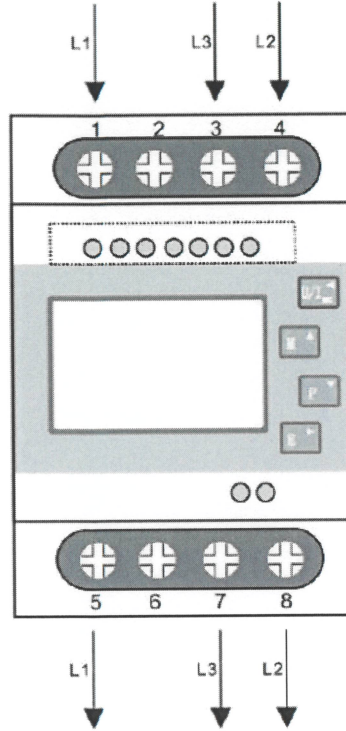
SDM 630 V1 Wiring Diagram




SDM 630 V2 & V3 Wiring Diagram



SDM 630 V2.2 Wiring Diagram



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5. 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




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		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


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6. 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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7. Document Revision History

Issue	Date	Comments
1	29/03/2022	Initial Issue

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END OF CERTIFICATE