



EU Type Examination Certificate Number: **0120/SGS0526**

SOCOMEK S.A.S

1 Rue de Westhouse 67230 BENFELD
FRANCE

Instrument Identification:
48C03144, 48C03146

**Polyphase, Active Import/ Export kWh, Indoor, Multi-Function, Transformer Operated,
Electricity Meter**

Instrument Traceable Number
0120/SGS0526

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 until 9th March 2024
Issue 2

Certification is based on report number(s) EMA174647/1/MID dated 30th January 2014
EMA174647/1/MID/iss 2 dated 9th October 2019
EMA281302/1
EMA295592/1

Authorised Signature

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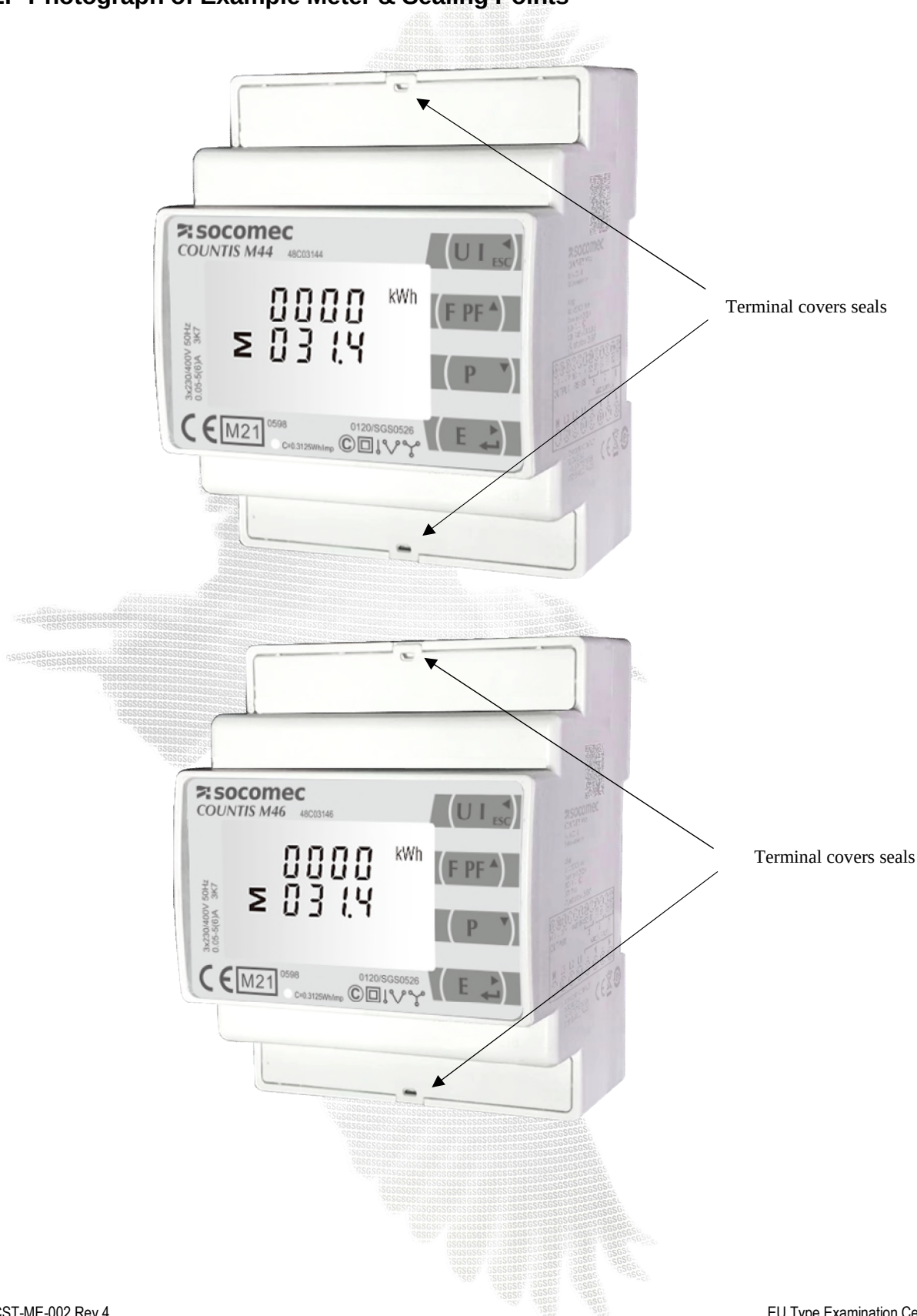
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1. Technical Data

Manufacturer	SOCOMEK S.A.S
Meter Type	48C03144, 48C03146
Voltage Rating (U_n)	3x230/400V
Current Rating ($I_{min} - I_{ref} (I_{max})$)	0.25-5(6)A
Frequency (F_n)	50Hz
Active Accuracy Class (kWh)	B or C (kWh)
Type of circuit	3p4w, 3p3w, 1p2w
Temperature Range	-40°C to +70°C
Software/ Firmware Version No's	48C03144: V1.3 48C03146: V1.5
CRC Checksum No's	48C03144: 0X0000D5C8 48C03146: 0X00001516
Identification Location	LCD
Bill Of Materials No's	48C03144: V1: DH-JS-150046-1.4 48C03146: V2: DH-JS-160008-1.4
IP Rating	IP51
Insulation Protective Class	Class II
LED Pulse Constant	3200imp/ kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	2 x Wire & Crimp
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	Side of meter

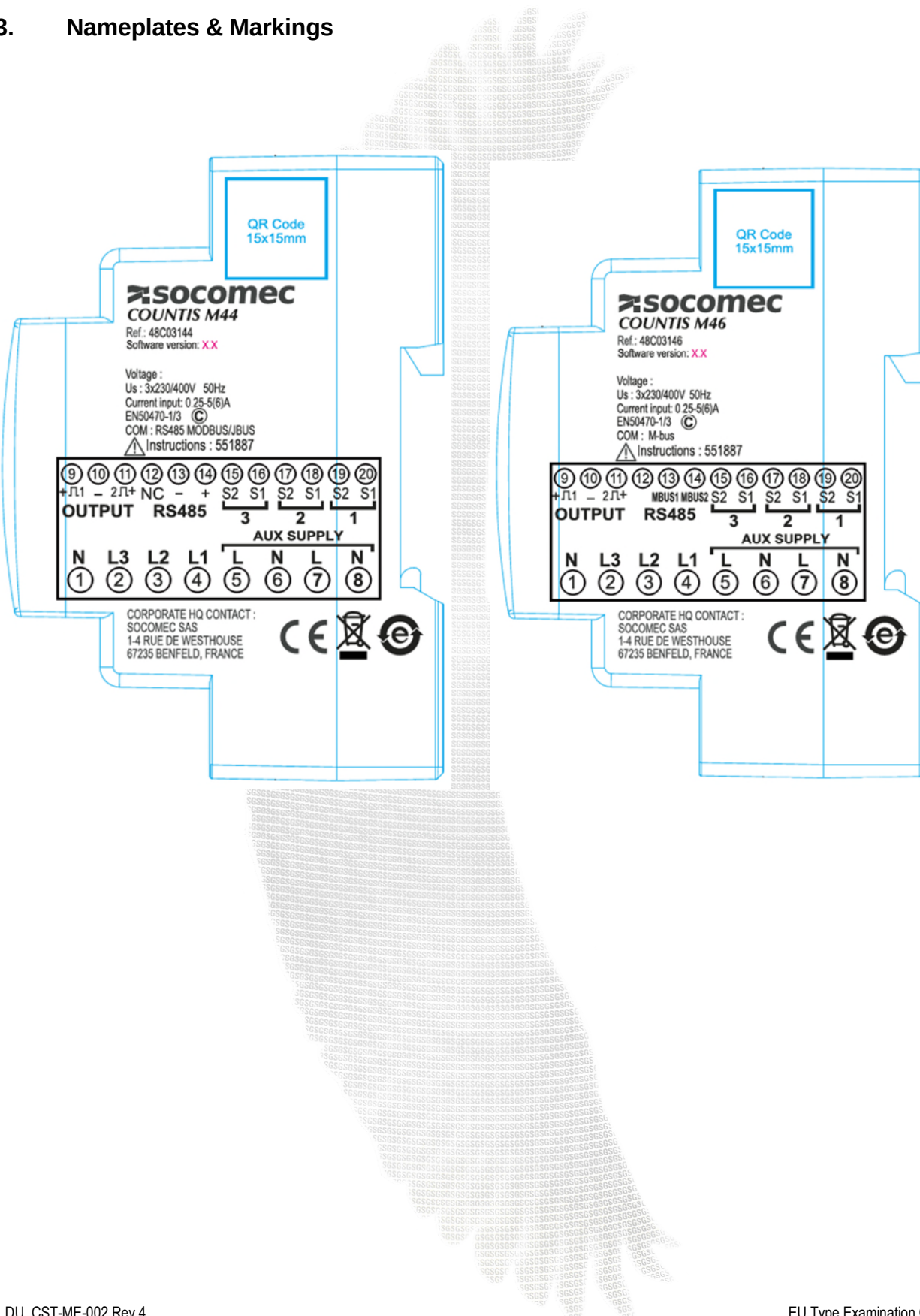
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2. Photograph of Example Meter & Sealing Points



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3. Nameplates & Markings



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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



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		Influence Factors for Temperature. Frequency & Voltage					
Current	PF Cos	-25°C	-10°C	5°C	30°C	40°C	55°C
I _{min}	1.0	0.85	0.50	0.07	0.12	0.13	0.15
I _{tr}	1.0	0.91	0.54	0.25	0.10	0.14	0.16
10I _{tr}	1.0	0.85	0.50	0.23	0.03	0.09	0.12
I _{max}	1.0	0.86	0.51	0.24	0.05	0.08	0.12
I _{tr}	0.5ind	1.08	0.70	0.37	0.16	0.16	0.17
10I _{tr}	0.5ind	0.79	0.43	0.17	0.09	0.13	0.18
I _{max}	0.5ind	0.79	0.43	0.18	0.10	0.15	0.17
I _{tr}	0.8cap	0.85	0.48	0.21	0.06	0.10	0.15
10I _{tr}	0.8cap	0.87	0.51	0.24	0.02	0.06	0.11
I _{max}	0.8cap	0.89	0.51	0.26	0.03	0.06	0.10
L1							
I _{tr}	1.0	0.92	0.38	0.20	0.11	0.13	0.13
10I _{tr}	1.0	0.85	0.48	0.22	0.05	0.12	0.17
I _{max}	1.0	0.87	0.50	0.24	0.05	0.10	0.16
I _{tr}	0.5ind	0.90	0.48	0.17	0.31	0.21	0.13
10I _{tr}	0.5ind	0.88	0.50	0.22	0.05	0.15	0.16
I _{max}	0.5ind	0.88	0.50	0.24	0.05	0.10	0.14
L2							
I _{tr}	1.0	0.86	0.51	0.23	0.04	0.09	0.13
10I _{tr}	1.0	0.82	0.47	0.21	0.04	0.08	0.12
I _{max}	1.0	0.83	0.48	0.22	0.04	0.08	0.11
I _{tr}	0.5ind	1.03	0.61	0.26	0.14	0.22	0.23
10I _{tr}	0.5ind	0.69	0.35	0.10	0.15	0.21	0.24
I _{max}	0.5ind	0.67	0.32	0.06	0.18	0.24	0.28
L3							
I _{tr}	1.0	0.87	0.50	0.24	0.05	0.10	0.12
10I _{tr}	1.0	0.85	0.48	0.22	0.04	0.09	0.11
I _{max}	1.0	0.84	0.48	0.22	0.05	0.09	0.12
I _{tr}	0.5ind	0.97	0.56	0.27	0.09	0.13	0.13
10I _{tr}	0.5ind	0.83	0.47	0.21	0.06	0.08	0.11
I _{max}	0.5ind	0.83	0.47	0.21	0.04	0.09	0.11

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5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
48C03144	0.25-5(6)A – Polyphase, Active Import/Export kWh, Multifunction, Transformer Operated (Terminal 7 and 8 used as power output for next meter in daisy connection)
48C03146	0.25-5(6)A – Polyphase, Active Import/Export kWh, Multifunction, Transformer Operated, Mbus communication

Modifications to the meter(s) described according to approval No.**0120/SGS0526** 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	24/01/2022	Initial Issue
2	21/02/2022	Photo with incorrect SGS TEC number corrected

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END OF CERTIFICATE