

EU Type Examination Certificate Number: **0120/SGS0405**

Hangzhou Meteronic Technology Co., Ltd

Building 3, No. 2620 Yuhangtang Road
Cangqian Street
Yuhang District
Hangzhou Zhejiang
China

Instrument Identification:
MT108 & MT101KP

Single Phase, Active Import/Export (kWh), Multi-Rate, Smart, Electricity Meter

Instrument Traceable Number
0120/SGS0405

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 15th February 2019 until 14th February 2029
Issue 1


Certification is based on report number(s) SHES181100079101 dated 15th February 2019
EMA263989/1/TR50579 dated 15th February 2019, EMA263989/1

Authorised Signature




SGS United Kingdom Limited, Notified Body 0120
Unit 202B Worle Parkway, Weston-super-Mare, BS22 6WA, UK
t +44 (0)1934 522917 f +44 (0)1934 522137 www.sgs.com

Contact Address
SGS United Kingdom Limited, Units 12A & 12B, South Industrial Estate, Bowburn, Durham, DH6 5AD, UK
t +44 (0)191 377 2000 f +44 (0)191 377 2020 www.sgs.com

	EU-Type Examination Certificate Number:	
	0120/SGS0405	
	Issue Number: 1	Dated: 15 th February 2019


1. Technical Data

Manufacturer	Hangzhou Meteronic Technology Co., Ltd
Meter Type(s)	MT108 & MT101KP
Voltage Rating (U_n)	230V
Current Rating (I_{min} – I_{ref} (I_{max}))	0.25-5(100)A
Frequency (F_n)	50Hz
Active Accuracy Class (kWh)	A or B (kWh)
Type of circuit	1p2w
Temperature Range	-40°C to +70°C
Software Version No.	V01.01
CRC Checksum No's.	MT108: e7961d3aH MT101KP : 4cf8c1a6H
Identification Location	LCD
Bill Of Materials No's.	MT108: MT108_BH10002-01V1.2 MT108_BH10002-02V1.2 MT101KP: MT101KP_BH10002-01V1.2 MT101KP_BH10002-02V1.2
IP Rating	IP54
Insulation Protective Class	Class II
LED Pulse Constant	1000 imp/ kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	Wire & Crimp
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	LCD
Terminal Arrangement(s)	BS
Location of Manufacturers Address	Associated Documents

	EU-Type Examination Certificate Number:	
	0120/SGS0405	
	Issue Number: 1	Dated: 15 th February 2019

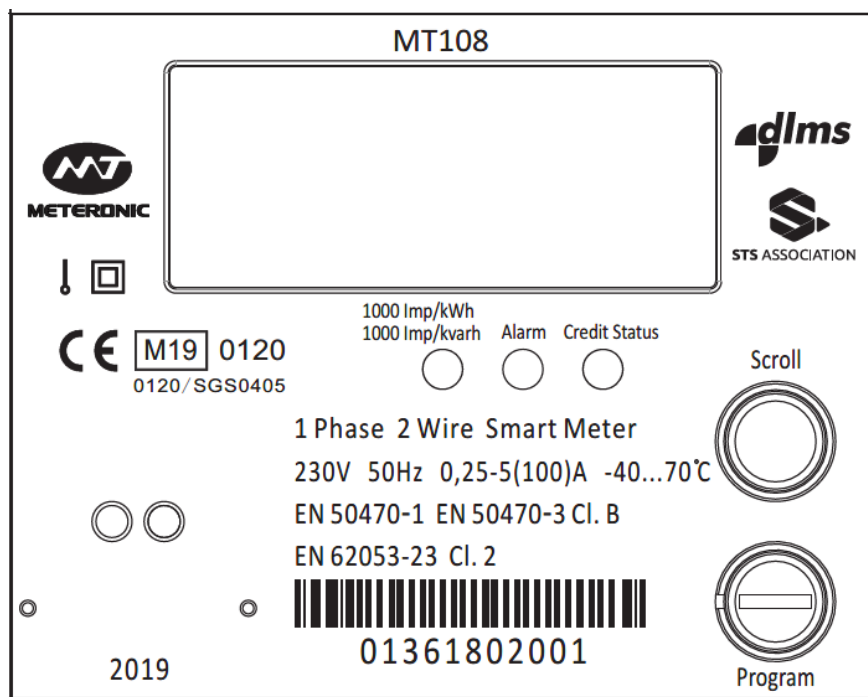
2. Photograph of Meter and Sealing Plan



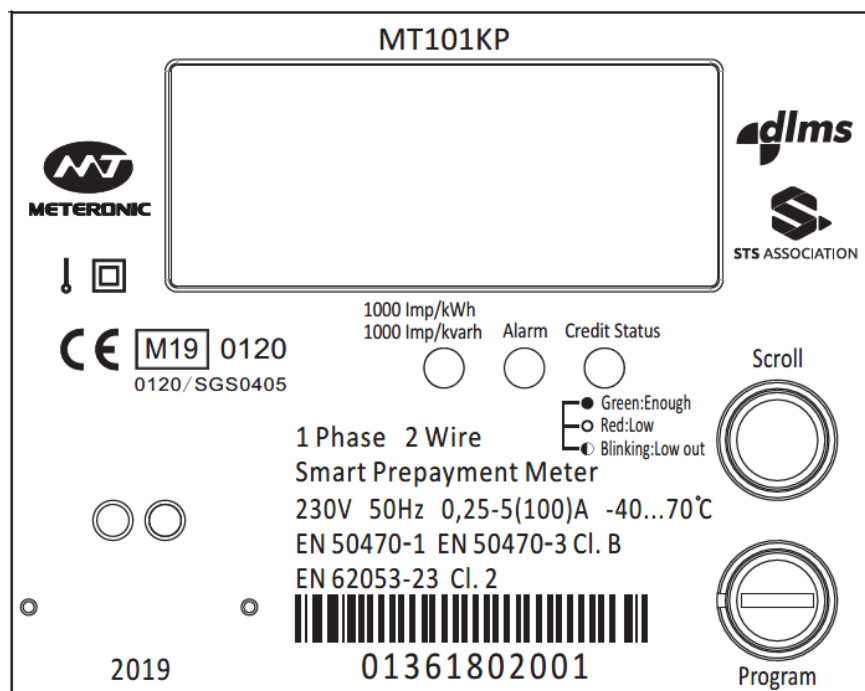
	EU-Type Examination Certificate Number:	
	0120/SGS0405	
	Issue Number: 1	Dated: 15 th February 2019


3. Examples of Nameplates

MT108



MT101KP



	EU-Type Examination Certificate Number:	
	0120/SGS0405	
	Issue Number: 1	Dated: 15 th February 2019

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, Voltage & Frequency							
Current	PF Cos	-40 °C	-25 °C	-10 °C	5 °C	30 °C	40 °C	55 °C	70 °C
I _{min}	1.0	0.67	0.65	0.50	0.15	0.13	0.24	0.47	0.64
I _{tr}	1.0	0.69	0.51	0.41	0.15	0.07	0.21	0.40	0.58
10I _{tr}	1.0	0.73	0.54	0.38	0.20	0.04	0.19	0.35	0.54
I _{max}	1.0	0.70	0.58	0.49	0.40	0.29	0.25	0.27	0.36
I _{tr}	0.5ind	0.57	0.48	0.36	0.14	0.10	0.24	0.43	0.58
10I _{tr}	0.5ind	0.62	0.49	0.33	0.17	0.09	0.22	0.38	0.53
I _{max}	0.5ind	0.61	0.52	0.44	0.36	0.26	0.23	0.27	0.36
I _{tr}	0.8cap	0.61	0.41	0.32	0.15	0.20	0.26	0.42	0.63
10I _{tr}	0.8cap	0.67	0.49	0.11	0.16	0.16	0.23	0.40	0.57
I _{max}	0.8cap	0.71	0.60	0.51	0.43	0.31	0.29	0.31	0.38


	EU-Type Examination Certificate Number:	
	0120/SGS0405	
	Issue Number: 1	Dated: 15 th February 2019

5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
MT108	1P2W, 230V, 5(100)A, 50Hz Communication Module
MT101KP	1P2W, 230V, 5(100)A, 50Hz

Modifications to the meter(s) described according to approval No.**0120/SGS0405** 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/SGS0405	
	Issue Number: 1	Dated: 15 th February 2019

6. Document Revision History

Issue	Date	Comments
1	15/02/2019	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