

EC Type Examination Certificate Number: 0120/SGS0115

ACLARA METERS, S.L.

Polingono Industrial Ugaldeguren III Parcela 27 48170 Zamudio Spain

Instrument Identification: SGM13**

Single Phase, Credit/ Pre-payment, Multi Rate, Electricity Meter

Instrument Traceable Number 0120/ SGS0115 has been assessed and certified as meeting the requirements of

EC Directive 2004/22/EC

on Measuring Instruments Annex 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 MI-003 of EC Directive 2004/22/EC

This certificate must be used in conjunction with a certificate covering the product verification as required in Annex D or Annex F.

This certificate is valid until 26th September 2023 Issue 24

> Certification is based on report number(s) EMA179463/1/MID dated 27th September 2013 EMA186199/11MID dated 26th February 2014

> > 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 Ltd, Unit 12, South Industrial Estate, Bowburn, Durham, DH6 5AD□UK t +44 (0)191 377 2000 f +44 (0)191 377 2020 www.sgs.com



Technical Data

1.

EC-Type Examination Certificate Number:

0120/ SGS0115

Issue Number: 24

Dated: 3rd April 2018

Manufacturer Aclara Meters S.L. Meter Type SGM13** Voltage Rating (Un) 230V Current Rating (Imin – Iref (Imax)) 0,5-10(100)A Frequency (Fn) 50Hz Active Accuracy Class (kWh) A or B (kWh) Type of circuit 1p2w Temperature Range -25°C to +55°C Metrology Firmware Software/ Firmware Version No's. V 01.00.10, V01.00.11 **Application Firmware** V02.02.04, V02.02.26, V0.2.02.30, V0.2.02.34, V02.02.35, V02.02.36, V3.0.40, V3.0.52, V3.0.54, V3.0.48, V3.0.49, V3.1.2, V3.2.2, V3.2.11, V3.2.13, V3.3.2, V3.3.3 **CRC Checksum** 0xB926 Identification Location LCD **Bill Of Materials No's** 104X1539G001 Revision 9 104X1539G002 Revision 9 104X1586G001 Revision 9 104X1586G002 Revision 9 104X1590G001 Revision 9 **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 or Plastic Seal Integrity of meter Inaccessible without breaking seals Intended Location of the Meter Indoor **Type of Register** LCD Terminal Arrangement(s) BS



0120/ SGS0115

Issue Number: 24

Dated: 3rd April 2018

2. Photograph of Meters





Twin Element





0120/ SGS0115

Issue Number: 24

Dated: 3rd April 2018

3. Calculation of the composite error/ MPE

	Influence Factors for temperature, frequency and voltage						
Current	PF Cos	-25	-10	5	30	40	55
Imin	1.0	0.32	0.27	0.18	0.11	0.19	0.35
ltr	1.0	0.36	0.25	0.14	0.05	0.18	0.33
10ltr	1.0	0.33	0.25	0.14	0.08	0.18	0.33
Imax	1.0	0.43	0.29	0.17	0.11	0.17	0.23
ltr	0.5ind	0.41	0.31	0.21	0.22	0.28	0.39
10ltr	0.5ind	0.37	0.30	0.19	0.15	0.21	0.35
Imax	0.5ind	0.43	0.33	0.17	0.11	0.16	0.21
ltr	0.8cap	0.32	0.25	0.16	0.12	0.22	0.31
10ltr	0.8cap	0.34	0.26	0.16	0.13	0.21	0.36
Imax	0.8cap	0.38	0.34	0.21	0.18	0.23	0.26

During the type approval examination the influence factors for temperature, frequency and voltage are determined per load point. The table above presents the sum of the square values per load, determined via the following formula:-

 $\delta \in (T, U, f) = \sqrt{(\delta e^2 (T, I, \cos\varphi), \delta e^2 (U, I, \cos\varphi), \delta e^2 (f, I, \cos\varphi))}$

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



0120/ SGS0115

Issue Number: 24

Dated: 3rd April 2018

4. Annex of Variants

Product Variant Identification Details:

Type Designation

Description of meter

SGM Smart Meter

1311 Single Element

1312 Single Element, 2A Auxiliary Relay

1322 Twin Element

Modifications to the meter(s) described according to approval No.**0120/SGS0115** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).



0120/ SGS0115

Issue Number: 24

Dated: 3rd April 2018

5. Document Revision History

Issue	Date	Comments
1	27/09/2013	Initial Issue
2	20/11/2013	Re-classification of IP rating and application firmware version upgrade from V 01.01.13 to V01.05.04.
3	10/03/2014	Twin element version added. Twin element version BOM added.
		Metrology and application firmware version upgraded.
		Change of manufacturers address.
		Meter name plate artwork removed. Photo of twin element version added.
4	11/04/2014	BOM revision change from REV03 to REV04 due to minor hardware change
5	03/06/2014	Application firmware version upgrade from V01.07.00 to V02.02.04
6	15/10/2014	Application firmware version upgrade from V02.02.04 to V02.02.26
7	20/11/2014	Application firmware version upgrade from V02.02.26 to V02.02.30
8	17/03/2015	Application firmware version upgrade from V02.02.26 to V02.02.34
9	29/05/2015	Application firmware version upgrade from V02.02.34 to V02.02.35
10	26/10/2015	Application firmware version upgrade from V02.02.35 to V02.02.36
11	17/12/2015	Minor metrology firmware change from V 01.00.10 to V01.00.11
12	26/02/2016	Non metrology component change and BOM revision number.
13	09/03/2016	Application firmware version upgrade from V02.02.36 to V3.0.40
14	06/04/2016	Change of manufacturer form GE Power Management to Aclara Meters
15	19/05/2016	Application firmware versions V3.0.52 and V3.0.54 added and revised PCBA codes
16	08/07/2016	Application firmware version V3.0.48 added.
17	29/07/2016	Application firmware version V3.0.49 added.
18	19/09/2016	Application firmware version V3.1.2 added.
19	06/02/2017	Application firmware version V3.1.2 added. Additional BOM number added. CRC checksum added
20	03/04/2017	New BOM revision
21	19/06/2017	New BOM revision
22	12/07/2017	Application firmware versions V3.2.11 & V3.2.13 added
23	11/01/2018	Application firmware version V3.2.2 added
24	03/04/2018	Application firmware version V3.3.3 added