EU Type Examination Certificate Number: **0120/ SGS0103/R1**

EM-Lite Limited

1 Stevern Way
Peterborough
Cambridgeshire
PE1 5EL

Instrument Identification:
ECA2.*
Single Phase, Active Import/ Export, Electricity Meter
Instrument Traceable Number
0120/ SGS0103

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 22nd March 2030

Issue 3

Certification is based on report number(s)
EMA157563/1 dated 18th June 2012
EMA277439/1 dated 18th March 2020

Authorised Signature

Mikko Välimäki

SGS Fimko OY, Notified Body 0598
Takomotie 8, FI-00380 Helsinki, Finland
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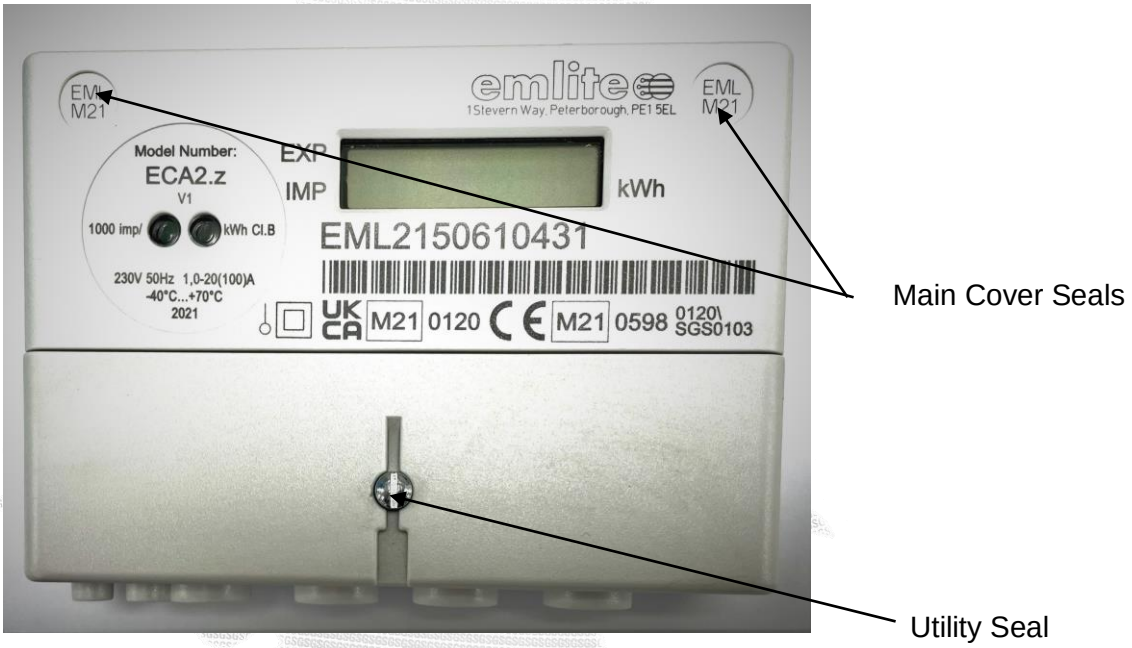
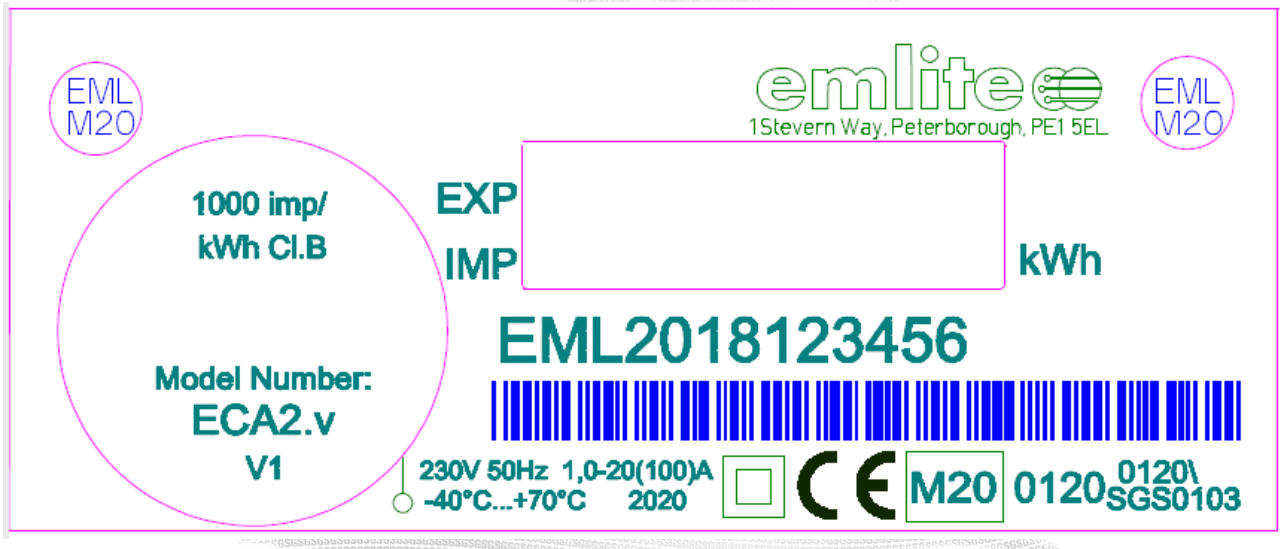
1. Technical Data

Manufacturer	EM-Lite Ltd
Meter Type	ECA2.*
Voltage Rating *(Un)*	220V – 240V
Current Rating *(Imin – Iref (Imax))*	0,25-5(100) 0,5-10(100) 0,75-15(100) 1-20(100)
Frequency *(Fn)*	50Hz
Active Accuracy Class *(kWh)*	A or B (kWh)
Type of circuit	1p2w
Temperature Range	-40°C to +70°C
Firmware Version No's **Identification Location**	V1.01-5 Checksum 50787 V1.01-6 Checksum 50814 V1.01-7 Checksum 10446 V1.01-8 Checksum 26153 V1.01-9 Checksum 42819 V1.02-0 Checksum 27098 LCD
Bill Of Materials No's	**ECA2.z & ECA2.nz** ECA2-4001- 02 REV A, ECA2-4001-03 REV A ECA2-4001-03 REV B, ECA2-4001-04 REV A ECA2-4001-05 REV A, ECA2-4001-06 REV A **ECA2.v & ECA.nv** ECA2-4002-02 REV A, ECA2-4002-03 REV A ECA2-4002-03 REV B, ECA2-4002-04 REV A ECA2-4002-5 REV A, ECA2-4002-06 REV A
IP Rating	IP52
Insulation Protective Class	Class II
LED Pulse Constant	1000 imp/kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Terminal Cover Sealing Type **Main Cover Sealing Type**	Wire & Crimp Press Fit Non-removable Lasered Plastic Seals
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	Nameplate

2. Photograph of Meter and Sealing Plan



3. Examples of Nameplates



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:-

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

where

$\delta e(T, I, \cos\varphi)$ = Additional error due to variation of the temperature at the same load
$\delta e(U, I, \cos\varphi)$ = Additional error due to variation of the voltage at the same load
$\delta e(f, I, \cos\varphi)$ = 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
Imin	1.0	*1.04*	*1.18*	*1.00*	*0.66*	*0.08*	*0.24*	*0.84*	*0.58*
Itr	1.0	*1.31*	*1.22*	*0.95*	*0.64*	*0.10*	*0.19*	*0.64*	*0.86*
10Itr	1.0	*1.02*	*0.79*	*0.52*	*0.30*	*0.17*	*0.35*	*0.62*	*0.82*
Imax	1.0	*0.91*	*0.27*	*0.15*	*0.20*	*0.52*	*0.68*	*0.95*	*0.72*
Itr	0.5ind	*0.88*	*1.25*	*0.99*	*0.63*	*0.12*	*0.26*	*0.75*	*0.89*
10Itr	0.5ind	*1.06*	*0.72*	*0.41*	*0.20*	*0.32*	*0.44*	*0.71*	*0.82*
Imax	0.5ind	*0.90*	*0.32*	*0.52*	*0.71*	*1.07*	*1.24*	*1.49*	*0.76*
Itr	0.8cap	*1.03*	*1.17*	*0.90*	*0.57*	*0.20*	*0.39*	*0.80*	*1.13*
10Itr	0.8cap	*1.06*	*0.77*	*0.48*	*0.27*	*0.20*	*0.39*	*0.63*	*0.94*
Imax	0.8cap	*0.94*	*0.16*	*0.13*	*0.29*	*0.66*	*0.83*	*1.09*	*0.87*

5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
ECA2.z	4 terminal basic variant, no auxiliary connections
ECA2.v	4 terminal with electronic pulsed output variant
ECA2.nz	4 terminal basic variant, no auxiliary connections, including Net Register
ECA2.nv	4 terminal with electronic pulsed output variant, including Net Register

Modifications to the meter(s) described according to approval No.**0120/SGS0103** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).

6. Document Revision History

Issue	Date	Comments
1	23/03/2020	Initial Issue
2	26/05/2022	Issue 1 for SGS Fimko NB 0598 The original approval certificate issued 23/03/2022 Additional BoM versions ECA2-4001-03 REV B, ECA2-4001-04 REV A & ECA2-4002-03 REV B, ECA2-4002-04 REV A. New software version V1.01-8
3	01/12/2022	New software versions V1.01-9 & V1.02-0

END OF CERTIFICATE