

Instrument Traceable No .:

0598/MID/B/25/091

### EU TYPE EXAMINATION CERTIFICATE Directive 2014/32/EU, Module B 0598/MID/B/25/091 Issue 1

Product Active Electrical Energy Meters (Annex V MI-003)

Model Meter type:

100652, 100694

Description: Polyphase

Import/Export (kWh) Electricity Meter

Trademark Loxone

Certificate holder / Manufacturer

Loxone Electronics GmbH

Smart Home 1, 4154 Kollerschlag, Austria

Directive information

For the instruments mentioned in this Certificate, the following essential requirements of

Directive 2014/32/EU apply:

Annex I Essential requirementsAnnex V Active electrical meters (MI-003)

Standards EN IEC 62052-11:2021+A11:2022, EN 50470-3:2022, IEC 62052-31:2024

Validity This certificate is valid until 2035-10-03.

The manufacturer must inform SGS Fimko in case of any intended change to the design.

Unauthorised changes will invalidate this certificate.

The Manufacturer is permitted to affix the CE-marking onto the instrument(s) after complying with the conformity assessment procedures referred to in Article 17 of the Directive and to

draw up a written declaration of conformity.

**Date of issue** 2025-10-08

SGS Fimko OY Notified Body 0598

Signature

Mikko Välimäki Certification Manager

Page 1 of 9

This document is issued by the Company under its General Conditions of Service accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">https://www.sgs.com/terms\_and\_conditions.htm</a>. 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. 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.

Certificate issued by

#### **SGS Fimko Oy**





#### Page 2 of 9 to Certificate No.: 0598/MID/B/25/091 Issue 1

#### Test report(s)

Report Number	scenses as a second sec
SHES250601000801	2025-09-29
SHES250601000802	2025-09-29

Technical information

Meter type(s) 100652, 100694

Voltage rating (U<sup>n</sup>): 3\*230/400V

Current rating (I<sub>min</sub> – I<sub>ref</sub> (I<sub>max</sub>)): 100652: 0.01-1(6)A/0.01-5(6)A

100694: 0.4-40(48)mA

Frequency  $(F_n)$ : 50/60Hz

Active Accuracy Class (kWh): A or B or C (kWh)

Type of circuit: 3p4w, 3p3w,1p3w, 1p2w

Temperature range: -40°C to +70°C

Software Version no(s).: 01.01

CRC Checksum(s): 100652:14BF1CC5

100694:1CBF1CB5

Identification location: Nameplate

Bill of Materials No.(s): 100652: DH-JS-250007 V1.0

100694: DH-JS-250008 V1.0

IP rating: IP 20 (installed in IP51 rated enclosure)

LED Pulse Constant 100652: 3200 imp/kWh

100694: 400K imp/kWh

Impulse Voltage Rating: 6kV

AC Voltage Rating: 4kV

Main Cover Sealing Type: 4 x Clips

Integrity of Meter: Inaccessible without breaking seals

Intended Location: Indoor

Type of Register: LCD

Terminal Arrangement(s): DIN

#### Page 2 of 9

This document is issued by the Company under its General Conditions of Service accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">https://www.sgs.com/terms\_and\_conditions.htm</a>. 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. 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.

Certificate issued by

#### **SGS Fimko Oy**

Takomotie 8
FI-00380 Helsinki, Finland
t. +358 9 696 361 www.sgs.com

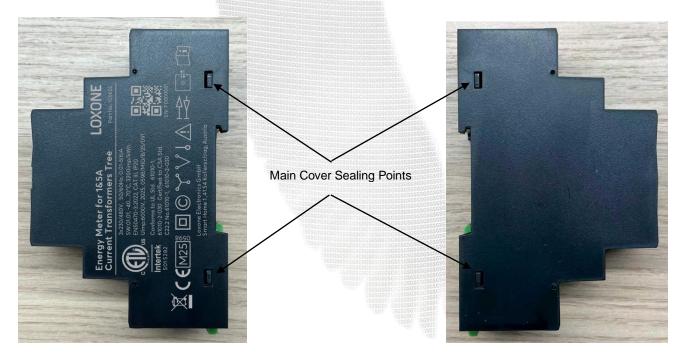
Business ID 0634247-4 Member of the SGS Group (SGS SA)



#### Page 3 of 9 to Certificate No.: 0598/MID/B/25/091 Issue 1

#### Photograph of Meter and Sealing Plan





#### Page 3 of 9

This document is issued by the Company under its General Conditions of Service accessible at <a href="http://www.sgs.com/terms\_and\_conditions.htm">http://www.sgs.com/terms\_and\_conditions.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

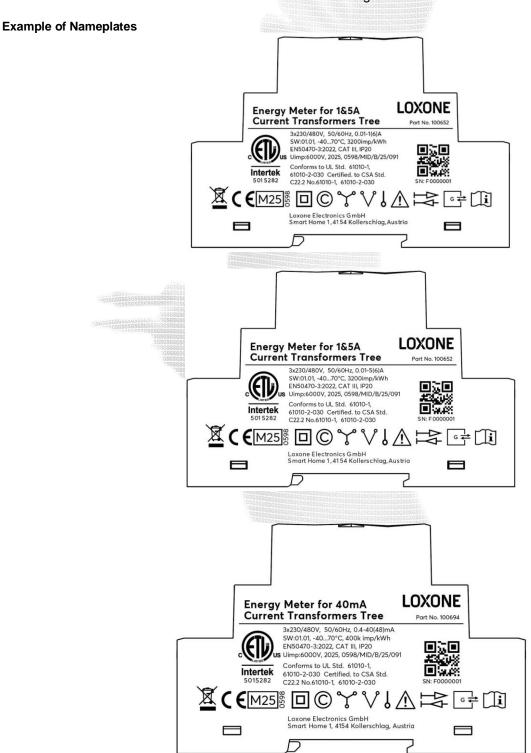
Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. 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.

Certificate issued by

#### **SGS Fimko Oy**



#### Page 4 of 9 to Cerificate No.: 0598/MID/B/25/091 Issue 1



#### Page 4 of 9

This document is issued by the Company under its General Conditions of Service accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">https://www.sgs.com/terms\_and\_conditions.htm</a>. 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. 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.

Certificate issued by

#### **SGS Fimko Oy**



#### Page 5 of 9 to Certificate No.: 0598/MID/B/25/091 Issue 1

## 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

 $e^{2} (I, \cos \varphi) = \text{Intrinsic error of the meter at a certain load}$ 

 $\delta e(T, I, \cos \varphi) = Additional error due to variation of the temperature at the same load <math>\delta e(U, I, \cos \varphi) = Additional error due to variation of the voltage at the same load <math>\delta e(f, I, \cos \varphi) = Additional error due to variation of the frequency at the same load$ 

#### Page 5 of 9

This document is issued by the Company under its General Conditions of Service accessible at <a href="http://www.sgs.com/terms\_and\_conditions.htm">http://www.sgs.com/terms\_and\_conditions.htm</a>. 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. 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.

Certificate issued by

#### **SGS Fimko Oy**



#### Page 6 of 9 to Certificate No.: 0598/MID/B/25/091 Issue 1

#### 6A Version

		Influence Factors for Temperature. Frequency & Voltage					)		
		-40°C	-25°C	-10°C	5°C	30°C	40°C	55°C	70°C
Current	PF Cos	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Imin	1.0	1.22	0.89	0.61	0.41	0.23	0.21	0.21	0.21
ltr	1.0	1.10	0.74	0.44	0.24	0.07	0.09	0.11	0.11
10ltr	1.0	1.14	0.78	0.51	0.27	0.08	0.07	0.07	0.07
Imax	1.0	1.14	0.77	0.47	0.26	0.06	0.06	0.06	0.06
ltr	0.5ind	1.14	0.74	0.43	0.21	0.10	0.11	0.09	0.09
10ltr	0.5ind	1.10	0.74	0.43	0.22	0.05	0.07	0.06	0.06
Imax	0.5ind	1.16	0.78	0.47	0.26	0.07	0.07	0.07	0.07
ltr	0.8cap	1.08	0.73	0.41	0.21	0.07	0.10	0.10	0.10
10ltr	0.8cap	1.17	0.81	0.49	0.29	0.12	0.11	0.11	0.11
Imax	0.8cap	1.15	0.77	0.48	0.26	0.07	0.07	0.07	0.07
		GSG GSG SGSG	GSGSGSGSGSGSGSG GSGSGSGSGSGSGSG GSGSGSGSGSGSGSG	GSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGS	GSGSGSGSGS GSGSGSGSGS GSGSGSGSGS				
L1	"SGSĞSG	SGSGSG GSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGS	6565656565656565 6565656565656565656565	GSGSGSGSGSGSGSGSGSGS GSGSGSGSGSGSGSGSGS	686868686868 68686868686868	9650 9650 05656			
ltr 5686868	asala O gsasasasasasasasasasasasasasasasasasasa	1.14	0.78	0.45	0.22	0.03	0.04	0.04	0.05
10ltr	1.0 SGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSG	1.18	0.81	0.49	0.29	0.12	0.12	0.12	0.15
Imax	1.0 GSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGS	1.15	0.79	0.48	0.26	0.10	0.09	0.09	0.12
ltr	0.5ind	1.12	0.72	0.39	0.17	0.14	0.13	0.11	0.21
10ltr	0.5ind	1.12	0.74	0.42	0.19	0.08	0.08	0.08	0.08
Imax	0.5ind	1.18	0.78	0.46	0.23	0.05	0.06	0.05	0.10
		SGSG SGSG	GSGSGSGSGSGSGSG GSGSGSGSGSGSGSG GSGSGSGSGSGSGSGSG	GSGSGSGSGSGSGSGSG GSGSGSGSGSGSGSGSGSG GSGSGSGSGSGSGSGSGSG	GSGSGSGSGSGSG GSGSGSGSGSGSG GSGSGSGSGSG				
L2		GSG: GSG: GSG:		GSGSGSGSGSGSGSGSGSG GSGSGSGSGSGSGSGSG GSGSCSGSGSGSG	GSGSGSGSGSGSGS GSGSGSGSGSGSGS GSGSGSGSG	0.40	0.40	0.40	0.40
ltr	1.0	1.13	0.71	0.40	0.19	0.16	0.18	0.19	0.18
10ltr	1.0	1.13	0.73	0.41	0.18	0.09	0.10	0.09	0.06
Imax	1.0	1.21	0.79	0.47	0.24	0.06	0.06	0.06	0.08
ltr	0.5ind	1.23	0.80	0.46	0.21	0.09	0.11	0.10	0.12
10ltr	0.5ind	1.22	0.80	0.48	0.25	0.07	0.07	0.07	0.10
Imax	0.5ind	1.28	0.87	0.55	0.32	0.17	0.16	0.16	0.19
			SGSGSGSGSG SGSGSGSGSG SGSGSGSG	GSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGS	GSGSGSGSGSGSGSGSG GSGSGSGSGSGSGSGSG GSGSGSGSGSGSGSGSG	GSGSGSGSG GSGSGSGSGS GSGSGSGSGS			
L3	4.0	4.40	GSGSGSG GSGSGSG	GSGSGSGSGSGSGSGSG GSGSGSGSGSGSGSGSGSG GS	65656565656565656565656565656565656565	GSGSGSGSGSGS GSGSGSGSGSGS	0.00	0.00	0.04
ltr 4014m	1.0	1.13	0.73	0.40	0.19	0.07	0.08	0.09	0.04
10ltr	1.0	1.17	0.75	0.43	0.22	0.05	0.06	0.05	0.08
Imax	1.0	1.17	0.75	0.44	0.22	0.05	0.06	0.05	0.07
ltr 4014=	0.5ind	1.16	0.74	0.40	0.16	0.09	0.10	0.07	0.09
10ltr	0.5ind	1.07	0.66	0.35	0.13	0.10	0.12	0.09	0.06
Imax	0.5ind	1.13	0.71	0.39	0.17	0.04	0.06	0.03	0.08

#### Page 6 of 9

This document is issued by the Company under its General Conditions of Service accessible at <a href="http://www.sgs.com/terms\_and\_conditions.htm">http://www.sgs.com/terms\_and\_conditions.htm</a>. 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. 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.

Certificate issued by

#### **SGS Fimko Oy**



#### Page 7 of 9 to Certificate No.: 0598/MID/B/25/091 Issue 1

#### 48mA Version

		Influence Factors for Temperature. Frequency & Voltage					<u> </u>		
		-40°C	-25°C	-10°C	5°C	30°C	40°C	55°C	70°C
Current	PF Cos	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Imin	1.0	0.25	0.09	0.06	0.08	0.05	0.10	0.15	0.53
ltr	1.0	0.24	0.07	0.06	0.07	0.05	0.12	0.17	0.55
10ltr	1.0	0.31	0.05	0.05	0.03	0.08	0.10	0.20	0.55
Imax	1.0	0.19	0.05	0.08	0.08	0.02	0.09	0.18	0.55
ltr	0.5ind	0.38	0.19	0.01	0.02	0.04	0.11	0.17	0.59
10ltr	0.5ind	0.09	0.08	0.27	0.12	0.20	0.08	0.07	0.53
Imax	0.5ind	0.18	0.07	0.16	0.14	0.08	0.08	0.11	0.51
ltr	0.8cap	0.14	0.17	0.11	0.11	0.06	0.13	0.20	0.51
10ltr	0.8cap	0.08	0.08	0.10	0.11	0.04	0.08	0.03	0.38
Imax	0.8cap	0.20	0.06	0.07	0.08	0.04	0.12	0.20	0.54
l.,	"sősőső.	GSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGS	656565656565656 65656565656565656 65	GSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGS	GSGSGSGSGS GSGSGSGSGSGS GSGSGSGSGSGSGS	15650 9680 15650 156563			
L1	GSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGS	GSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGS	GSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGS		6565656565656565656 6565656565656565656	GSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGS	0.40		0.50
ltr	1.0 SGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSG	0.11	0.06	0.12	0.13	0.05	0.13	0.23	0.59
10ltr	68160 GSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGS	0.13	0.02	0.07	0.08	0.07	0.17	0.26	0.62
Imax	1.0 365656565	0.12	0.05	0.13	0.12	0.05	0.14	0.26	0.61
Itr	0.5ind	0.31	0.15	0.09	0.05	0.09	0.17	0.31	0.73
10ltr	0.5ind	0.17	0.06	0.23	0.08	0.07	0.16	0.32	0.70
Imax	0.5ind	0.10	0.08	0.17	0.14	0.06	0.14	0.27	0.64
1.0		GSGS GSGS GSGS	GSGSGSGSGSGSGSGSG GSGSGSGSGSGSGSG GSGSGSGSGSGSGSG	GSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGS	GSGSGSGSGSGSGS GSGSGSGSGSGSGS GSGSGSGSG				
L2	4.0	0.04	0.00	0.04	0.07	0.04	0.40	0.04	0.50
ltr 10ltr	1.0 1.0	0.24 0.28	0.08 0.10	0.04 0.03	0.07 0.06	0.04 0.03	0.12 0.11	0.24 0.25	0.50 0.47
Imax	1.0	0.26	0.10	0.03	0.06	0.03	0.11	0.25	0.47
Itr	0.5ind	0.20	0.10	0.01	0.04	0.05	0.14	0.26	0.49
10ltr	0.5ind 0.5ind	0.40	0.21	0.05	0.00	0.05	0.11	0.31	0.38
Imax	0.5ind 0.5ind	0.25	0.03	0.03	0.12	0.05	0.15	0.28	0.36
IIIIax	U.Siriu	0.23	0.09	0.02	0.04	GSGSGSGSGS GSGSGSGSGSGS	0.10	0.54	0.40
L3			GSGSGSG GSGSGSG SGSG	GSGSGSGSGSGSGSGSG GSGSGSGSGSGSGSGSGSGSG	65656565656565656565656565656565656565	GSGSGSGSGSGS GSGSGSGSGSGSGS GSGSGSGSGSG			
Itr	1.0	0.16	0.06	0.11	0.12	0.07	0.14	0.37	0.41
10ltr	1.0	0.10	0.04	0.06	0.06	0.04	0.14	0.40	0.49
Imax	1.0	0.19	0.04	0.06	0.07	0.06	0.15	0.41	0.44
Itr	0.5ind	0.32	0.15	0.06	0.08	0.06	0.10	0.43	0.39
10ltr	0.5ind	0.12	0.01	0.12	0.04	0.02	0.12	0.49	0.41
Imax	0.5ind	0.17	0.02	0.08	0.08	0.04	0.14	0.49	0.43
IIIIux	J.01110	0.17	0.02	0.00	0.00	enenenenenenenenen	ens GSusaco	0.70	0.70

#### Page 7 of 9

This document is issued by the Company under its General Conditions of Service accessible at <a href="http://www.sgs.com/terms\_and\_conditions.htm">http://www.sgs.com/terms\_and\_conditions.htm</a>. 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. 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.

Certificate issued by

#### **SGS Fimko Oy**



#### Page 8 of 9 to Certificate No.: 0598/MID/B/25/091 Issue 1

#### **Annex of Variants**

Product variation identification details

Model No.	Current range	Current Circuit	Front Nameplate	Display parameter	Pulse constant	Auxiliary function
100652	0.01-5(6)A 0.01-1(6)A	With internal current transformer	Laser etched on the front cover	+A, -A, Total A	3200 imp/kWh	Canbus communication
100694	0.4-40(48)mA	Without internal current transformer	Laser etched on the front cover	+A, -A, Total A	400k imp/kWh	Canbus communication

#### Page 8 of 9

This document is issued by the Company under its General Conditions of Service accessible at <a href="http://www.sgs.com/terms\_and\_conditions.htm">http://www.sgs.com/terms\_and\_conditions.htm</a>. 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. 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.

Certificate issued by

#### **SGS Fimko Oy**



#### Page 9 of 9 to Certificate No.: 0598/MID/B/25/091 Issue 1

#### **Certificate Revision History**

Issue	Date	Comments
1	2025-10-08	Initial Issue

# FINAS Finnish Accreditation Service S003 (EN ISO/IEC 17065)

#### Page 9 of 9

This document is issued by the Company under its General Conditions of Service accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">https://www.sgs.com/terms\_and\_conditions.htm</a>. 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. 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.

Certificate issued by

#### **SGS Fimko Oy**