

EU TYPE EXAMINATION CERTIFICATE Directive 2014/32/EU, Module B 0598/MID/B/24/077 Issue 1

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

Model Meter type

OR-WE-531, OR-WE-534 Description

Three Phase, Direct connected,

Import /Export (kWh),

DIN Rail Mounted, Electricity Meter

Instrument Traceable No 0598/MID/B/24/077

Certificate holder / Manufacturer

ORNO-LOGISTIC Sp. zo.o

44-141 Gliwice, ul. Rolników 437, Poland

Directive information

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

Directive 2014/32/EU apply:
- Annex I Essential requirements

- Annex V Active electrical meters (MI-003)

Standards EN IEC 6205

EN IEC 62052-11:2021+A11:2022, EN 50470-3:2022, IEC 62052-31:2015

Validity

This certificate is valid until 2034-10-25

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

2025-01-28

SGS Fimko OY Notified Body 0598

Signature

Mikko Välimäki

Certification Manager

Page 1 of 7

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Page 2 of 7 to Certificate No.:

0598/MID/B/24/077 Issue 1

Test report(s)

Report Number	Date
SHES240601223401	2024-09-18
SHES240601223402	2024-09-18
XNZ202402147	2024-09-18

Technical information

Meter type(s) OR-WE-531, OR-WE-534

Voltage rating (Uⁿ) 3*230/400V

Current rating $(I_{min} - I_{ref}(I_{max}))$ 0,25-5(30)A, 0,25-5(32)A, 0,25-5(40)A, 0,25-5(45)A,

0,25-5(50)A, 0,25-5(60)A, 0,25-5(80)A

Frequency (F_n) 50/60 Hz

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

Type of circuit 3p4w

Temperature range -25°C to +70°C

Software/Firmware version no.: 1.0.01

CRC Checksum 1D75

Identification location LCD

Bill of Materials No.(s) OR-WE-534: D519167 V0.1,

OR-WE-531: D519168 V0.1,

IP rating IP51

Insulation protective class Class II

LED Pulse Constant 1000 imp/kWh

Impulse Voltage Rating 6kV
AC Voltage Rating 4 kV

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) DIN

Page 2 of 7

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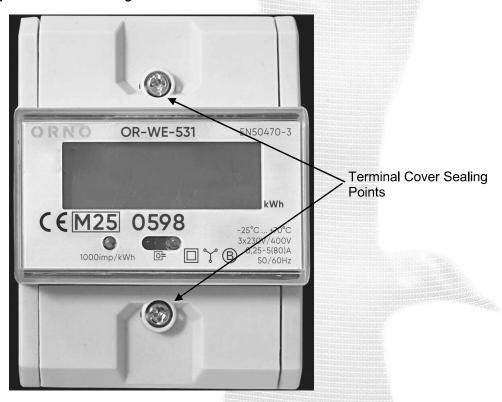
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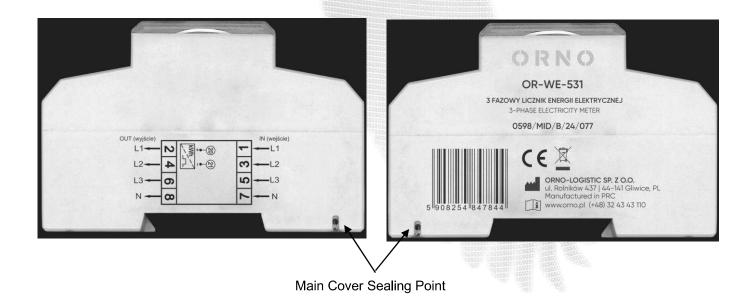


Page 3 of 7 to Certificate No.:

0598/MID/B/24/077 Issue 1

Photograph of Meter and Sealing Plan





Page 3 of 7

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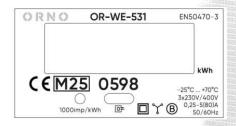
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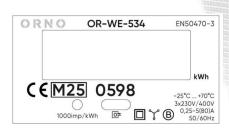


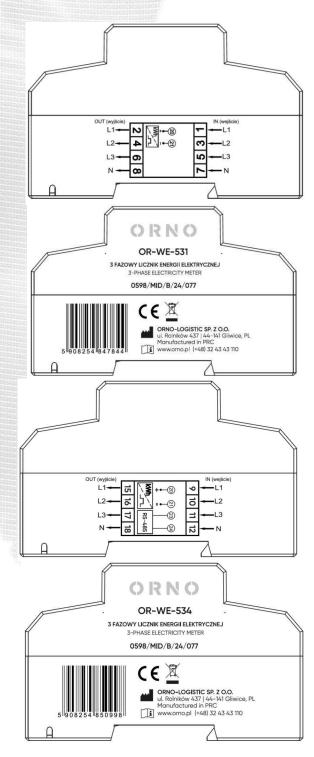
Page 4 of 7 to Certificate No.:

0598/MID/B/24/077 Issue 1

Example of Nameplates







Page 4 of 7

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Page 5 of 7 to Certificate No.:

0598/MID/B/24/077 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

 $\delta e(\mathit{T},\mathit{I},\cos\phi)$ = 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.

		GSGSGSGS In	fluence Fa	ctors for te	mperature	, frequency	and voltag	ge
Current	PF Cos	-25°C	-10°C	5°C	30°C	40°C	55°C	70°C
Imin	1.0	0.17	0.18	0.19	0.09	0.08	0.18	0.42
Itr	1.0	0.15	0.15	0.16	0.11	0.09	0.15	0.39
10Itr	1.0	0.25	0.25	0.25	0.18	0.10	0.10	0.27
Imax	1.0	0.24	0.23	0.24	0.20	0.17	0.14	0.30
Itr	0.5ind	0.16	0.20	0.16	0.11	0.09	0.15	0.46
	0.5ind	0.13	0.15	0.14	0.12	0.08	0.10	0.36
	0.5ind	0.16	0.17	0.17	0.13	0.09	0.09	0.35
ltr	0.8cap	0.23	0.22	0.21	0.15	0.12	0.13	0.39
10ltr	0.8cap	0.28	0.28	0.28	0.25	0.19	0.18	0.37
Imax	0.8cap	0.18	0.18	0.18	0.15	0.14	0.15	0.39
L1 ltr 10ltr lmax	1.0 1.0 1.0	0.21 0.18 0.17	0.18 0.16 0.14	0.18 0.16 0.12	0.19 0.16 0.12	0.19 0.16 0.13	0.22 0.21 0.19	0.51 0.52 0.57
ltr	0.5ind	0.40	0.40	0.38	0.38	0.38	0.39	0.56
10ltr	0.5ind	0.21	0.16	0.15	0.15	0.17	0.22	0.48
Imax	0.5ind	0.19	0.16	0.15	0.15	0.17	0.23	0.54
L2 Itr 10Itr Imax	1.0 1.0 1.0	0.18 0.14 0.11	0.18 0.13 0.10	0.18 0.13 0.09	0.19 0.11 0.08	0.23 0.13 0.09	0.32 0.18 0.13	0.55 0.43 0.46
Itr	0.5ind	0.33	0.35	0.32	0.32	0.39	0.52	0.75
10Itr	0.5ind	0.14	0.14	0.14	0.14	0.18	0.20	0.48
Imax	0.5ind	0.13	0.13	0.13	0.12	0.15	0.16	0.50
L3 Itr 10Itr Imax	1.0 1.0 1.0	0.38 0.25 0.36	0.29 0.23 0.36	0.19 0.20 0.35	0.17 0.11 0.25	0.17 0.09 0.22	0.12 0.14 0.19	0.28 0.29 0.25
Itr	0.5ind	0.37	0.29	0.33	0.16	0.18	0.10	0.25
10Itr	0.5ind	0.28	0.25	0.24	0.11	0.10	0.12	0.25
Imax	0.5ind	0.28	0.27	0.25	0.07	0.12	0.15	0.24

Page 5 of 7

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Page 6 of 7 to Certificate No.:

0598/MID/B/24/077 Issue 1

Product Variant Identification Details

Model No.	OR-WE-534	OR-WE-531	
Voltage range	3x230/400V		
Current range	0,25-5(30)A, 0,25-5(32)A, 0,25-5(40)A, 0,25-5(45)A,		
	0,25-5(50)A, 0	,25-5(60)A, 0,25-5(80)A	
Frequecy range	50/60Hz		
Optical pulse output	1000imp/k Wh		
Electrical pulse output	CSGSSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGS	495555555 57 4555555555 57 655555555 4	
RS485 communication	#####################################	0565650565 0566565655 05665656565	
Infrared communication	356585656555555555555555555555555555555	6565656565	
Battery	GSR - 1285CSSSSS - 655GSCSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS	6565656565 : 6565656565 : 6565656565 : 65656565	
Backlight	656595556559 • 305653555555555555555555555555555555555	GSGSGSGSGS	
Software version	1.0.01	1.0.01	
Checksum	1D75	1D75	

Opaque case and transparent case are optional

Page 6 of 7

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Page 7 of 7 to Certificate No.:

0598/MID/B/24/077 Issue 1

Certificate Revision History

Issue	Date	Comments	
1	2025-01-28	Initial Issue	**************************************



Page 7 of 7

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