

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 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

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Test report(s)

Report Number	assas sassassas Date sasass		
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

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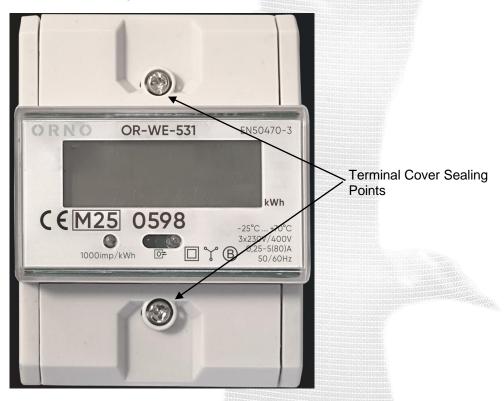
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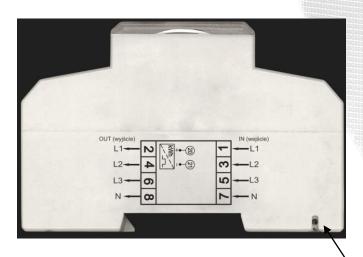


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Photograph of Meter and Sealing Plan







Main Cover Sealing Point

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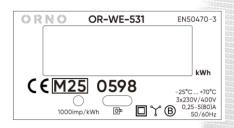
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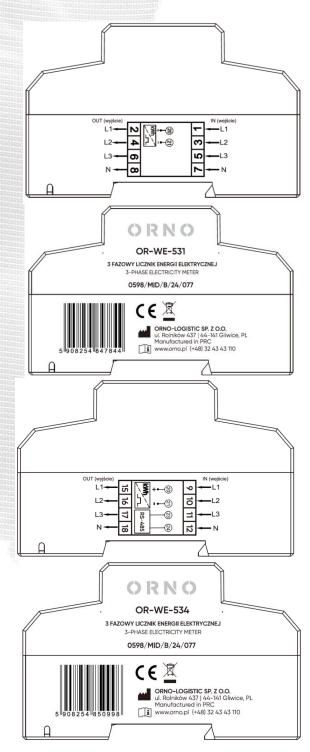
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Example of Nameplates







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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

 $\delta e(U, I, \cos \varphi) = \text{Additional error due to variation of the voltage at the same load}$

 $\delta e(f, I, \cos \varphi) = \text{Additional error due to variation of the frequency at the same load.}$

		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
ltr 6555555	0.5ind	0.16	0.20	0.16	0.11	0.09	0.15	0.46
10ltr	0.5ind	0.13	0.15	0.14	0.12	0.08	0.10	0.36
Imax 855555	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 Itr 10Itr Imax	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
ltr	0.5ind	0.33	0.35	0.32	0.32	0.39	0.52	0.75
10ltr	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
ltr	0.5ind	0.37	0.29	0.33	0.16	0.18	0.10	0.25
10ltr	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

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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	GSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGS	6565656565 57		
RS485 communication	3545658505 656075 \$\infty \$15565555555555555555555555555555555555	9565656555 5 1956565655 5 1966569696 6		
Infrared communication	G885G5G5G5G5G5G5G5G5G5G5G5G5G5G5G5G5G5G	4656965658		
Battery	GSGSGSGSG	956969868 IS 688868688 IS		
Backlight	6585958505656	SSCSSSSCS 5		
Software version	1.0.01	1.0.01		
Checksum	1D75	9565359555		

Opaque case and transparent case are optional

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Certificate Revision History

Issue	Date	Comments	
1	2025-01-28	Initial Issue	95 S S 9



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