

EU Type Examination Certificate Number: **0120/SGS0598**

# ORNO-LOGISTIC Sp. z o.o

44-141 Gliwice, ul, Rolników 437,  
Poland

Instrument Identification:  
**OR-WE-523, OR-WE-527**

**Single Phase, Direct Connected, Import / Export, DIN Rail Mounted, Electricity Meter**

Instrument Traceable Number  
**0120/SGS0598**

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 from 18<sup>th</sup> January 2023 until 21<sup>st</sup> December 2030  
Issue 1

Certification is based on report number(s)  
SHES200801726701 dated 22<sup>nd</sup> December 2020  
EMA285065/1/TR50579 dated 16<sup>th</sup> December 2020  
EMA285065/1  
EMA309157/1


Authorised Signature



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	EU-Type Examination Certificate Number:	
	<b>0120/SGS0598</b>	
	Issue Number: 1	Dated: 18 <sup>th</sup> January 2023

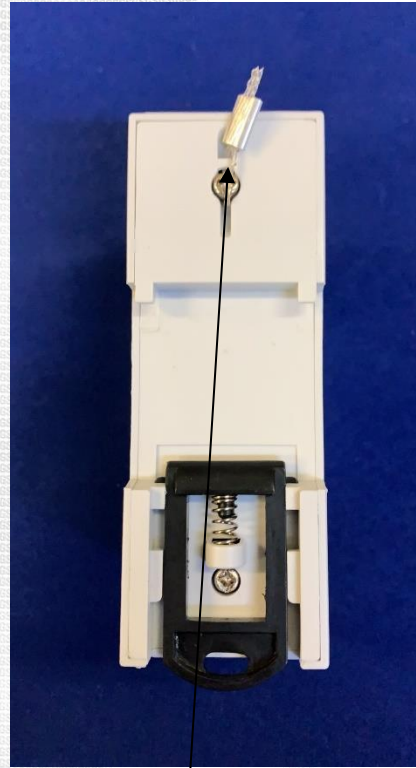
## 1. Technical Data

<b>Manufacturer</b>	ORNO-LOGISTIC Sp. z o.o
<b>Meter Type</b>	OR-WE-523, OR-WE-527
<b>Voltage Rating (<math>U_n</math>)</b>	230V
<b>Current Rating (<math>I_{min} - I_{ref} (I_{max})</math>)</b>	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(80)A
<b>Frequency (<math>F_n</math>)</b>	50Hz
<b>Active Accuracy Class (<math>kWh</math>)</b>	A or B (kWh)
<b>Type of circuit</b>	1p2w
<b>Temperature Range</b>	-40°C to +70°C
<b>Software/ Firmware Version No</b>	1.01
<b>CRC Checksum</b>	385E
<b>Identification Location</b>	LCD
<b>Bill Of Materials Number</b>	D119053
<b>IP Rating</b>	IP51
<b>Insulation Protective Class</b>	Class II
<b>LED Pulse Constant</b>	1000 imp/kWh
<b>Impulse Voltage Rating</b>	6kV
<b>AC Voltage Rating</b>	4kV
<b>Main Cover Sealing Type</b>	Wire & Crimp
<b>Integrity of meter</b>	Inaccessible without breaking seals
<b>Intended Location of the Meter</b>	Indoor
<b>Type of Register</b>	LCD
<b>Terminal Arrangement(s)</b>	DIN
<b>Location of Manufacturers Address</b>	Nameplate


**2. Photograph of Meter and Sealing Plan**



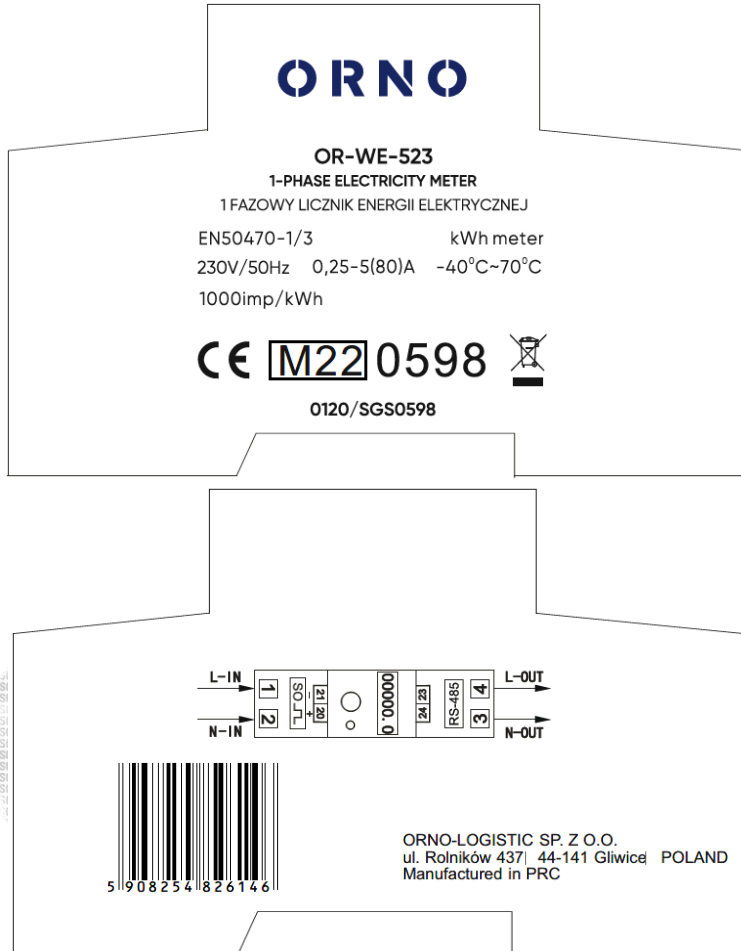
Terminal Cover Seal



Main Cover Seal

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### 3. Examples of Nameplates



# SGS

EU-Type Examination Certificate Number:

## 0120/SGS0598

Issue Number: 1

Dated: 18<sup>th</sup> January 2023

# ORNO

OR-WE-527

1-PHASE ELECTRICITY METER

1 FAZOWY LICZNIK ENERGII ELEKTRYCZNEJ

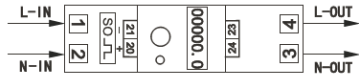
EN50470-1/3 kWh meter

230V/50Hz 0,25-5(80)A -40°C~70°C


1000imp/kWh

CE **M22** 0598 

0120/SGS0598



ORNO-LOGISTIC SP. Z O.O.  
ul. Rolników 437 | 44-141 Gliwice | POLAND  
Manufactured in PRC

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#### 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:-

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

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

		Influence Factors for Temperature. Frequency & Voltage							
Current	PF Cos	-40°C	-25°C	-10°C	5°C	30°C	40°C	55°C	70°C
I <sub>min</sub>	1.0	1.40	1.28	1.21	1.09	0.93	0.89	0.83	0.81
I <sub>tr</sub>	1.0	0.67	0.54	0.43	0.29	0.12	0.16	0.31	0.49
10I <sub>tr</sub>	1.0	0.58	0.45	0.32	0.18	0.09	0.19	0.37	0.57
I <sub>max</sub>	1.0	0.37	0.30	0.21	0.12	0.13	0.21	0.36	0.53
I <sub>tr</sub>	0.5ind	0.55	0.41	0.29	0.17	0.11	0.25	0.39	0.58
10I <sub>tr</sub>	0.5ind	0.56	0.43	0.31	0.17	0.08	0.20	0.38	0.57
I <sub>max</sub>	0.5ind	0.42	0.35	0.27	0.18	0.09	0.10	0.30	0.48
I <sub>tr</sub>	0.8cap	0.58	0.45	0.31	0.19	0.11	0.21	0.37	0.57
10I <sub>tr</sub>	0.8cap	0.58	0.45	0.32	0.18	0.10	0.21	0.38	0.57
I <sub>max</sub>	0.8cap	0.43	0.35	0.27	0.17	0.08	0.10	0.31	0.49


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## 5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
OR-WE-523	Active Import / Export Kwh, 230V, 0.25-5(X)A, Electricity Meter With Modbus Communication
OR-WE-527	Active Import / Export Kwh, 230V, 0.25-5(X)A, Electricity Meter

Modifications to the meter(s) described according to approval No. **0120/SGS0598** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).

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**6. Document Revision History**

Issue	Date	Comments
1	18/01/2023	Initial Issue

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**END OF CERTIFICATE**