



SGS

EU Type Examination Certificate Number: **0120/SGS0396**

ORNO-LOGISTIC Sp. Z O.O

ul. Rolnikow 437 44-141
Gliwice
Poland

Instrument Identification:
OR-WE-520

Poly Phase, Active Import, Indoor, Electricity Meter

Instrument Traceable Number
0120/SGS0396

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 18th September 2024
Issue 2

Certification is based on report number(s) SHES140600277301 issued 18th September 2014
SHES150400182201 issued 22nd May 2015
EMA261617

Authorised Signature

SGS United Kingdom Limited, Notified Body 0120
Unit 202B Worle Parkway, Weston-super-Mare, BS22 6WA, UK
t +44 (0)1934 522917 f +44 (0)1934 522137 www.sgs.com

SGS United Kingdom Limited, Units 12A & 12B, South Industrial Estate, Bowburn, Durham, DH6 5AD, UK
t +44 (0)191 377 2000 f +44 (0)191 377 2020 www.sgs.com

Contact Address




This document is issued, on the Client's behalf, by the Company under its General Conditions of Service printed overleaf. The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any other holder of this document is advised that the information contained herein reflects the Company's findings at the time of its intervention only and within the limits of Clients 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.

EU Type Examination Cert.


SGSPAPER
19794275



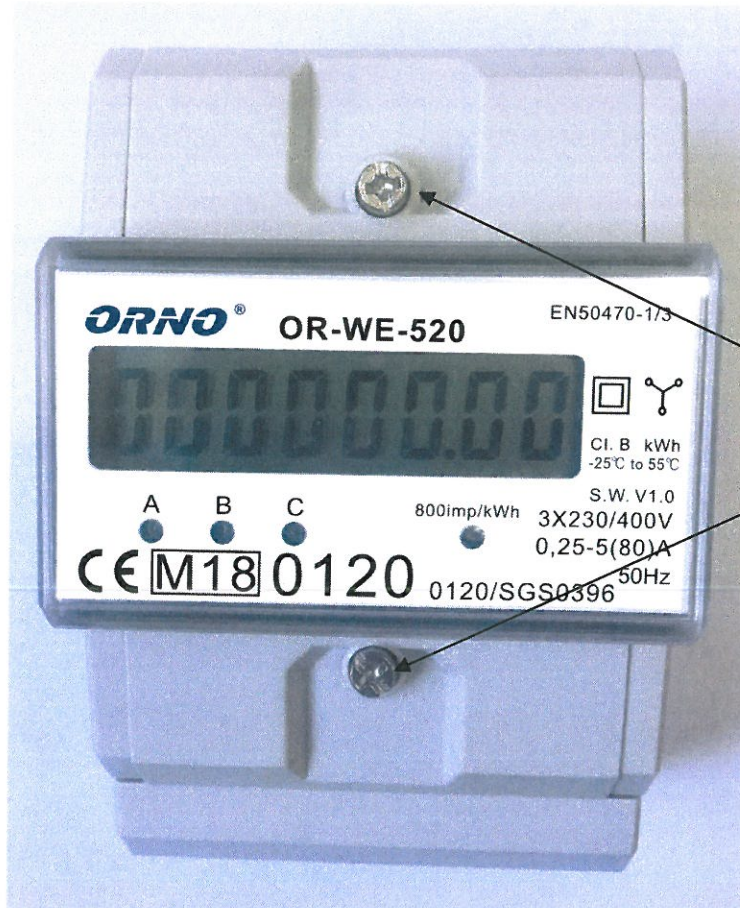
	EU-Type Examination Certificate Number:	
	0120/SGS0396	
	Issue Number: 2	Dated: 31 st July 2019

1. Technical Data


Manufacturer	ORNO-LOGISTIC Sp. Z O.O
Meter Type	OR-WE-520
Voltage Rating (U_n)	3x230/400V
Current Rating ($I_{min} - I_{ref} (I_{max})$)	0,25-5(80)A
Frequency (F_n)	50Hz
Active Accuracy Class (kWh)	A or B (kWh)
Type of circuit	3p4w
Temperature Range	-25°C to +55°C
Software/ Firmware Version No	V1.0
Identification Location	Nameplate
Bill Of Materials Number	D512054
IP Rating	IP51
Insulation Protective Class	Class II
LED Pulse Constant	800imp/ kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	2 x Wire & Crimp
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	LCD
Terminal Arrangement(s)	DIN
Location of Manufacturers Address	Nameplate

	EU-Type Examination Certificate Number:	
	0120/SGS0396	
	Issue Number: 2	Dated: 31 st July 2019

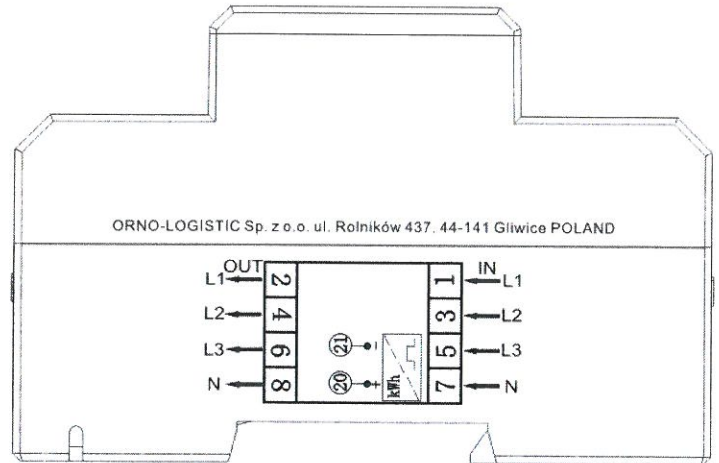
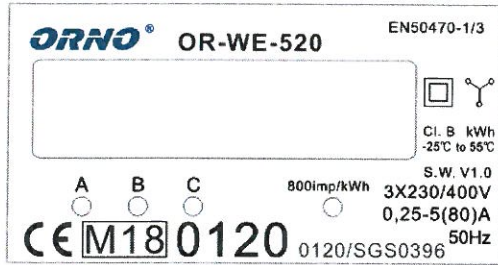
2. Photograph of Meter and Sealing Plan




Terminal Cover
Sealing Points

	EU-Type Examination Certificate Number:	
	0120/SGS0396	
	Issue Number: 2	Dated: 31 st July 2019

3. Examples of Nameplates



	EU-Type Examination Certificate Number:	
	0120/SGS0396	
	Issue Number: 2	Dated: 31 st July 2019

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




EU-Type Examination Certificate Number:

0120/SGS0396

Issue Number: 2

Dated: 31st July 2019

		Influence Factors for Temperature. Frequency & Voltage					
Current	PF Cos	-25°C	-10°C	5°C	30°C	40°C	55°C
I _{min}	1.0	0.65	0.60	0.25	0.16	0.31	0.36
I _{tr}	1.0	0.59	0.46	0.42	0.42	0.48	0.60
10I _{tr}	1.0	0.68	0.54	0.42	0.39	0.50	0.68
I _{max}	1.0	0.67	0.53	0.44	0.49	0.61	0.83
I _{tr}	0.5ind	0.43	0.37	0.29	0.06	0.15	0.31
10I _{tr}	0.5ind	0.48	0.41	0.38	0.45	0.60	0.77
I _{max}	0.5ind	0.45	0.34	0.26	0.34	0.47	0.65
I _{tr}	0.8cap	0.60	0.45	0.30	0.27	0.40	0.52
10I _{tr}	0.8cap	1.27	1.17	1.00	0.67	0.60	0.56
I _{max}	0.8cap	0.68	0.47	0.37	0.39	0.48	0.69
L1							
I _{tr}	1.0	1.02	0.89	0.56	0.20	0.32	0.60
10I _{tr}	1.0	1.01	0.77	0.51	0.17	0.34	0.64
I _{max}	1.0	1.04	0.76	0.48	0.16	0.33	0.64
I _{tr}	0.5ind	1.12	0.68	0.44	0.25	0.39	0.56
10I _{tr}	0.5ind	1.01	0.59	0.42	0.21	0.41	0.67
I _{max}	0.5ind	0.77	0.52	0.27	0.24	0.42	0.69
L2							
I _{tr}	1.0	0.62	0.47	0.35	0.16	0.14	0.21
10I _{tr}	1.0	0.49	0.40	0.31	0.12	0.13	0.25
I _{max}	1.0	0.44	0.32	0.18	0.11	0.20	0.38
I _{tr}	0.5ind	0.37	0.35	0.24	0.12	0.13	0.17
10I _{tr}	0.5ind	0.25	0.32	0.36	0.23	0.18	0.28
I _{max}	0.5ind	0.28	0.19	0.15	0.12	0.20	0.32
L3							
I _{tr}	1.0	0.80	0.66	0.41	0.29	0.25	0.42
10I _{tr}	1.0	0.82	0.67	0.46	0.20	0.24	0.42
I _{max}	1.0	0.68	0.49	0.30	0.15	0.29	0.55
I _{tr}	0.5ind	0.33	0.33	0.23	0.22	0.22	0.46
10I _{tr}	0.5ind	0.52	0.22	0.12	0.28	0.24	0.45
I _{max}	0.5ind	0.42	0.31	0.19	0.19	0.36	0.58


	EU-Type Examination Certificate Number:	
	0120/SGS0396	
	Issue Number: 2	Dated: 31 st July 2019

5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
OR-WE-520	3x230/400V, 5(80)A, active import = [import] + [export], 800imp/kWh, only kWh displayed, transparent Cover

Modifications to the meter(s) described according to approval No.**0120/SGS0396** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).

	EU-Type Examination Certificate Number:	
	0120/SGS0396	
	Issue Number: 2	Dated: 31 st July 2019

6. Document Revision History

Issue	Date	Comments
1	04/12/2018	Initial Issue
2	31/07/2019	Reissued due to lost issue 1. SGS paper No. 19356138

This document is issued by the Company subject to its General Conditions for Certification Services, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>.

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. This document cannot be reproduced except in full, without prior written approval of the Company. 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.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested *and such sample(s) are retained for 28 days only.*

END OF CERTIFICATE