



EU Type Examination Certificate Number: **0120/SGS0399**

## **Reltech GmbH & Co. KG**

Nordbahnstr. 1  
Kaiserslautern  
67657  
Germany

Instrument Identification:  
**RWD Series**

**Single Phase, Active Import/Export (kWh) Indoor, Electricity Meter**

Instrument Traceable Number  
**0120/SGS0399**

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 29<sup>th</sup> September 2025  
Issue 1

Certification is based on report number(s) SHES141200649301 issued 16<sup>th</sup> April 2015  
EMA207767 issued 9<sup>th</sup> October 2015  
EMA262680

Authorised Signature


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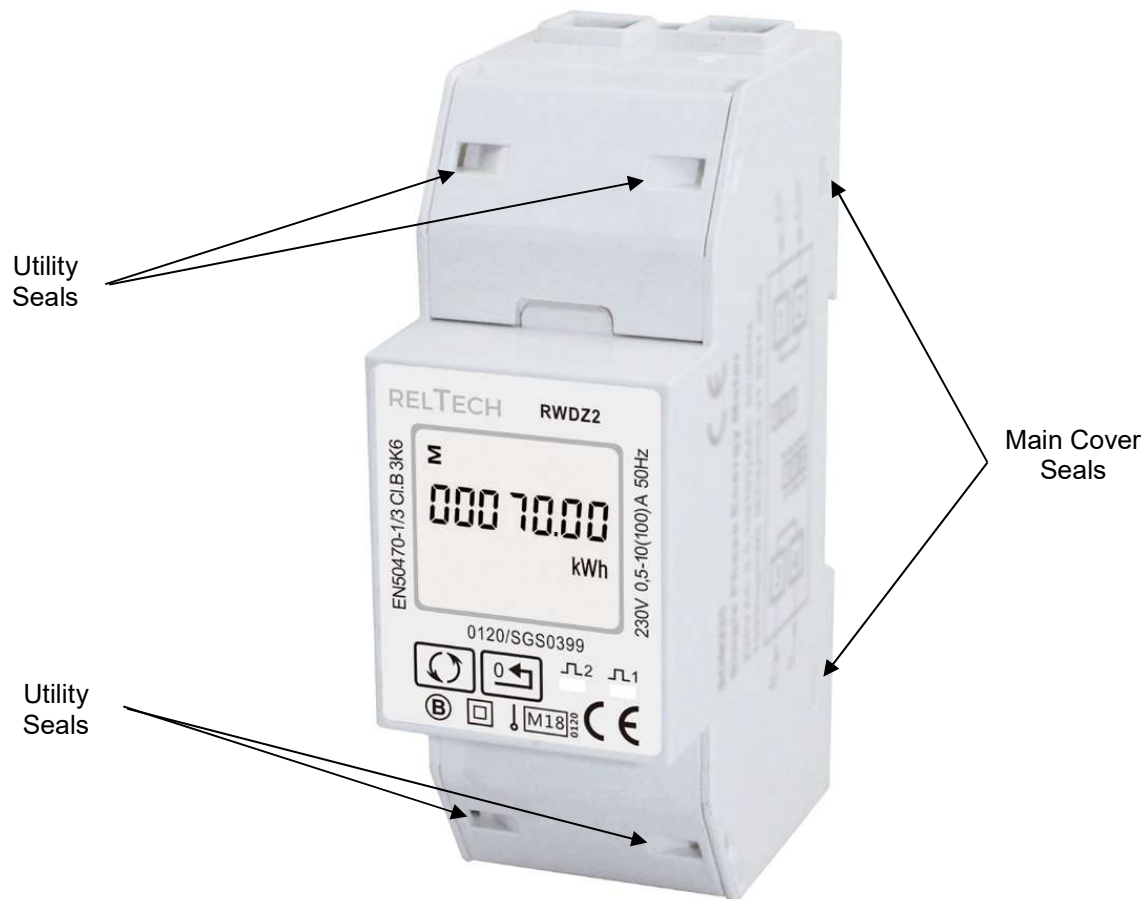
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## 1. Technical Data


<b>Manufacturer</b>	Reltech GmbH & Co. KG
<b>Meter Type</b>	RWDZ2, RWDZ2M, RWDZ2MB
<b>Voltage Rating (<math>U_n</math>)</b>	230V
<b>Current Rating (<math>I_{min}</math> – <math>I_{ref}</math> (<math>I_{max}</math>))</b>	0.5-10(100)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>	-25°C to +55°C
<b>Software/ Firmware Version No</b>	V1.2
<b>CRC Checksum</b>	0x000052F2
<b>Identification Location</b>	Meter Case
<b>Bill Of Materials Number</b>	RWDZ2, RWDZ2M: 20150929 RWDZ2MB: DH-JS-180029-V1.0
<b>IP Rating</b>	IP51
<b>Insulation Protective Class</b>	Class II
<b>LED Pulse Constant</b>	1000imp/kWh
<b>Impulse Voltage Rating</b>	6kV
<b>AC Voltage Rating</b>	4kV
<b>Main Cover Sealing Type</b>	4 x 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>	Meter Case

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## 2. Photograph of Meters and Sealing Plan



**Photograph of RWDZ2**


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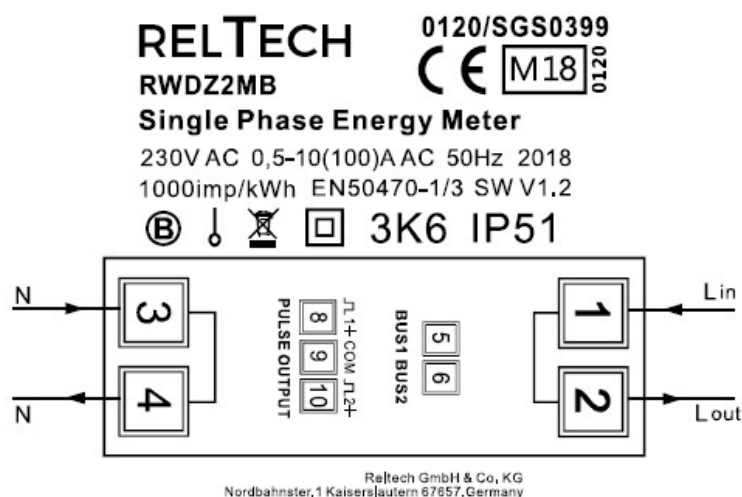
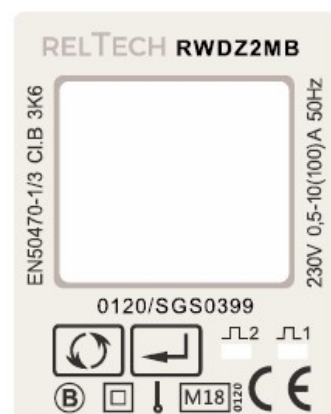
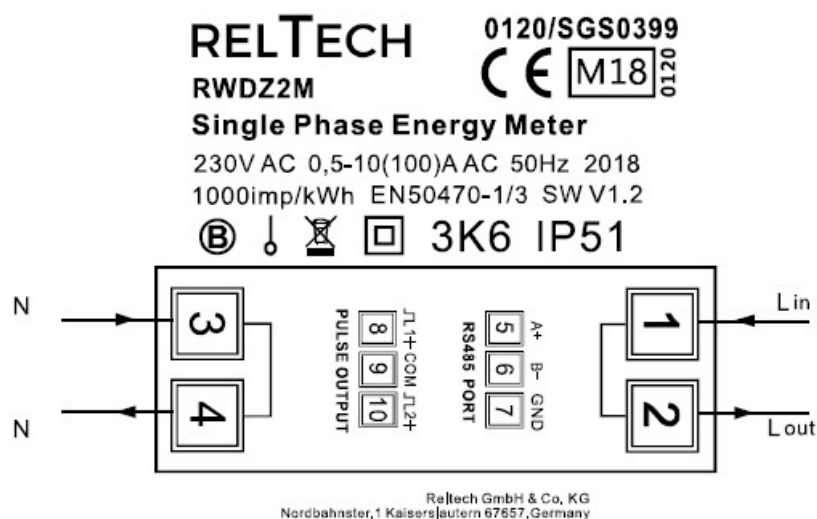
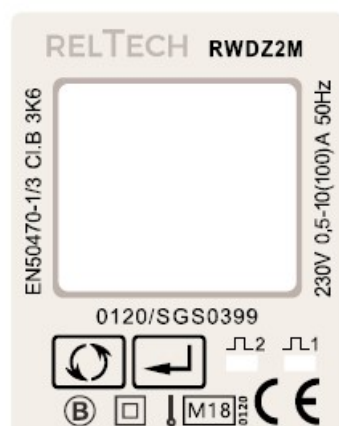
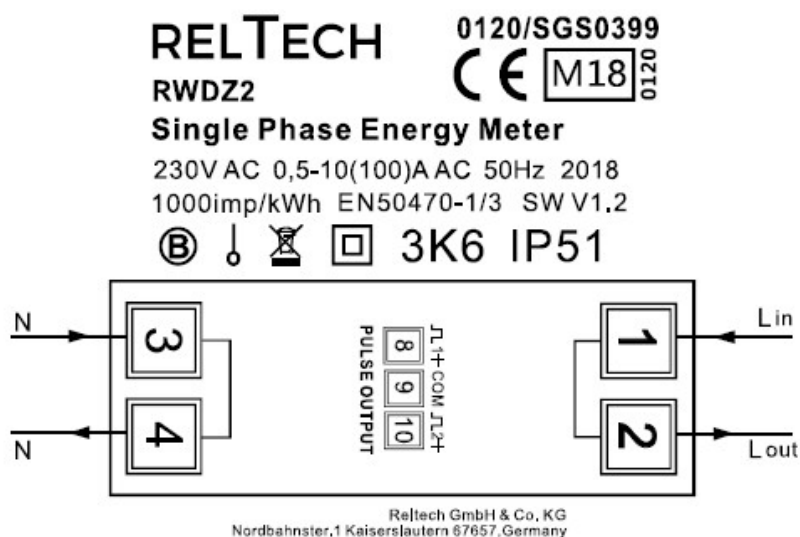
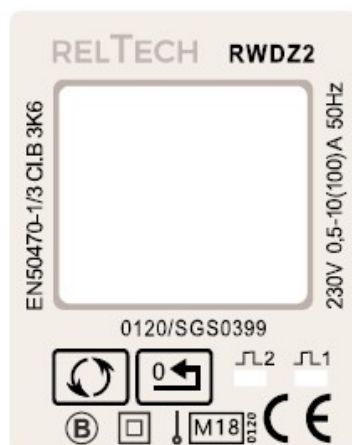
**Photograph of RWDZ2M**




**Photograph of RWDZ2MB**

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### 3. Examples of Nameplates



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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, Voltage & Frequency					
Current	PF Cos	-25°C	-10°C	5°C	30°C	40°C	55°C
I <sub>min</sub>	1.0	0.45	0.33	0.23	0.15	0.17	0.23
I <sub>tr</sub>	1.0	0.44	0.31	0.19	0.07	0.10	0.18
10I <sub>tr</sub>	1.0	0.42	0.29	0.18	0.03	0.08	0.16
I <sub>max</sub>	1.0	0.27	0.19	0.12	0.03	0.06	0.12
I <sub>tr</sub>	0.5ind	0.48	0.36	0.27	0.17	0.18	0.22
10I <sub>tr</sub>	0.5ind	0.41	0.28	0.17	0.03	0.08	0.17
I <sub>max</sub>	0.5ind	0.27	0.18	0.12	0.04	0.07	0.13
I <sub>tr</sub>	0.8cap	0.45	0.31	0.20	0.09	0.12	0.18
10I <sub>tr</sub>	0.8cap	0.40	0.27	0.16	0.04	0.10	0.19
I <sub>max</sub>	0.8cap	0.26	0.19	0.11	0.05	0.08	0.15


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## 5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
RWDZ2	Single tariff, total active energy, resettable energy, active power
RWDZ2M	Single tariff, total active energy, resettable active energy, import active energy, export active energy, total reactive energy, import reactive energy, export reactive energy, active power, reactive power, voltage, current, frequency, power factor, power demand, RS485 Modbus communication
RWDZ2MB	Single tariff, total active energy, resettable active energy, import active energy, export active energy, total reactive energy, import reactive energy, export reactive energy, active power, reactive power, voltage, current, frequency, power factor, power demand, Mbus communication

Modifications to the meter(s) described according to approval No.**0120/SGS0399** 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	22/01/2019	Initial Issue

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**END OF CERTIFICATE**