



EU Type Examination Certificate Number: **0120/SGS0429**

# **Gacia Electrical Appliance Co., LTD.**

No.1 Nanxijiang Road  
Daqiao Industrial Zone  
Yueqing, Wenzhou  
China

Instrument Identification:  
**N8DM-34D, N8DM-34DR, N8DM-34D-M, N8DM-34Bi**

**Polyphase, Active Import/Export (kWh), Electricity Meter**

Instrument Traceable Number  
**0120/SGS0429**

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 20<sup>th</sup> April 2026  
Issue 1

Certification is based on report number(s) SHES151000648101 dated 19<sup>th</sup> April 2016  
EMA275962

Authorised Signature


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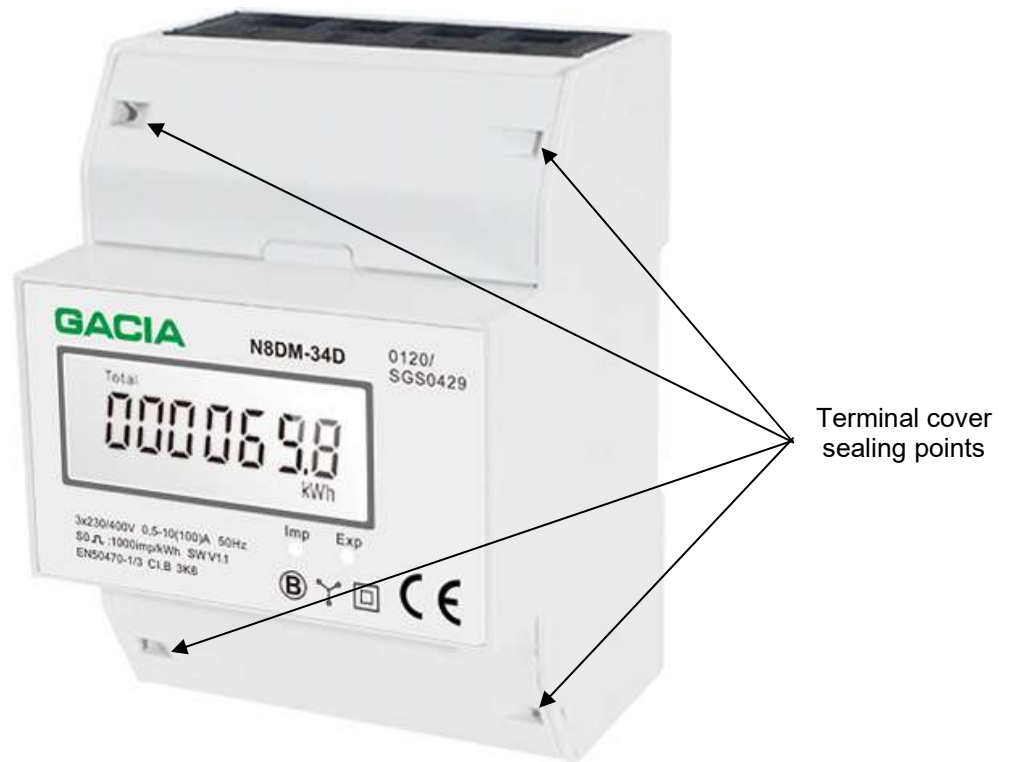
	EU-Type Examination Certificate Number:	
	<b>0120/SGS0429</b>	
	Issue Number: 1	Dated: 9 <sup>th</sup> April 2020


## 1. Technical Data

<b>Manufacturer</b>	Gacia Electrical Appliance Co., LTD.
<b>Meter Type</b>	N8DM-34D, N8DM-34DR, N8DM-34D-M, N8DM-34Bi
<b>Voltage Rating (<math>U_n</math>)</b>	3 x 230/400V
<b>Current Rating (<math>I_{min}</math> – <math>I_{ref}</math> (<math>I_{max}</math>))</b>	0,5-10(100)A & 0.5-10(80)A
<b>Frequency (<math>F_n</math>)</b>	50Hz
<b>Active Accuracy Class (<math>kWh</math>)</b>	B ( $kWh$ )
<b>Type of circuit</b>	3p4w
<b>Temperature Range</b>	-25°C to +55°C
<b>Software/ Firmware Version No</b>	N8DM-34D, N8DM-34DR, N8DM-34Bi: V1.1 N8DM-34D-M: V1.2
<b>CRC Checksum</b>	N8DM-34D, N8DM-34DR, N8DM-34Bi: 0X001134D7 N8DM-34D-M: 0X00233EC7
<b>Identification Location</b>	LCD
<b>Bill Of Materials Number</b>	N8DM-34D, N8DM-34DR, N8DM-34Bi: V1.2 N8DM-34D-M: DH-JS-170016-1.0
<b>IP Rating</b>	IP51
<b>Insulation Protective Class</b>	Class II
<b>LED Pulse Constant</b>	1000 imp/kWh or 100imp/kWh
<b>Impulse Voltage Rating</b>	6kV
<b>AC Voltage Rating</b>	4kV
<b>Main Cover Sealing Type</b>	Wire & Crimp on terminal cover Meter case sealed with screws
<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>	Associated documents

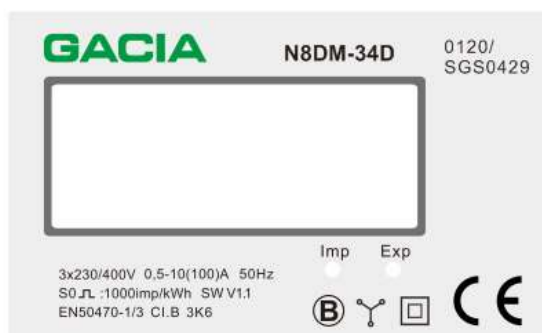
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## 2. Photograph of Meter and Sealing Plan

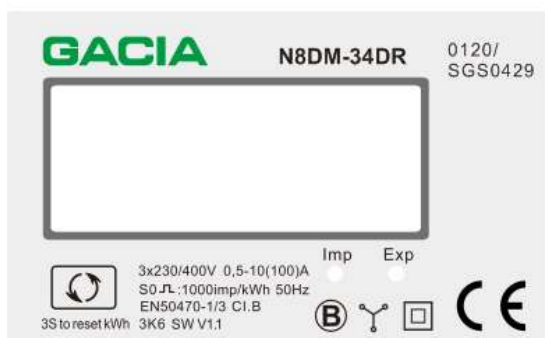


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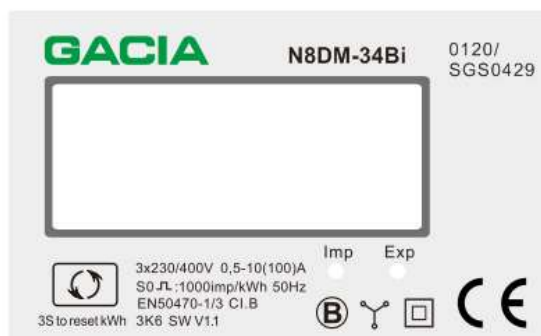
### 3. Examples of Nameplates



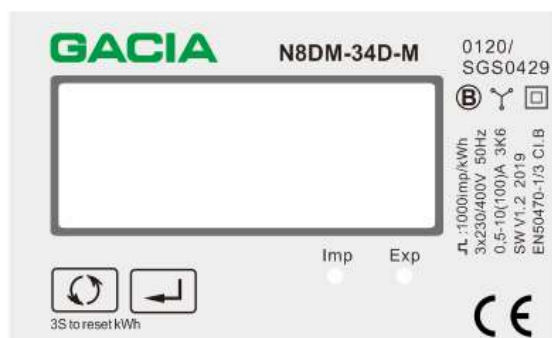
**GACIA**  
**N8DM-34D 0120/SGS0429**  
**THREE PHASE ENERGY METER**  
 3x230/400V AC 0.5-10(100)AAC 50Hz 2020  
 1000imp/kWh EN50470-1/3 SW V1.1 CAT III  
 (C) (E) (M20) (0120) (B) (□) (Y) (Δ) IP513K6  
 Gacia Electrical Appliance Co., LTD  
 No.1 Nanxijiang Road, Wenzhou, Zhejiang




**GACIA**  
**N8DM-34DR 0120/SGS0429**  
**THREE PHASE ENERGY METER**  
 3x230/400V AC 0.5-10(100)AAC 50Hz 2020  
 1000imp/kWh EN50470-1/3 SW V1.1 CAT III  
 (C) (E) (M20) (0120) (B) (□) (Y) (Δ) IP513K6  
 Gacia Electrical Appliance Co., LTD  
 No.1 Nanxijiang Road, Wenzhou, Zhejiang



**GACIA**  
**N8DM-34Bi 0120/SGS0429**  
**THREE PHASE ENERGY METER**  
 3x230/400V AC 0.5-10(100)AAC 50Hz 2020  
 1000imp/kWh EN50470-1/3 SW V1.1 CAT III  
 (C) (E) (M20) (0120) (B) (□) (Y) (Δ) IP513K6  
 Gacia Electrical Appliance Co., LTD  
 No.1 Nanxijiang Road, Wenzhou, Zhejiang



**GACIA**  
**N8DM-34D-M 0120/SGS0429**  
**THREE PHASE ENERGY METER**  
 3x230/400V AC 0.5-10(100)AAC 50Hz 2020  
 1000imp/kWh EN50470-1/3 SW V1.2 CAT III  
 (C) (E) (M20) (0120) (B) (□) (Y) (Δ) IP513K6  
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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

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		Influence Factors for Temperature. Frequency & Voltage					
Current	PF Cos	-25°C	-10°C	5°C	30°C	40°C	55°C
I <sub>min</sub>	1.0	0.32	0.24	0.15	0.12	0.15	0.26
I <sub>tr</sub>	1.0	0.34	0.24	0.15	0.10	0.15	0.30
10I <sub>tr</sub>	1.0	0.37	0.28	0.17	0.10	0.15	0.28
I <sub>max</sub>	1.0	0.30	0.24	0.19	0.15	0.17	0.24
I <sub>tr</sub>	0.5ind	0.51	0.45	0.37	0.30	0.30	0.36
10I <sub>tr</sub>	0.5ind	0.40	0.32	0.25	0.18	0.22	0.32
I <sub>max</sub>	0.5ind	0.66	0.62	0.58	0.52	0.51	0.50
I <sub>tr</sub>	0.8cap	0.44	0.34	0.26	0.16	0.17	0.24
10I <sub>tr</sub>	0.8cap	0.37	0.25	0.15	0.09	0.15	0.27
I <sub>max</sub>	0.8cap	0.48	0.42	0.38	0.33	0.31	0.32
L1							
I <sub>tr</sub>	1.0	0.37	0.33	0.29	0.26	0.28	0.38
10I <sub>tr</sub>	1.0	0.30	0.21	0.15	0.10	0.17	0.29
I <sub>max</sub>	1.0	0.23	0.18	0.17	0.11	0.14	0.23
I <sub>tr</sub>	0.5ind	0.44	0.38	0.35	0.34	0.38	0.44
10I <sub>tr</sub>	0.5ind	0.31	0.24	0.22	0.19	0.26	0.38
I <sub>max</sub>	0.5ind	0.29	0.26	0.25	0.22	0.24	0.34
L2							
I <sub>tr</sub>	1.0	0.61	0.61	0.61	0.61	0.61	0.61
10I <sub>tr</sub>	1.0	0.19	0.19	0.19	0.19	0.19	0.20
I <sub>max</sub>	1.0	0.16	0.14	0.12	0.12	0.12	0.12
I <sub>tr</sub>	0.5ind	0.76	0.77	0.77	0.76	0.77	0.77
10I <sub>tr</sub>	0.5ind	0.31	0.30	0.30	0.30	0.31	0.32
I <sub>max</sub>	0.5ind	0.30	0.28	0.27	0.27	0.27	0.27
L3							
I <sub>tr</sub>	1.0	0.80	0.52	0.38	0.27	0.37	0.54
10I <sub>tr</sub>	1.0	0.86	0.64	0.50	0.42	0.48	0.63
I <sub>max</sub>	1.0	1.09	0.97	0.90	0.87	0.89	0.95
I <sub>tr</sub>	0.5ind	1.04	0.92	0.82	0.79	0.82	0.92
10I <sub>tr</sub>	0.5ind	1.03	0.88	0.78	0.74	0.78	0.88
I <sub>max</sub>	0.5ind	1.02	0.92	0.92	0.83	0.87	0.94


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## 5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
N8DM-34D	3x230/400V, 0.5-10(100)A or 0.5-10(80)A 1000imp/kWh or 100imp/kWh Shows only total active energy, without resettable kWh
N8DM-34DR	3x230/400V, 0.5-10(100)A or 0.5-10(80)A 1000imp/kWh or 100imp/kWh Shows total active energy, resettable kWh, total active power
N8DM-34D-M	3x230/400V, 0.5-10(100)A or 0.5-10(80)A 1000imp/kWh or 100imp/kWh Shows total active energy, total active power, import and export energy, resettable import and export energy. RS485 communication.
N8DM-34Bi	3x230/400V, 0.5-10(100)A or 0.5-10(80)A 1000imp/kWh or 100imp/kWh Shows total active energy, total active power, import and export energy, resettable import and export energy.

Modifications to the meter(s) described according to approval No. **0120/SGS0429** 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	09/04/2020	Initial Issue

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**END OF CERTIFICATE**