



EU Type Examination Certificate Number: **0120/SGS0428**

Gacia Electrical Appliance Co., LTD.

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

Instrument Identification:
N8DM-11 Series

Single Phase, Active Import (kWh) Indoor, Electricity Meter

Instrument Traceable Number
0120/SGS0428

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 17th February 2024
Issue 1

Certification is based on report number(s) SHES130800321401 dated 18th February 2014
EMA241425
EMA275962

Authorised Signature


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t +44 (0)191 377 2000 f +44 (0)191 377 2020 www.sgs.com

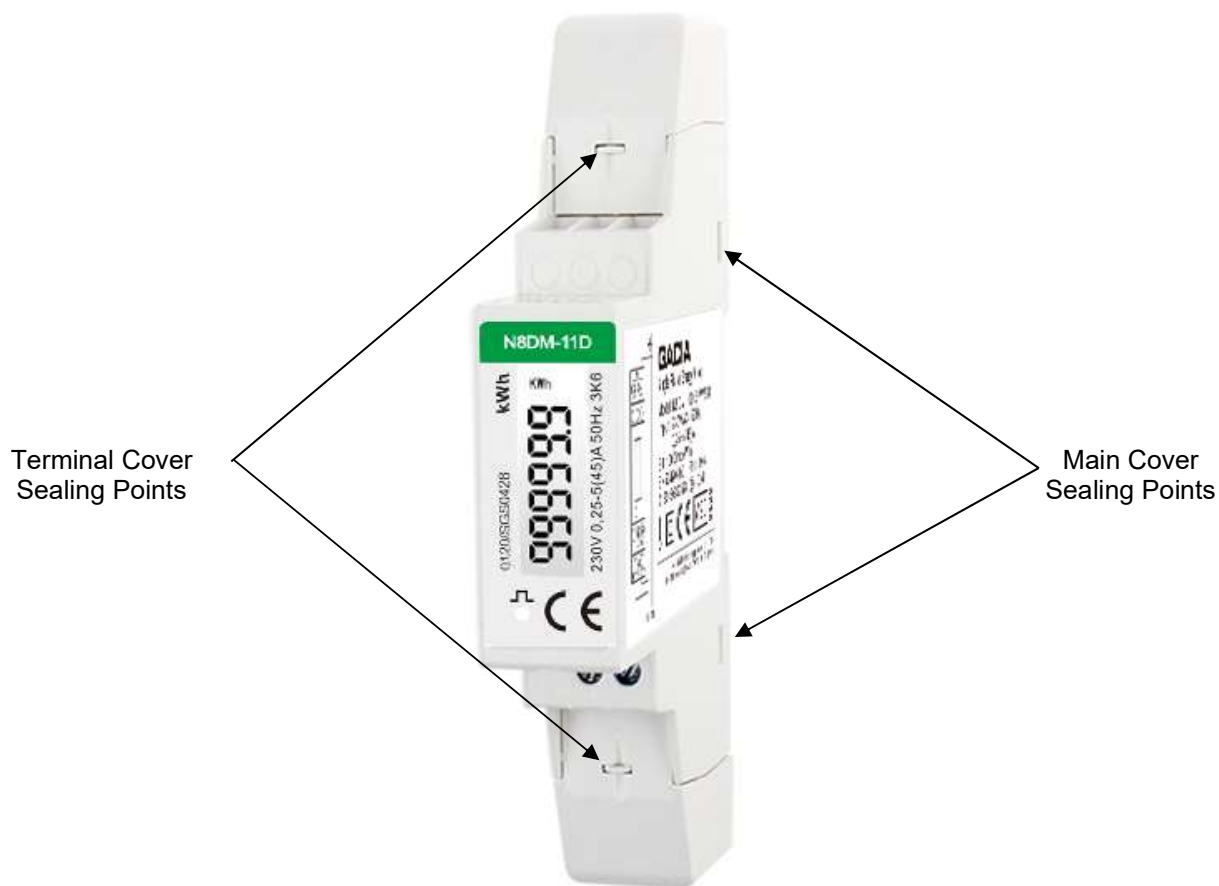
	EU-Type Examination Certificate Number:	
	0120/SGS0428	
	Issue Number: 1	Dated: 9 th April 2020


1. Technical Data

Manufacturer	Gacia Electrical Appliance Co., LTD.	
Meter Type	N8DM-11D, N8DM-11A, N8DM-11DB, N8DM-11P, N8DM-11M, N8DM-11MB, N8DM-11CTM, N8DM-11CTP, N8DM-11CTMB, N8DM-11A V2, N8DM-11D V2, N8DM-11DB V2	
Voltage Rating (U_n)	230V	
Current Rating (I_{min} – I_{ref} (I_{max}))	Direct Connected 0.25-5(45)A, CT Connected 0.25-5(6)A	
Frequency (F_n)	50Hz	
Active Accuracy Class (kWh)	A or B (kWh)	
Type of circuit	1p2w	
Temperature Range	-25°C to +55°C	
Software/ Firmware Version No	N8DM-11A, N8DM-11D, N8DM-11DB: V1.2 N8DM-11M, N8DM-11MB, N8DM-11P: V2.4 N8DM-11CTM, N8DM-11CTMB, N8DM-11CTP: V2.5 N8DM-11A V2, N8DM-11D V2, N8DM-11DB V2: V2.4	
CRC Checksum	N8DM-11A, N8DM-11D, N8DM-11DB: 0x00008E1E N8DM-11M, N8DM-11MB, N8DM-11P: 0x0000272C N8DM-11CTM, N8DM-11CTMB, N8DM-11CTP: 0x0000B594 N8DM-11A V2, N8DM-11D V2, N8DM-11DB V2: 0x0000272C	
Identification Location	Meter Case	
Bill Of Materials Number	N8DM-11A: DH-JS-150002-1.5 N8DM-11A V2: DH-JS-190006-1.0 N8DM-11D/DB: DH-JS-150003-1.5 N8DM-11D V2: DH-JS-180033-1.0 N8DM-11DB V2: DH-JS-190009-1.0 N8DM-11MB DH-JS-170026-1.0 N8DM-11M: DH-JS-170009-1.2 N8DM-11P: DH-JS-170021-1.0 N8DM-11CTM: DH-JS-170014-1.1 N8DM-11CTMB: DH-JS-170027-1.0 N8DM-11CTP: DH-JS-170025-1.0	
IP Rating	IP51	
Insulation Protective Class	Class II	
LED Pulse Constant	1000imp/kWh & 100imp/kWh	
Impulse Voltage Rating	6kV	
AC Voltage Rating	4kV	
Main Cover Sealing Type	4 x Wire & Crimp	
Integrity of meter	Inaccessible without breaking seals	
Intended Location of the Meter	Indoor	
Type of Register	LCD: N8DM-11D, N8DM-11DB, N8DM-11P, N8DM-11M, N8DM-11MB, N8DM-11CTM, N8DM-11CTP, N8DM-11CTMB Mechanical: N8DM-11A	
Terminal Arrangement(s)	DIN	
Location of Manufacturers Address	Nameplate	

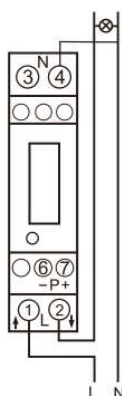
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2. Photograph of Meter and Sealing Plan



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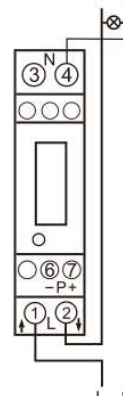
3. Examples of Nameplates



GACIA
Single Phase Energy Meter
Model: N8DM-11D SW V2.4
Input: 230VAC 50Hz
0,25~5(45)A
S0: 1000imp/kWh
EN50470-1/3 IP51 3K6
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  0120

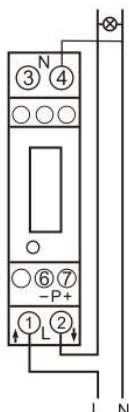
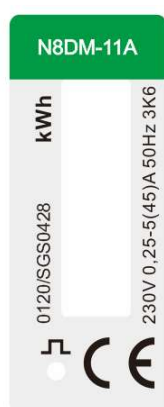
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GACIA
Single Phase Energy Meter
Model: N8DM-11D V2 SW V2.4
Input: 230VAC 50Hz
0,25~5(45)A
S0: 1000imp/kWh
EN50470-1/3 IP51 3K6
0120/SGS0428 ⓑ CAT II

  0120

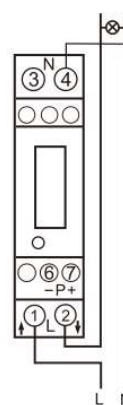
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GACIA
Single Phase Energy Meter
Model: N8DM-11A SW V2.4
Input: 230VAC 50Hz
0,25~5(45)A
S0: 1000imp/kWh
EN50470-1/3 IP51 3K6
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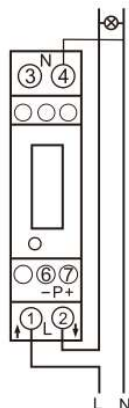
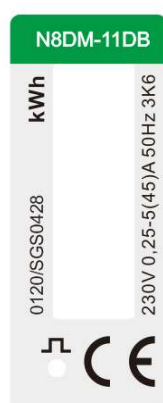
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GACIA
Single Phase Energy Meter
Model: N8DM-11A V2 SW V2.4
Input: 230V AC 50Hz
0,25~5(45)A
S0: 1000imp/kWh
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  0120

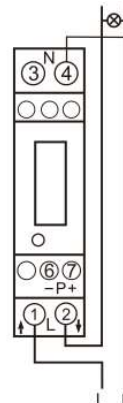
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GACIA
Single Phase Energy Meter
Model: N8DM-11DB SW V2.4
Input: 230VAC 50Hz
0,25~5(45)A
S0: 1000imp/kWh
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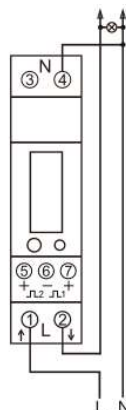
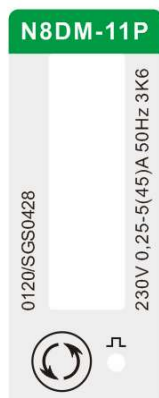


GACIA
Single Phase Energy Meter
Model: N8DM-11DB V2 SW V2.4
Input: 230VAC 50Hz
0,25~5(45)A
S0: 1000imp/kWh
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Single Phase Energy Meter

Model: N8DM-11P SW V2.4

Input: 230V AC 50Hz

0,25~5(45)A

⌚ 1: 1000imp/kWh (Export)

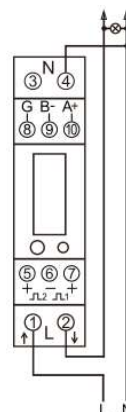
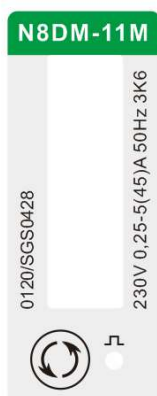
⌚ 2: 1000imp/kWh (Import)

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GACIA

Single Phase Energy Meter

Model: N8DM-11M SW V2.4

Input: 230V AC 50Hz

0,25~5(45)A

⌚ 1: Configurable

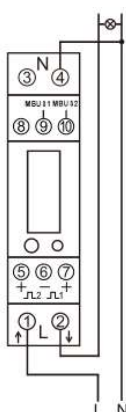
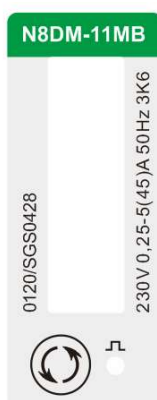
⌚ 2: 1000imp/kWh

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GACIA

Single Phase Energy Meter

Model: N8DM-11MB SW V2.4

Input: 230V AC 50Hz

0,25~5(45)A

⌚ 1: Configurable


⌚ 2: 1000imp/kWh

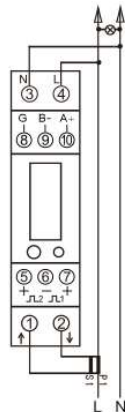
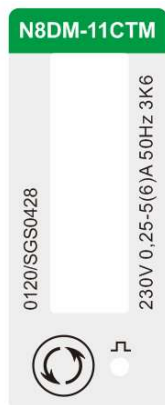
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Single Phase Energy Meter

Model: N8DM-11CTM SW V2.5

Input: 230V AC 50Hz

0,25-5(6)A CT

1: Configurable

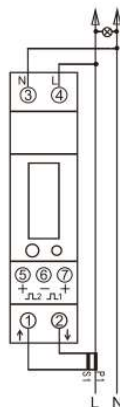
2: 1000imp/kWh

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GACIA

Single Phase Energy Meter

Model: N8DM-11CTP SW V2.5

Input: 230V AC 50Hz

0,25-5(6)A CT

1: 1000imp/kWh (Export)

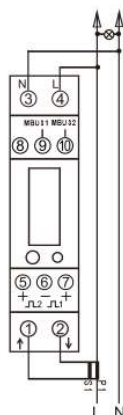
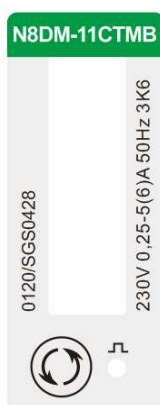
2: 1000imp/kWh (Import)

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Single Phase Energy Meter

Model: N8DM-11CTMB SW V2.5

Input: 230V AC 50Hz

0,25-5(6)A CT

1: Configurable


2: 1000imp/kWh

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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 _{min}	1.0	0.12	0.12	0.12	0.13	0.12	0.12
I _{tr}	1.0	0.16	0.16	0.16	0.16	0.16	0.16
10I _{tr}	1.0	0.17	0.16	0.16	0.16	0.16	0.16
I _{max}	1.0	0.13	0.13	0.13	0.13	0.13	0.13
I _{tr}	0.5ind	0.29	0.29	0.29	0.29	0.29	0.29
10I _{tr}	0.5ind	0.40	0.40	0.40	0.40	0.40	0.40
I _{max}	0.5ind	0.16	0.16	0.16	0.16	0.16	0.16
I _{tr}	0.8cap	0.24	0.24	0.24	0.24	0.24	0.24
10I _{tr}	0.8cap	0.31	0.31	0.31	0.31	0.31	0.31
I _{max}	0.8cap	0.09	0.09	0.09	0.09	0.09	0.09


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5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
NBDM-11D	Single Phase 230V, 0.25-5(45)A
NBDM-11DB	Single Phase 230V, 0.25-5(45)A, backlight
NBDM-11A	Single Phase 230V, 0.25-5(45)A Mechanical register
NBDM-11M	Single Phase 230V, 0.25-5(45)A, RS485 Modbus
NBDM-11P	Single Phase, 230V, 0.25-5(45)A
NBDM-11MB	Single Phase, 230V, 0.25-5(45)A, Mbus EN13757-3
NBDM-11A V2	Single Phase 230V, 0.25-5(45)A Mechanical register
NBDM-11D V2	Single Phase 230V, 0.25-5(45)A
NBDM-11DB V2	Single Phase 230V, 0.25-5(45)A backlight
NBDM-11CTP	Single Phase 230V, 0.25-5(6)A
NBDM-11CTM	Single Phase 230V, 0.25-5(6)A. RS485, Modbus
NBDM-11CTMB	Single Phase 230V, 0.25-5(6)A. M-Bus EN13757-3

Modifications to the meter(s) described according to approval No.**0120/SGS0428** 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