



SGS

EU Type Examination Certificate Number: 0120/SGS0386

Nuri System Inc.

270-2985 Virtual way
Vancouver
BC V5M 4X7
Canada

Instrument Identification:
NRAM34-CT & NRAM34-DC

**Polyphase, Active, Import/ Export (kWh), Transformer Operated/ Direct Connected,
Multi-rate, Smart, Electricity Meter**

Instrument Traceable Number
0120/SGS0386

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 for 10 years from 26th November 2018 until 25th November 2028
Issue 1

Certification is based on report number(s) SHES180700792201 dated 22nd November 2018,
SHES180700792202 dated 22nd November 2018, EMA260637/DC/TR50579 dated 21st November 2018, EMA260637/CT/TR50579
dated 21st November 2018
EMA260637/1

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

Contact Address

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



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.

DU_CST-ME-002 Rev 2
Any other 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 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.

SGS PAPER
19356115





EU-Type Examination Certificate Number:

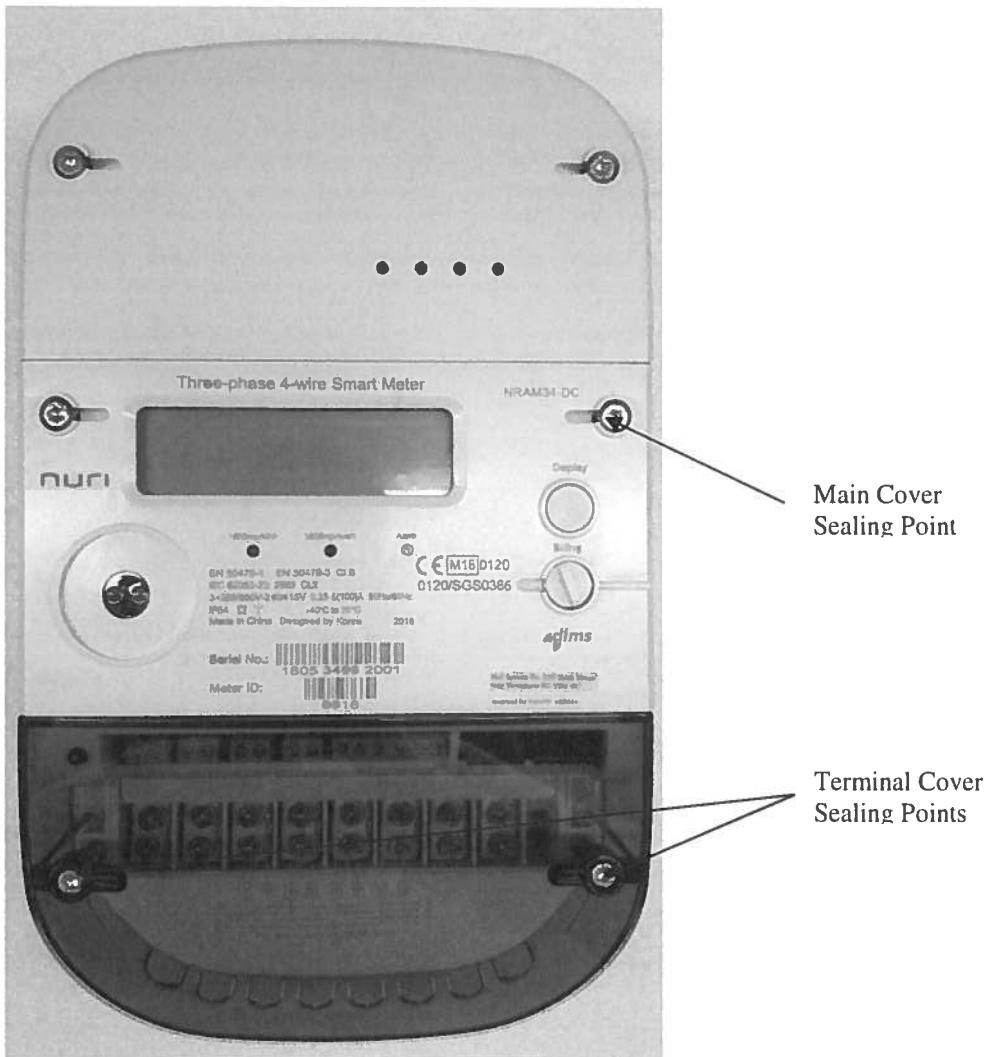
0120/SGS0386

Issue Number: 1

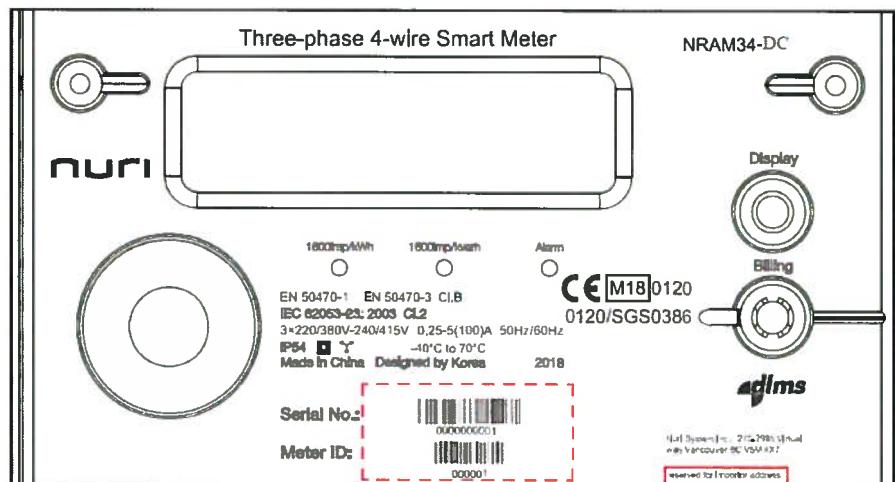
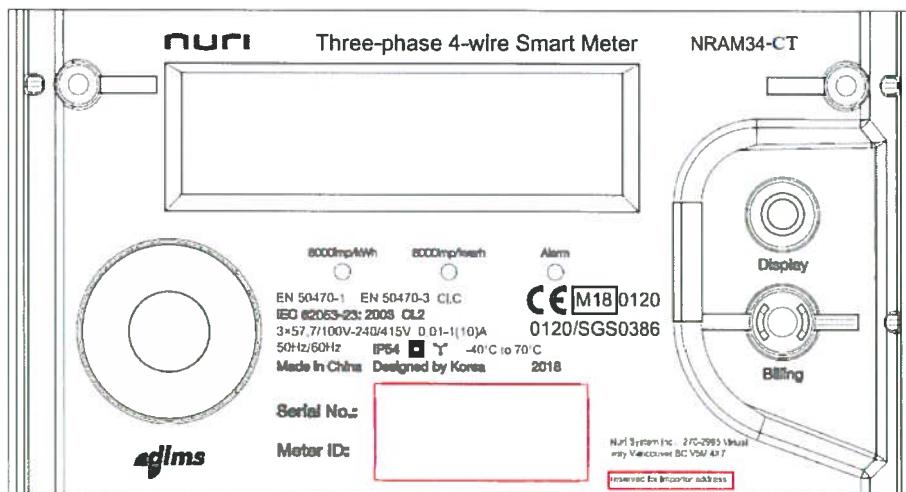
Dated: 26th November 2018

1. Technical Data

Manufacturer	Nuri System Inc
Meter Type	NRAM34-DC NRAM34-CT
Voltage Rating (Un)	NRAM34-DC: 3x220/380V – 240/415V NRAM34-CT: 3x57.7/100V – 240/415V
Current Rating (Imin – Iref (Imax))	NRAM34-DC: 0.25-5(100)A NRAM34-CT: 0.01-1(10)A
Frequency (Fn)	50Hz or 60Hz (IEC only)
Active Accuracy Class (kWh)	NRAM34-DC: Class B NRAM34-CT : Class C
Type of circuit	3p4w
Temperature Range	-40°C to +70°C
Software/ Firmware Version No's	NRAM34-DC: B0400201 NRAM34-CT: C0400100
CRC Checksum No's	NRAM34-DC: 7CF5 NRAM34-CT: 4247
Identification Location	LCD
Bill Of Materials No's	NRAM34-DC: OKRW2.702.838MX(DC) NRAM34-CT: OKRW2.702.838MX(CT)
IP Rating	IP54
Insulation Protective Class	Class II
LED Pulse Constant	NRAM34-DC: 1600imp/kWh NRAM34-CT: 8000imp/kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	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

2. Photograph of Meter and Sealing Plan (Applicable to DC and CT models)

3. Example of Nameplates

NRAM34-DC**NRAM34-CT**



EU-Type Examination Certificate Number:

0120/SGS0386

Issue Number: 1

Dated: 26th November 2018

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/SGS0386

Issue Number: 1

Dated: 26th November 2018

NRAM34-DC

		Influence Factors for temperature, frequency and voltage							
Current	PF Cos	-40°C	-25°C	-10°C	5°C	30°C	40°C	55°C	70°C
Imin	1.0	0.16	0.09	0.08	0.08	0.10	0.16	0.22	0.31
Itr	1.0	0.14	0.10	0.09	0.09	0.12	0.16	0.24	0.32
10ltr	1.0	0.14	0.10	0.08	0.08	0.10	0.16	0.23	0.31
Imax	1.0	0.05	0.06	0.05	0.05	0.05	0.06	0.10	0.15
Itr	0.5ind	0.13	0.08	0.07	0.05	0.04	0.08	0.17	0.26
10ltr	0.5ind	0.12	0.09	0.08	0.08	0.11	0.15	0.23	0.31
Imax	0.5ind	0.04	0.04	0.06	0.08	0.08	0.05	0.04	0.09
Itr	0.8cap	0.05	0.07	0.05	0.03	0.03	0.08	0.16	0.24
10ltr	0.8cap	0.09	0.09	0.08	0.08	0.10	0.14	0.22	0.30
Imax	0.8cap	0.02	0.02	0.03	0.05	0.05	0.03	0.05	0.10
L1									
Itr	1.0	0.40	0.31	0.20	0.17	0.03	0.15	0.32	0.46
10ltr	1.0	0.37	0.28	0.18	0.12	0.14	0.22	0.37	0.53
Imax	1.0	0.28	0.24	0.20	0.16	0.03	0.05	0.20	0.33
Itr	0.5ind	0.33	0.35	0.25	0.23	0.12	0.24	0.43	0.56
10ltr	0.5ind	0.37	0.32	0.24	0.17	0.17	0.27	0.48	0.66
Imax	0.5ind	0.30	0.33	0.30	0.25	0.07	0.06	0.23	0.38
L2									
Itr	1.0	0.14	0.09	0.09	0.06	0.08	0.10	0.18	0.25
10ltr	1.0	0.13	0.10	0.09	0.08	0.10	0.14	0.20	0.29
Imax	1.0	0.04	0.02	0.03	0.05	0.03	0.02	0.06	0.12
Itr	0.5ind	0.10	0.07	0.07	0.07	0.07	0.07	0.10	0.13
10ltr	0.5ind	0.10	0.06	0.07	0.08	0.08	0.08	0.10	0.15
Imax	0.5ind	0.03	0.05	0.02	0.05	0.09	0.10	0.10	0.06
L3									
Itr	1.0	0.11	0.15	0.16	0.14	0.10	0.09	0.10	0.13
10ltr	1.0	0.08	0.11	0.10	0.08	0.05	0.04	0.06	0.08
Imax	1.0	0.25	0.23	0.17	0.09	0.05	0.07	0.07	0.09
Itr	0.5ind	0.11	0.15	0.15	0.16	0.10	0.10	0.10	0.14
10ltr	0.5ind	0.04	0.13	0.12	0.08	0.05	0.05	0.06	0.09
Imax	0.5ind	0.17	0.16	0.11	0.11	0.08	0.12	0.18	0.15



EU-Type Examination Certificate Number:

0120/SGS0386

Issue Number: 1

Dated: 26th November 2018

NRAM34-CT

		Influence Factors for temperature, frequency and voltage							
Current	PF Cos	-40°C	-25°C	-10°C	5°C	30°C	40°C	55°C	70°C
Imin	1.0	0.30	0.20	0.11	0.10	0.10	0.26	0.31	0.59
Itr	1.0	0.22	0.18	0.14	0.12	0.14	0.21	0.29	0.40
10ltr	1.0	0.14	0.11	0.08	0.07	0.10	0.14	0.22	0.32
Imax	1.0	0.14	0.13	0.09	0.08	0.10	0.15	0.23	0.34
Itr	0.5ind	0.19	0.12	0.10	0.09	0.12	0.24	0.38	0.50
10ltr	0.5ind	0.09	0.08	0.06	0.05	0.09	0.15	0.25	0.39
Imax	0.5ind	0.09	0.07	0.05	0.05	0.07	0.13	0.22	0.34
Itr	0.8cap	0.22	0.24	0.11	0.09	0.10	0.16	0.27	0.37
10ltr	0.8cap	0.15	0.11	0.07	0.06	0.08	0.12	0.21	0.30
Imax	0.8cap	0.15	0.11	0.07	0.06	0.09	0.13	0.22	0.32
L1					0.00	0.00	0.00	0.00	0.00
Itr	1.0	0.34	0.25	0.18	0.12	0.15	0.15	0.20	0.53
10ltr	1.0	0.17	0.13	0.07	0.05	0.08	0.13	0.21	0.32
Imax	1.0	0.16	0.11	0.07	0.05	0.07	0.13	0.21	0.32
Itr	0.5ind	0.28	0.14	0.09	0.08	0.17	0.23	0.30	0.52
10ltr	0.5ind	0.17	0.12	0.06	0.05	0.08	0.12	0.22	0.35
Imax	0.5ind	0.15	0.10	0.05	0.05	0.07	0.12	0.20	0.32
L2									
Itr	1.0	0.15	0.09	0.09	0.09	0.17	0.24	0.29	0.43
10ltr	1.0	0.17	0.11	0.08	0.07	0.10	0.15	0.24	0.35
Imax	1.0	0.15	0.10	0.06	0.05	0.07	0.12	0.21	0.33
Itr	0.5ind	0.13	0.13	0.21	0.22	0.14	0.33	0.51	0.59
10ltr	0.5ind	0.07	0.05	0.04	0.04	0.08	0.14	0.27	0.43
Imax	0.5ind	0.10	0.05	0.02	0.02	0.04	0.10	0.21	0.34
L3									
Itr	1.0	0.13	0.17	0.05	0.05	0.09	0.27	0.40	0.52
10ltr	1.0	0.07	0.05	0.04	0.04	0.08	0.13	0.22	0.34
Imax	1.0	0.05	0.02	0.02	0.02	0.06	0.11	0.20	0.32
Itr	0.5ind	0.20	0.12	0.14	0.13	0.19	0.43	0.57	0.79
10ltr	0.5ind	0.03	0.04	0.04	0.03	0.08	0.14	0.25	0.41
Imax	0.5ind	0.04	0.06	0.06	0.05	0.07	0.13	0.22	0.36



EU-Type Examination Certificate Number:

0120/SGS0386

Issue Number: 1

Dated: 26th November 2018

5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
NRAN34-DC	Direct connected, 3x220/380V – 240/415V, 5(100)A
NRAM34-CT	Transformer operated, 3x57.7/100V – 240/415V, 1(10)A

Modifications to the meter(s) described according to approval No.**0120/SGS0386** 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/SGS0386

Issue Number: 1

Dated: 26th November 2018

6. Document Revision History

Issue	Date	Comments
1	26/11/2018	Initial Issue

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