



EU Type Examination Certificate Number: **0120/SGS0367**

Aktif Muhendislik Dis Tic.A.S

Bayraktar Blv
Sehit sk
No.5 Aktif Plaza Serifali
Umraniye 34775
Istanbul
Turkey

Instrument Identification:
NDM30-2T

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

Instrument Traceable Number
0120/SGS0367

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 29th September 2025
Issue 1

Certification is based on report number(s) SHES141200649301 issued 16th April 2015
EMA207767 issued 9th October 2015
EMA254736

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

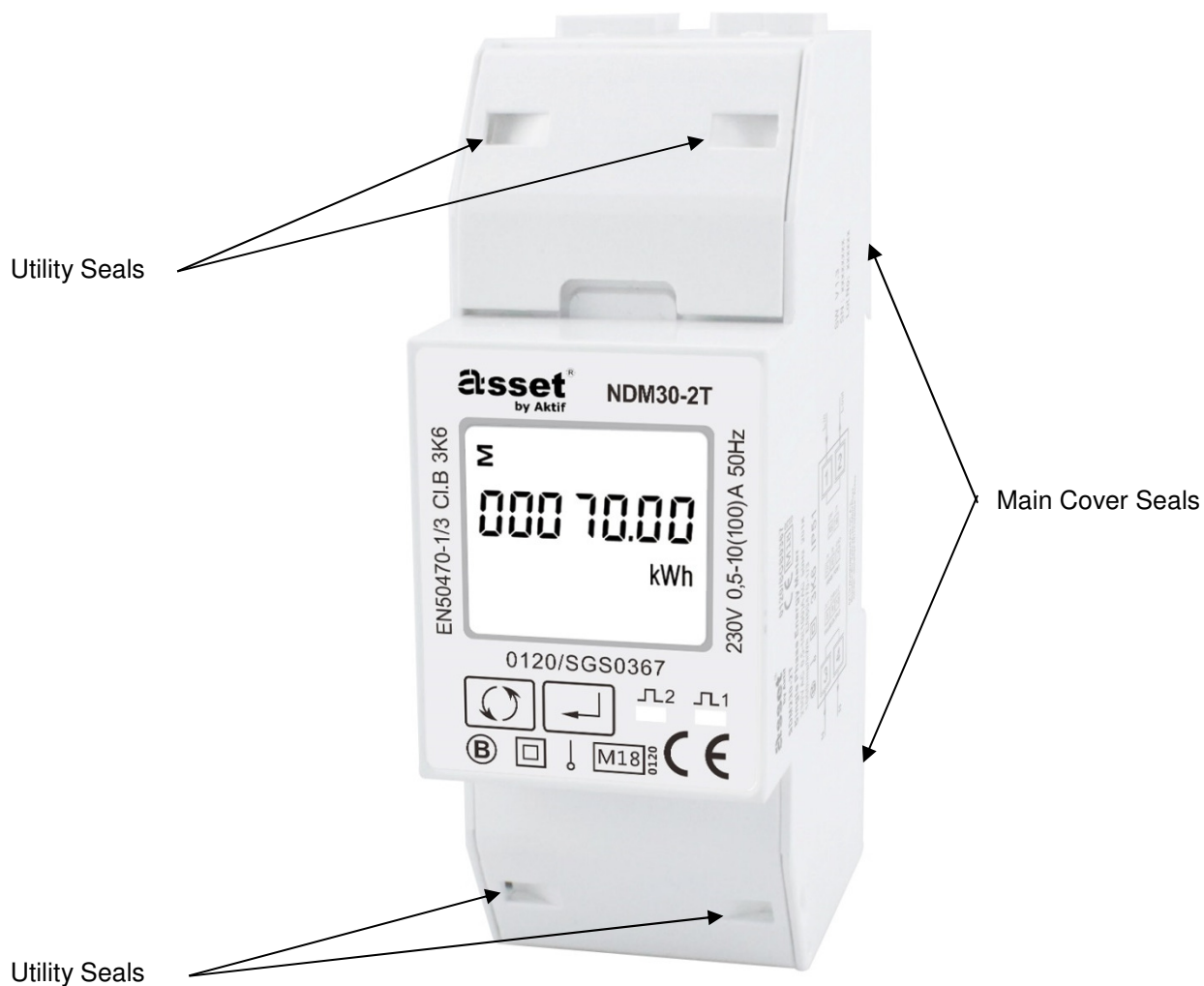
	EU-Type Examination Certificate Number:	
	0120/SGS0367	
	Issue Number: 1	Dated: 6 th July 2018


1. Technical Data

Manufacturer	Aktif Muhendislik Dis Tic.A.S.
Meter Type	230V
Voltage Rating (U_n)	0.5-10(100)A
Current Rating ($I_{min} - I_{ref} (I_{max})$)	50Hz
Frequency (F_n)	A or B (kWh)
Active Accuracy Class (kWh)	1p2w
Type of circuit	-25°C to +55°C
Temperature Range	230V
Software/ Firmware Version No	V1.3
CRC Checksum	0x00001AD5
Identification Location	Nameplate
Bill Of Materials Number	DH-JS-180009-1.0
IP Rating	IP51
Insulation Protective Class	Class II
LED Pulse Constant	1000imp/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
Terminal Arrangement(s)	DIN
Location of Manufacturers Address	Side of meter

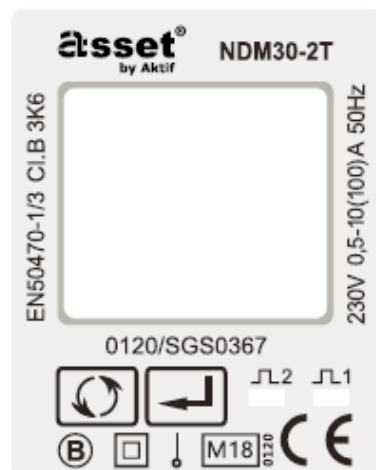
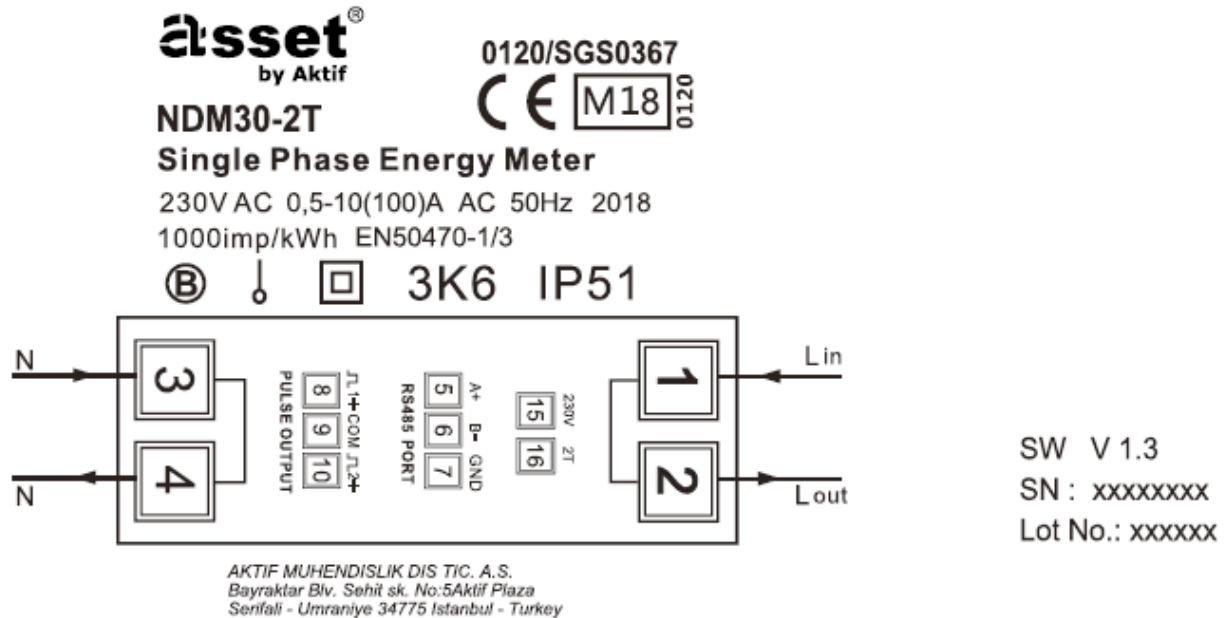
	EU-Type Examination Certificate Number:	
	0120/SGS0367	
	Issue Number: 1	Dated: 6 th July 2018


2. Photograph of Meter and Sealing Plan



	EU-Type Examination Certificate Number:	
	0120/SGS0367	
	Issue Number: 1	Dated: 6 th July 2018

3. Examples of Nameplates



	EU-Type Examination Certificate Number:	
	0120/SGS0367	
	Issue Number: 1	Dated: 6 th July 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

		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	0.45	0.33	0.23	0.15	0.17	0.23
I _{tr}	1.0	0.44	0.31	0.19	0.07	0.10	0.18
10I _{tr}	1.0	0.42	0.29	0.18	0.03	0.08	0.16
I _{max}	1.0	0.27	0.19	0.12	0.03	0.06	0.12
I _{tr}	0.5ind	0.48	0.36	0.27	0.17	0.18	0.22
10I _{tr}	0.5ind	0.41	0.28	0.17	0.03	0.08	0.17
I _{max}	0.5ind	0.27	0.18	0.12	0.04	0.07	0.13
I _{tr}	0.8cap	0.45	0.31	0.20	0.09	0.12	0.18
10I _{tr}	0.8cap	0.40	0.27	0.16	0.04	0.10	0.19
I _{max}	0.8cap	0.26	0.19	0.11	0.05	0.08	0.15


	EU-Type Examination Certificate Number:	
	0120/SGS0367	
	Issue Number: 1	Dated: 6 th July 2018

5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
NDM30-2T:	Two 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

Modifications to the meter(s) described according to approval No.**0120/SGS0367** 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/SGS0367	
	Issue Number: 1	Dated: 6 th July 2018

6. Document Revision History

Issue	Date	Comments
1	06/07/2018	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