



EU Type Examination Certificate Number: **0120/SGS0364**

Jiangsu Linyang Energy Co., Ltd

No. 666, Linyang Road
Qidong
Jiangsu Province
China

Instrument Identification:
SM120

Single Phase, Pre-paid, DIN Rail, Smart, Electricity Meter

Instrument Traceable Number
0120/SGS0364

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 31st May 2018 until 30th May 2028
Issue 1

Certification is based on report number(s) SHES180400317601 dated 31st May 2018
EMA254216/1/TR50579 31st May 2018
EMA254216/1

Authorised Signature


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1. Technical Data


Manufacturer	Jiangsu Linyang Energy Co., Ltd
Meter Type	SM120
Voltage Rating (U_n)	220V-240V
Current Rating ($I_{min} - I_{ref} (I_{max})$)	0.25-5(100)A
Frequency (F_n)	50Hz
Active Accuracy Class (kWh)	B (kWh)
Type of circuit	1p2w
Temperature Range	-40°C to +70°C
Software/ Firmware Version No	SM11_AMI_BD_H5027_VA111_20180322
CRC Checksum	3EFA
Identification Location	LCD
Bill Of Materials No's	LY5.365.001155MX-V01.01 LY5.528.001693MX-V01.01 LY5.528.001719MX-V01.01 LY7.303.001091MX-V01.01
IP Rating	IP54
Insulation Protective Class	Class II
LED Pulse Constant	1000 imp/kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	Laser Welded
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	Associated Documents

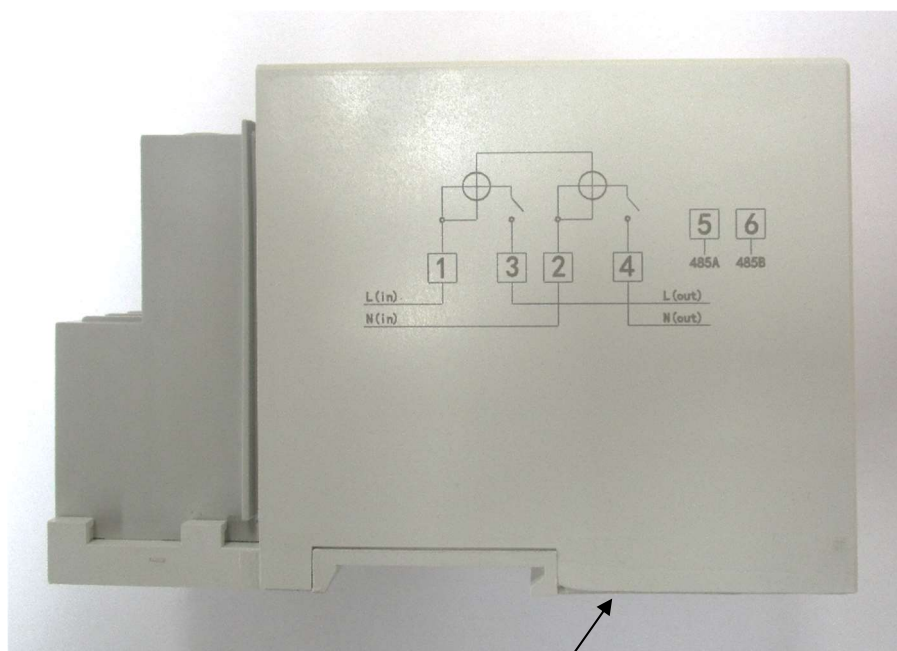
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2. Photograph of Meter and Sealing Plan




Terminal Cover Seal

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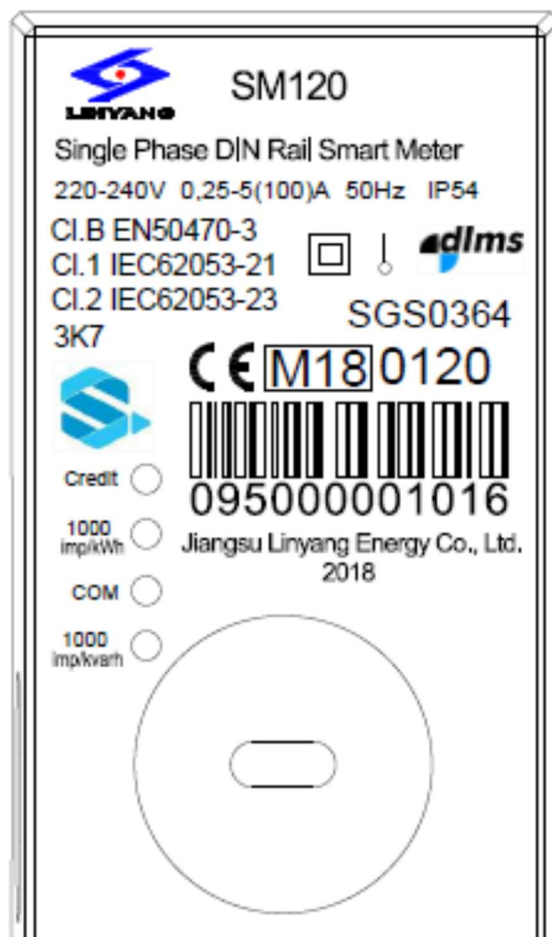



Main Cover Seal
Laser Welded



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3. Example of Nameplate



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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, frequency and voltage							
Current	PF Cos	-40°C	-25°C	-10°C	5°C	30°C	40°C	55°C	70°C
I _{min}	1.0	0.87	-0.67	0.42	0.23	0.15	0.24	0.37	0.52
I _{tr}	1.0	0.75	-0.55	0.37	0.19	0.26	0.34	0.49	0.64
10I _{tr}	1.0	0.66	-0.47	0.29	0.16	0.32	0.42	0.57	0.70
I _{max}	1.0	0.87	-0.62	0.40	0.15	0.15	0.25	0.41	0.57
I _{tr}	0.5ind	1.09	-0.88	0.64	0.40	0.07	0.06	0.19	0.30
10I _{tr}	0.5ind	0.87	-0.70	0.47	0.23	0.06	0.16	0.31	0.45
I _{max}	0.5ind	1.00	-0.75	0.50	0.26	0.11	0.21	0.37	0.50
I _{tr}	0.8cap	0.84	-0.63	0.40	0.19	0.13	0.21	0.37	0.55
10I _{tr}	0.8cap	0.69	-0.52	0.31	0.09	0.20	0.30	0.45	0.62
I _{max}	0.8cap	0.87	-0.62	0.37	0.12	0.22	0.31	0.48	0.66


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5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
SM120	Single Phase, Import/Export (kWh), 220V-240V, 5(100)A

Modifications to the meter(s) described according to approval No.**0120/SGS0364** 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	31/05/2018	Initial Issue

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END OF CERTIFICATE