



EU Type Examination Certificate Number: **0120/SGS0393**

Jiangsu Sfere Electric Co.,Ltd.

No. 1 Dongding Road
Jiangyin
Jiangsu
China

Instrument Identification:
DDS1946-2M, DDSF1946-2M

Single-phase, Active Import/Export kWh, Direct Connected, Smart, Electricity Meter

Instrument Traceable Number
0120/SGS0393

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 27th March 2020 until 27th March 2030
Issue 1

Certification is based on report number(s) SHES 180901038201 dated 27th March 2020,
EMA275989/1/TR50579 dated 23rd March 2020
EMA275989/1

Authorised Signature


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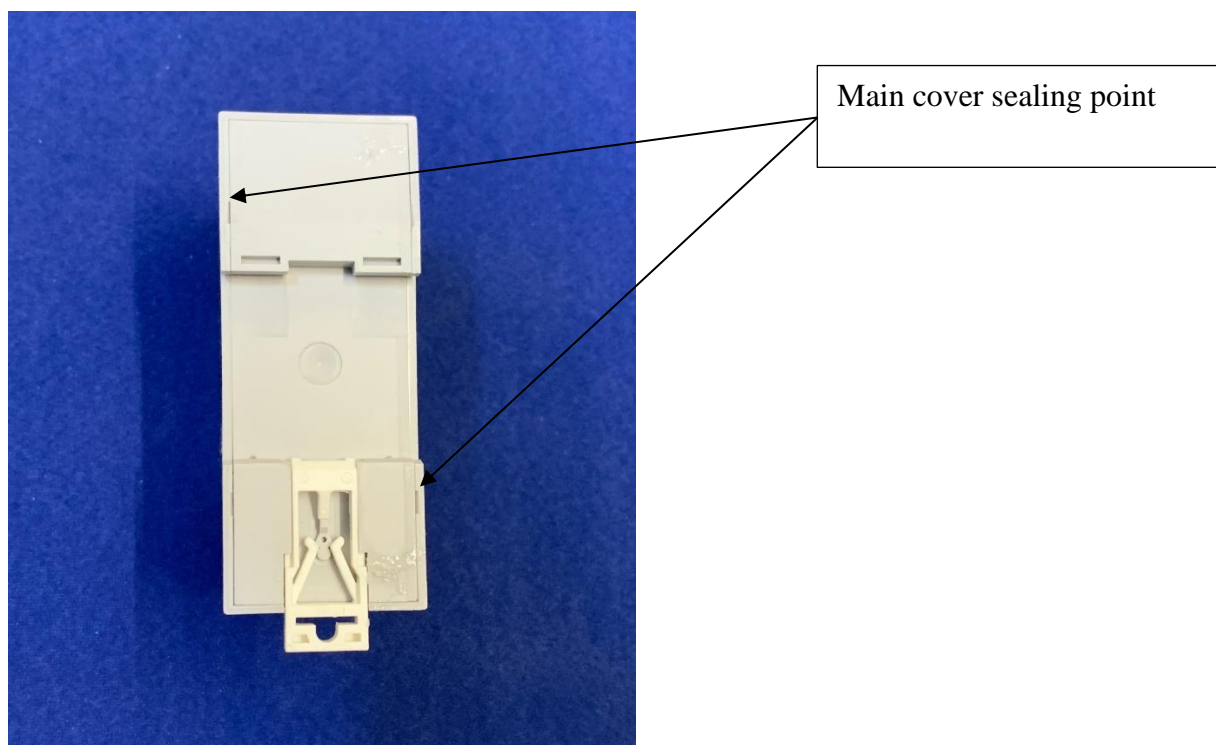
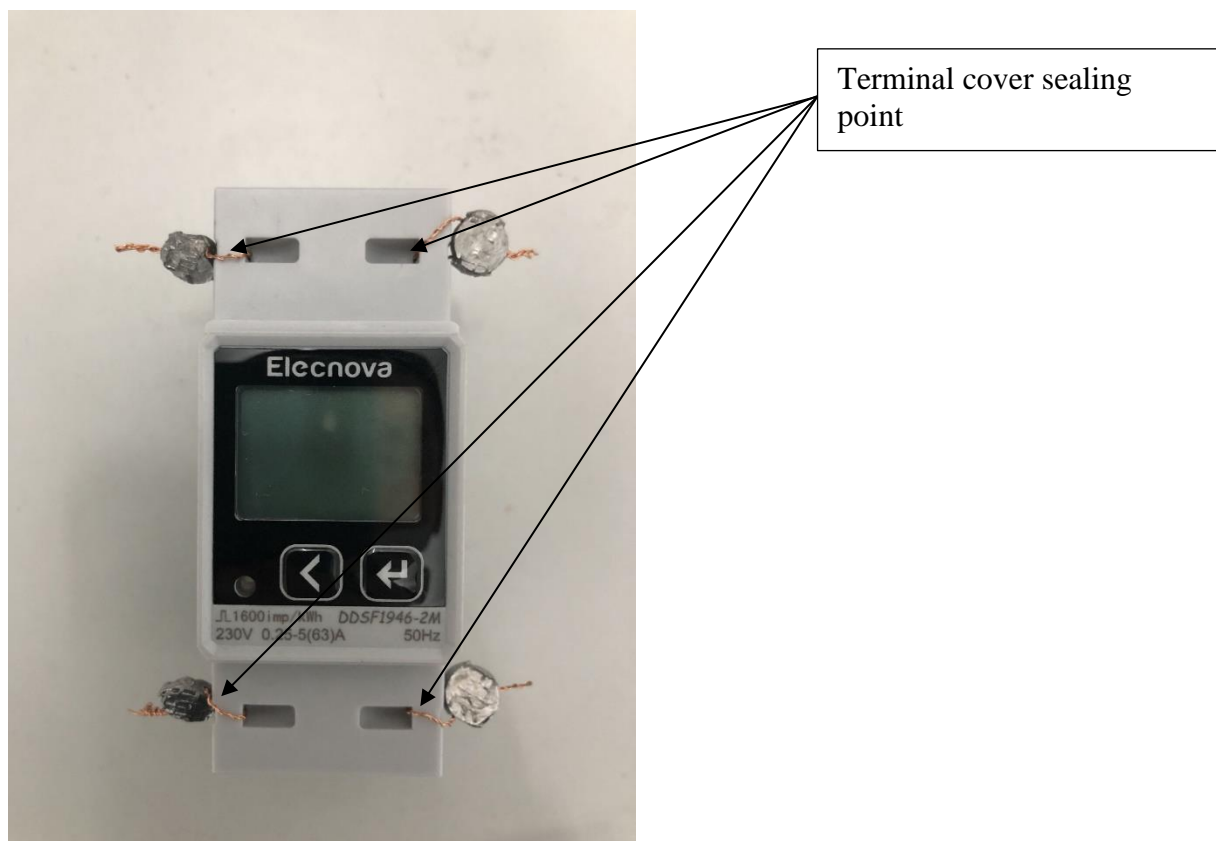
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1. Technical Data

Manufacturer	Jiangsu Sferic Electric Co., Ltd.
Meter Type	DDSF1946-2M DDS1946-2M
Voltage Rating (U_n)	230V
Current Rating ($I_{min} - I_{ref} (I_{max})$)	0.25-5(63)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	DDS2.1010.
CRC Checksum	0x2FF895B6
Identification Location	LCD
Bill Of Materials Number	DDS1946-2M: 1JY010010; DDSF1946-2M: 1JY010000.
IP Rating	IP51
Insulation Protective Class	Class II
LED Pulse Constant	1600 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

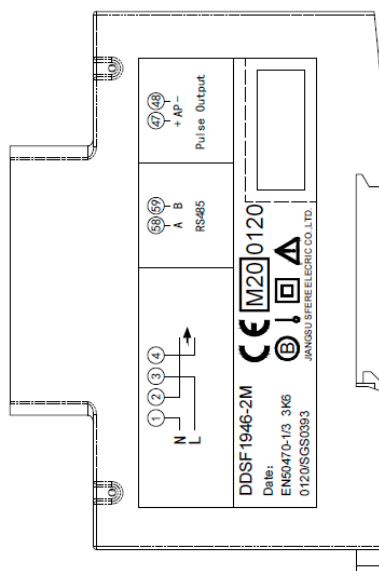
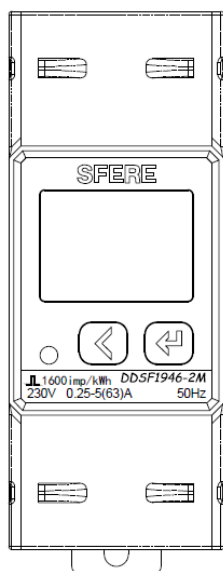
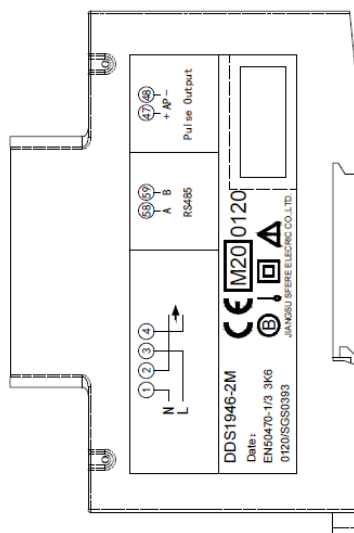
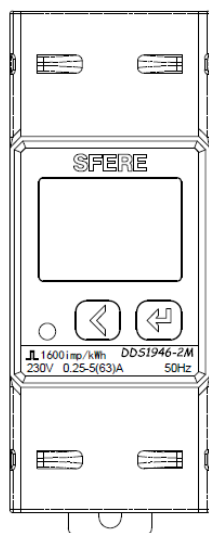
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2. Photograph of Meter and Sealing Plan

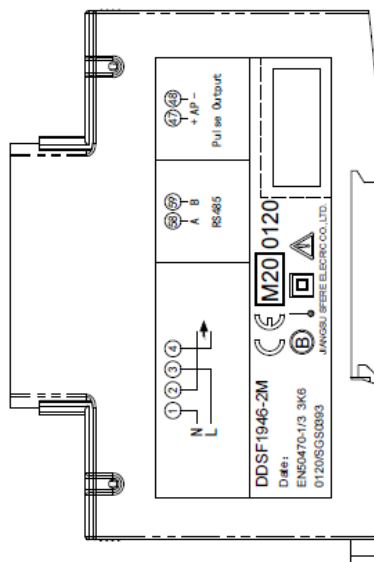
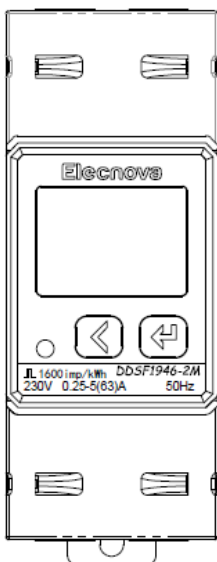
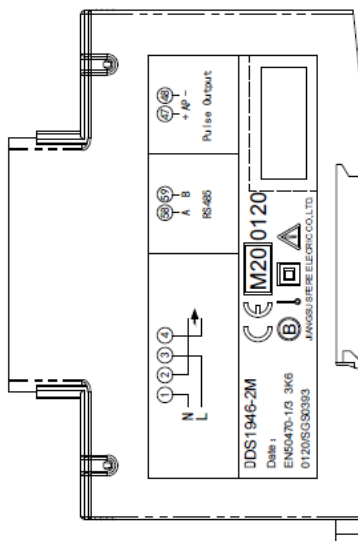
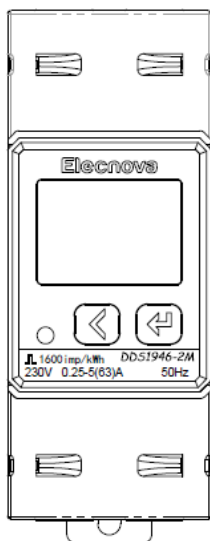



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3. Examples of Nameplates



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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	0.14	0.14	0.14	0.14	0.14	0.14
I _{tr}	1.0	0.08	0.08	0.08	0.08	0.08	0.08
10I _{tr}	1.0	0.02	0.02	0.02	0.02	0.02	0.02
I _{max}	1.0	0.03	0.03	0.03	0.03	0.03	0.03
I _{tr}	0.5ind	0.14	0.14	0.14	0.14	0.14	0.14
10I _{tr}	0.5ind	0.04	0.04	0.04	0.04	0.04	0.04
I _{max}	0.5ind	0.14	0.20	0.27	0.34	0.40	0.47
I _{tr}	0.8cap	0.09	0.09	0.09	0.09	0.09	0.09
10I _{tr}	0.8cap	0.07	0.10	0.14	0.17	0.20	0.24
I _{max}	0.8cap	0.13	0.15	0.17	0.18	0.19	0.20


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5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
DDSF1946-2M	230V, 0.25-5(63)A, Active Import/Export kWh, Multi-rate
DDS1946-2M	230V, 0.25–5(63)A, Active Import/Export kWh, One-rate

Modifications to the meter(s) described according to approval No.**0120/SGS0393** 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	27/03/2020	Initial Issue

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END OF CERTIFICATE