



EC Type Examination Certificate Number: **0120/SGS0204**

## **Shenzhen Chuangren Technology Co Ltd**

Building 33, No. 3 Industrial Area  
Mashantou, Gongming Street,  
New Guangming District, Shenzhen City  
Guangdong Province, 518106, China

Instrument Identification:

**DSZ12E-3x80A, DSZ12D-3x80A, DSZ12A-3x80A, DSZ15D-3x80A, DSZ14DRS-3x80A,  
DSZ12DM-3x80A, DSZ15DM-3x80A**

Instrument Traceable Number

**0120/SGS0204**

**Poly phase, Active Import/Export (kWh), Electricity Meter**

has been assessed and certified as meeting the requirements of

## **EC 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 EC 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 28<sup>th</sup> April 2026  
Issue 7

Certification is based on report number(s) SHES150800499601 dated 29<sup>th</sup> April 2016,  
SHES171201220501 dated 24<sup>th</sup> January 2018, SHES180300313101 dated 8<sup>th</sup> May 2018, EMA222994

Authorised Signature


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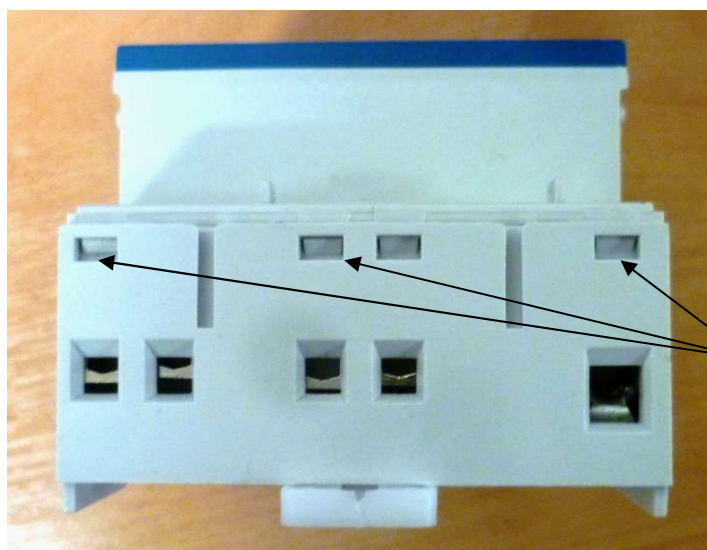
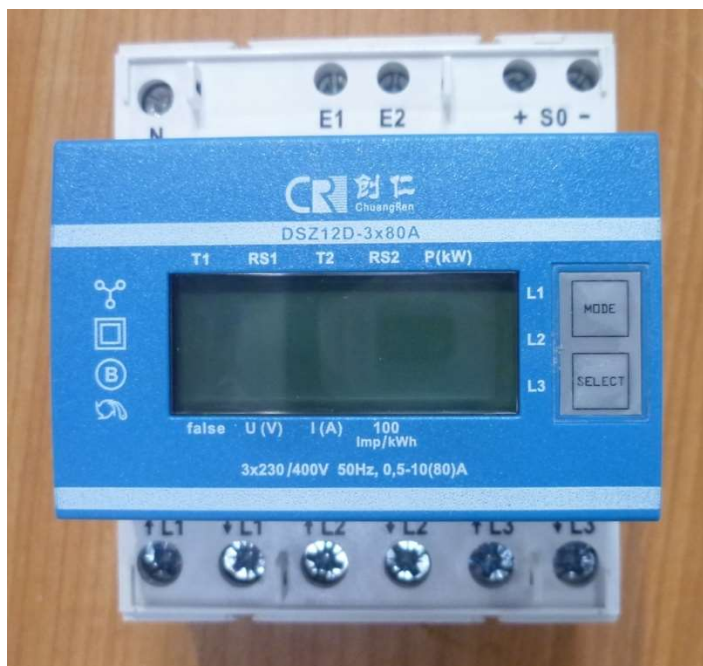
## 1. Technical Data

Manufacturer	Shenzhen Chuangren Technology Co Ltd
Meter Type(s)	DSZ12E-3X80A, DSZ12D-3X80A, DSZ12A-3X80A, DSZ15D-3x80A, DSZ14DRS-3x80A, DSZ12DM-3x80A, DSZ15DM-3x80A
Voltage Rating ( $U_n$ )	3 x 230/400 V
Current Rating ( $I_{min}$ – $I_{ref}$ ( $I_{max}$ ))	DSZ12E: 0.25-5(80) A, DSZ12D: 0.5-10(80) A, DSZ12A: 0.5-10(80) A, DSZ15D: 0.5-10(80) A, DSZ14DRS: 0.5-10(80) A, DSZ12DM: 0.5-10(80) A, DSZ15DM: 0.5-10(80) A
Frequency ( $F_n$ )	50Hz
Active Accuracy Class ( $kWh$ )	B ( $kWh$ )
Type of circuit	3p4w
Temperature Range	-25° C to +55° C
Software/ Firmware Version No	DSZ12D: V1.1, DSZ12E: V1.1, DSZ12A: V1.1, DSZ15D: V1.1, DSZ12DM: V1.1, DSZ15DM: V1.1
Identification Location	LCD
Bill Of Materials Number	DSZ12D V0, DSZ12E V0, DSZ12A V0, DSZ15D V0, DSZ14DRS: V0, DSZ12DM: V0, DSZ15DM: V0
IP Rating	The meter casing is only IP50 complaint. Therefore the meter MUST always be fitted into an IP51 approved enclosure.
Insulation Protective Class	Class II
LED Pulse Constant	DSZ12E: 800 imp/kWh DSZ12D LED tariff: 100 imp/kWh, SO-output: 1000imp/kWh DSZ12A LED tariff: 100 imp/kWh, SO-output – 1000imp/kWh DSZ15D LED tariff – 100imp/kWh, SO-output – 1000imp/kWh DSZ14DRS LED tariff: 1000imp/kWh DSZ12DM LED tariff: 1000 imp/kWh DSZ15DM LED tariff: 1000 imp/kWh
Impulse Voltage Rating	6 kV
AC Voltage Rating	4 kV
Main Cover Sealing Type	Terminal covers are wire & crimp Main cover clipped in place and sealed with tamper proof sealing tape
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	LCD
Terminal Arrangement(s)	DIN


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## 2. Photographs of Meter and Sealing Plan

### DSZ12D




Main cover  
sealing points

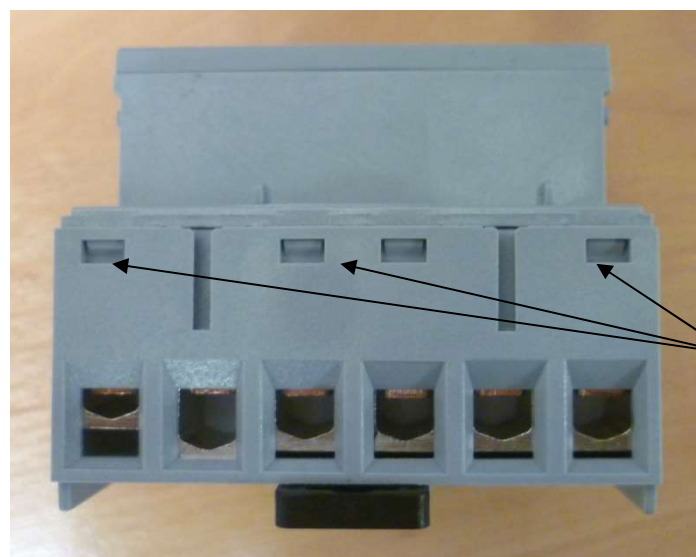
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Terminal cover  
sealing points

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### DSZ12E




Main cover  
sealing points

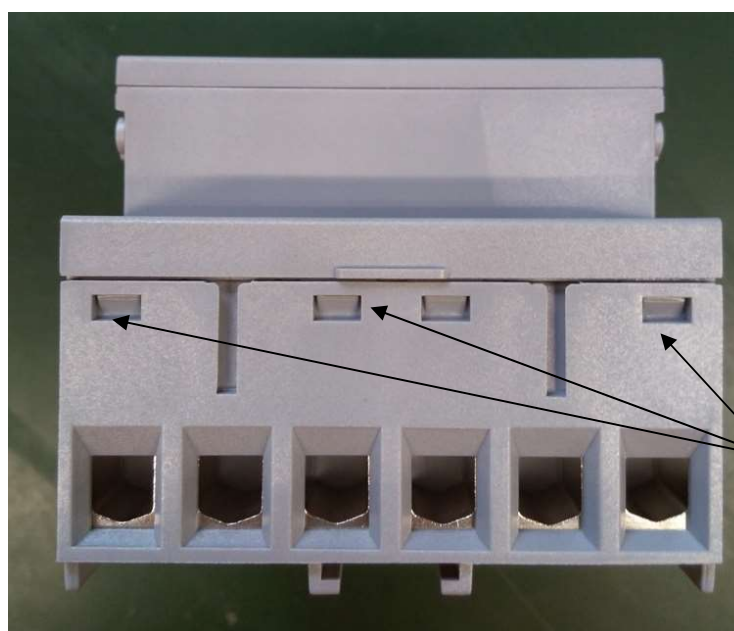
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Terminal cover  
sealing points


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## DSZ12A



Main cover  
sealing points




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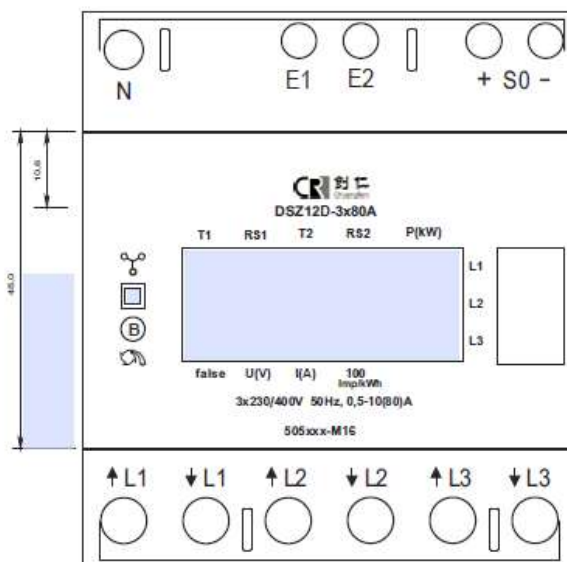
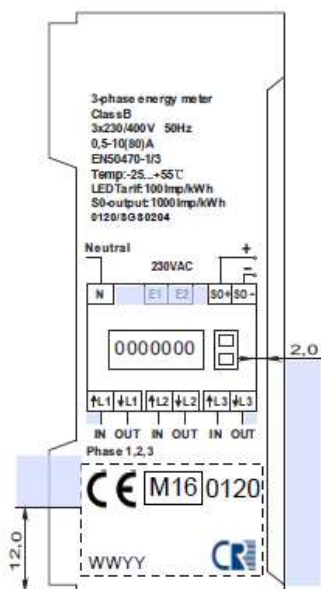
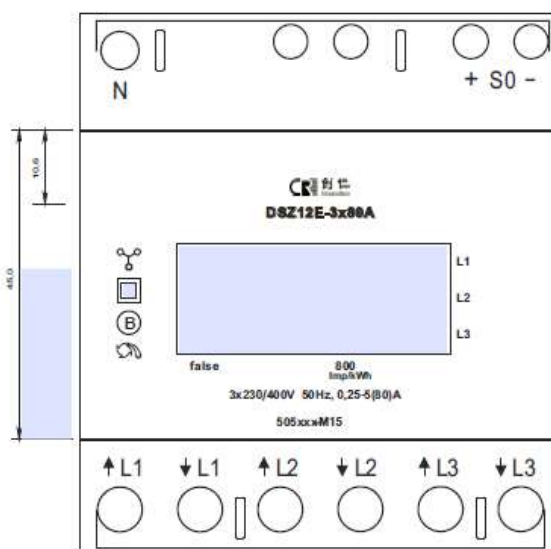
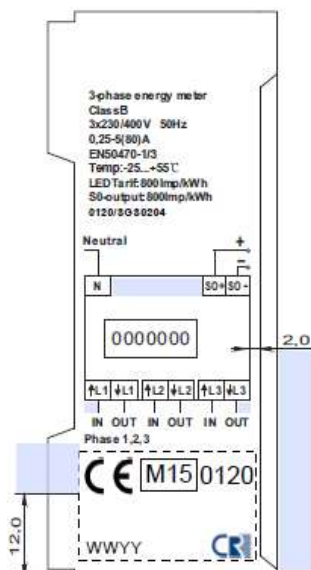


Terminal cover  
sealing points



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### 3. Nameplates



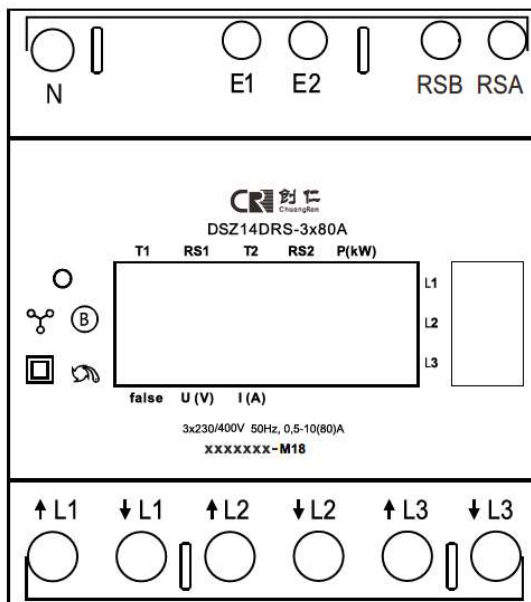
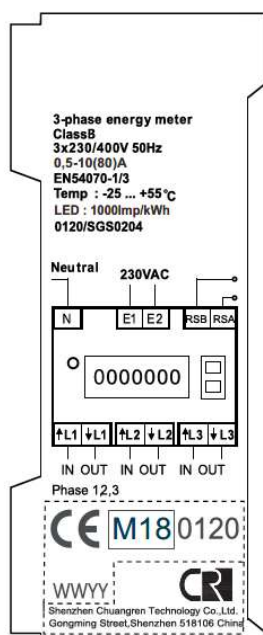
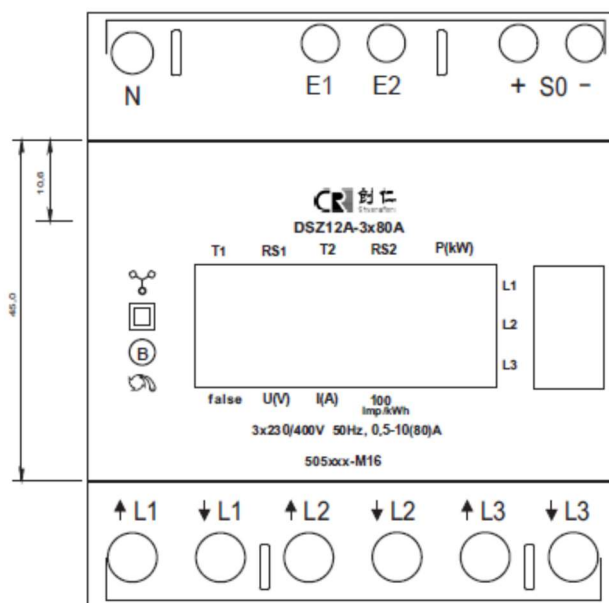
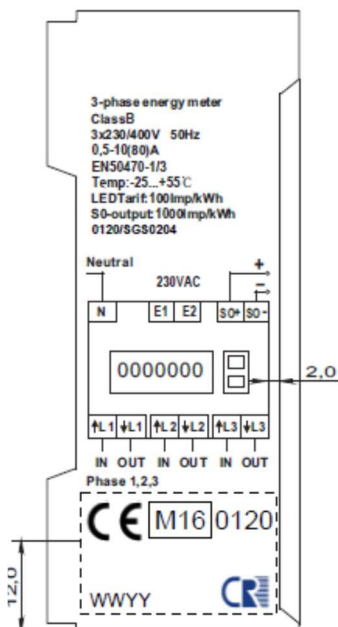
# SGS

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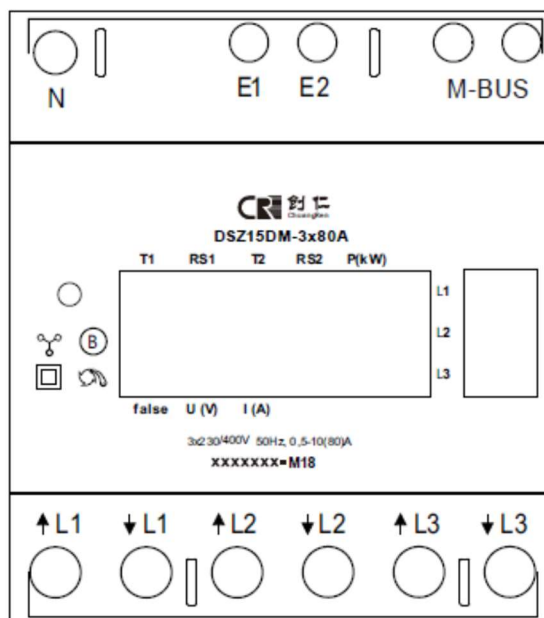
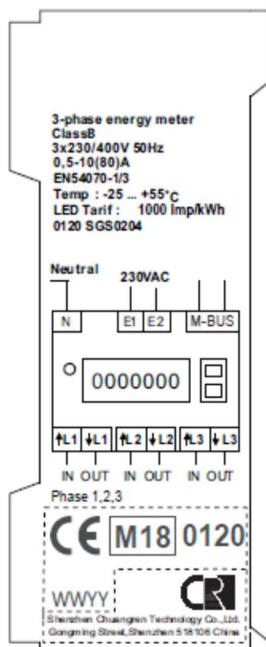
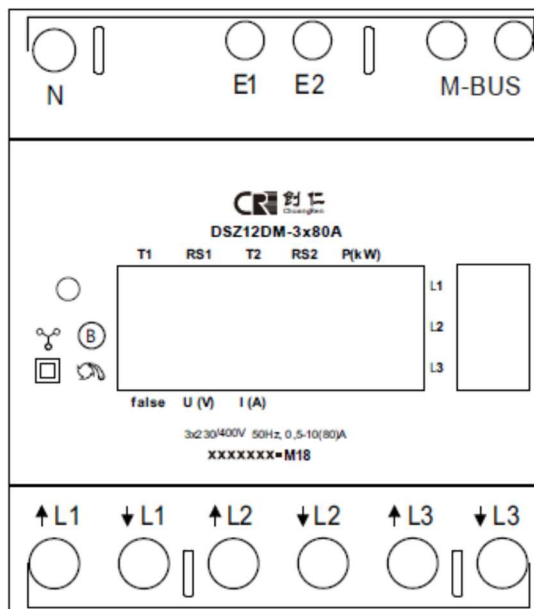
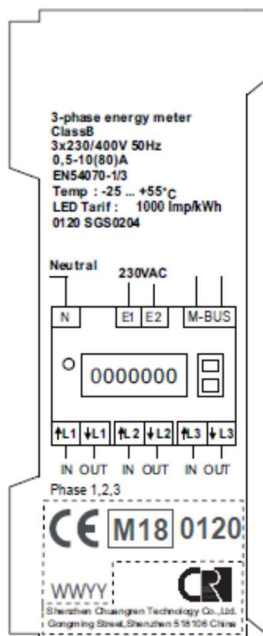
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#### 4. Calculation of the composite error/ MPE

Influence Factors for temperature, frequency and voltage							
Current	PF Cos	-25°C	-10°C	5°C	30°C	40°C	55°C
I <sub>min</sub>	1.0	0.30	0.29	0.32	0.37	0.64	0.45
I <sub>tr</sub>	1.0	0.42	0.61	0.69	0.26	0.28	0.33
10I <sub>tr</sub>	1.0	0.35	0.22	0.24	0.21	0.61	0.54
I <sub>max</sub>	1.0	0.16	0.14	0.15	0.15	0.16	0.22
I <sub>tr</sub>	0.5ind	0.32	0.48	0.59	0.63	0.65	0.71
10I <sub>tr</sub>	0.5ind	0.43	0.49	0.51	0.57	0.57	0.48
I <sub>max</sub>	0.5ind	0.95	0.99	0.69	0.74	0.68	0.94
I <sub>tr</sub>	0.8cap	0.38	0.41	0.30	0.30	0.68	0.37
10I <sub>tr</sub>	0.8cap	0.57	0.59	0.43	0.54	0.41	0.42
I <sub>max</sub>	0.8cap	0.65	0.56	0.72	0.75	0.52	0.64
L1							
I <sub>tr</sub>	1.0	0.42	0.38	0.30	0.18	0.14	0.07
10I <sub>tr</sub>	1.0	0.62	0.65	0.66	0.46	0.52	0.31
I <sub>max</sub>	1.0	0.58	0.73	0.72	0.63	0.68	0.54
I <sub>tr</sub>	0.5ind	0.52	0.37	0.26	0.09	0.06	0.15
10I <sub>tr</sub>	0.5ind	0.51	0.62	0.53	0.39	0.38	0.11
I <sub>max</sub>	0.5ind	0.57	1.06	1.06	0.86	0.98	0.81
L2							
I <sub>tr</sub>	1.0	0.27	0.22	0.15	0.04	0.03	0.09
10I <sub>tr</sub>	1.0	0.21	0.16	0.09	0.07	0.09	0.12
I <sub>max</sub>	1.0	0.27	0.24	0.19	0.14	0.12	0.09
I <sub>tr</sub>	0.5ind	0.30	0.24	0.14	0.02	0.07	0.17
10I <sub>tr</sub>	0.5ind	0.27	0.20	0.12	0.02	0.05	0.15
I <sub>max</sub>	0.5ind	0.21	0.18	0.15	0.09	0.08	0.10
L3							
I <sub>tr</sub>	1.0	0.21	0.16	0.09	0.03	0.07	0.12
10I <sub>tr</sub>	1.0	0.20	0.16	0.12	0.06	0.08	0.12
I <sub>max</sub>	1.0	0.28	0.26	0.24	0.20	0.19	0.18
I <sub>tr</sub>	0.5ind	0.28	0.18	0.12	0.02	0.07	0.16
10I <sub>tr</sub>	0.5ind	0.25	0.20	0.13	0.02	0.05	0.12
I <sub>max</sub>	0.5ind	0.20	0.27	0.16	0.03	0.11	0.14


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During the type approval examination the influence factors for temperature, frequency and voltage are determined per load point. The table above represents the sum of the square values per load, determined via the following formula:-

$$\delta e(T, U, f) = \sqrt{(\delta e^2(T, I, \cos\varphi) + \delta e^2(U, I, \cos\varphi) + \delta e^2(f, I, \cos\varphi))}$$

where

$\delta e(T, I, \cos\varphi)$  = Additional error due to variation of the temperature at the same load  
 $\delta e(U, I, \cos\varphi)$  = Additional error due to variation of the voltage at the same load  
 $\delta e(f, I, \cos\varphi)$  = Additional error due to variation of the frequency at the same load


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## 5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
DSZ12E	3 x 230/400V 0.25-5(80) A, 800 imp/kWh
DSZ12D	3 x 230/400V 0.5-10(80) A, LED tariff - 100 imp/kWh, S0-output – 1000imp/kWh
DSZ12A	3 x 230/400V 0.5-10(80) A, LED tariff - 100 imp/kWh, S0-output – 1000imp/kWh
DSZ15D	3 x 230/400V 0.5-10(80) A, LED tariff - 100 imp/kWh, S0-output – 1000imp/kWh
DSZ14DRS	3 x 230/400V 0.5-10(80) A, LED tariff - 1000 imp/kWh, RS485 communication
DSZ12DM	3 x 230/400V 0.5-10(80) A, LED tariff - 1000 imp/kWh, M-Bus communication, grey face and terminal covers
DSZ15DM	3 x 230/400V 0.5-10(80) A, LED tariff - 1000 imp/kWh, M-Bus communication Blue face and terminal covers

Modifications to the meter(s) described according to approval No.**0120/ SGS0204** 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	29/04/2016	Initial Issue
2	20/05/2016	Model DSZ12A added to approval
3	26/10/2016	Software versions rename
4	08/09/2017	Model DSZ15D added to approval
5	24/01/2018	Model DSZ14DRS added to approval
6	08/05/2018	Models DSZ12DM & DSZ15DM added to approval
7	02/11/2018	DSZ14DRS-3x80A nameplate modified due to removal of S0 output and change of meter constant from 100imp/kWh to 1000imp/kWh

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