



SGS

EU Type Examination Certificate Number: **0120/SGS0455**

B+G E-Tech GmbH

Franz-Mehring Str.36
01979 Lauchhammer
Germany

Instrument Identification:
DRS155AE

Single phase, Active Import (kWh), Electricity Meter, Mechanical Display

Instrument Traceable Number
0120/SGS0455

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 6th June 2026
Issue 1

Certification is based on report number(s) SHES151200784001 dated 3rd June 2016
EMA224514
EMA277852

Authorised Signature

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EU Type Examination Cert.


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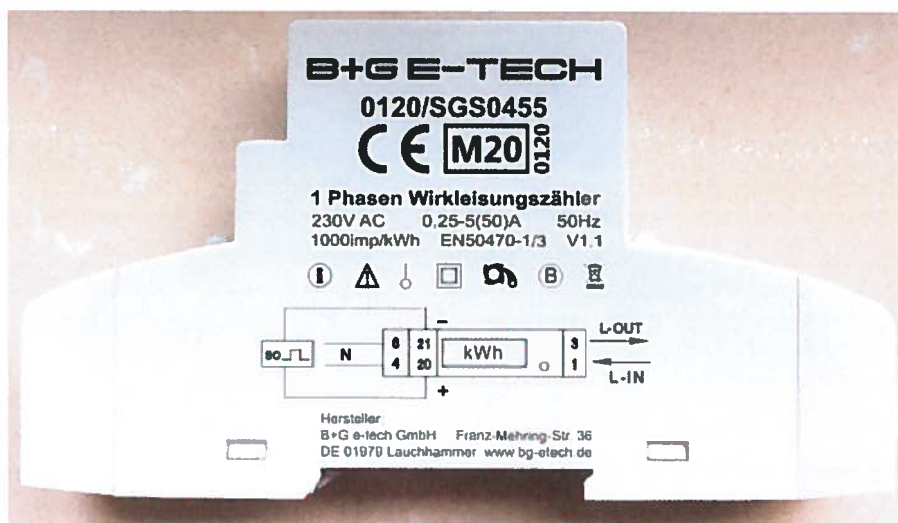
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	Issue Number: 1	Dated: 25 th March 2020

1. Technical Data

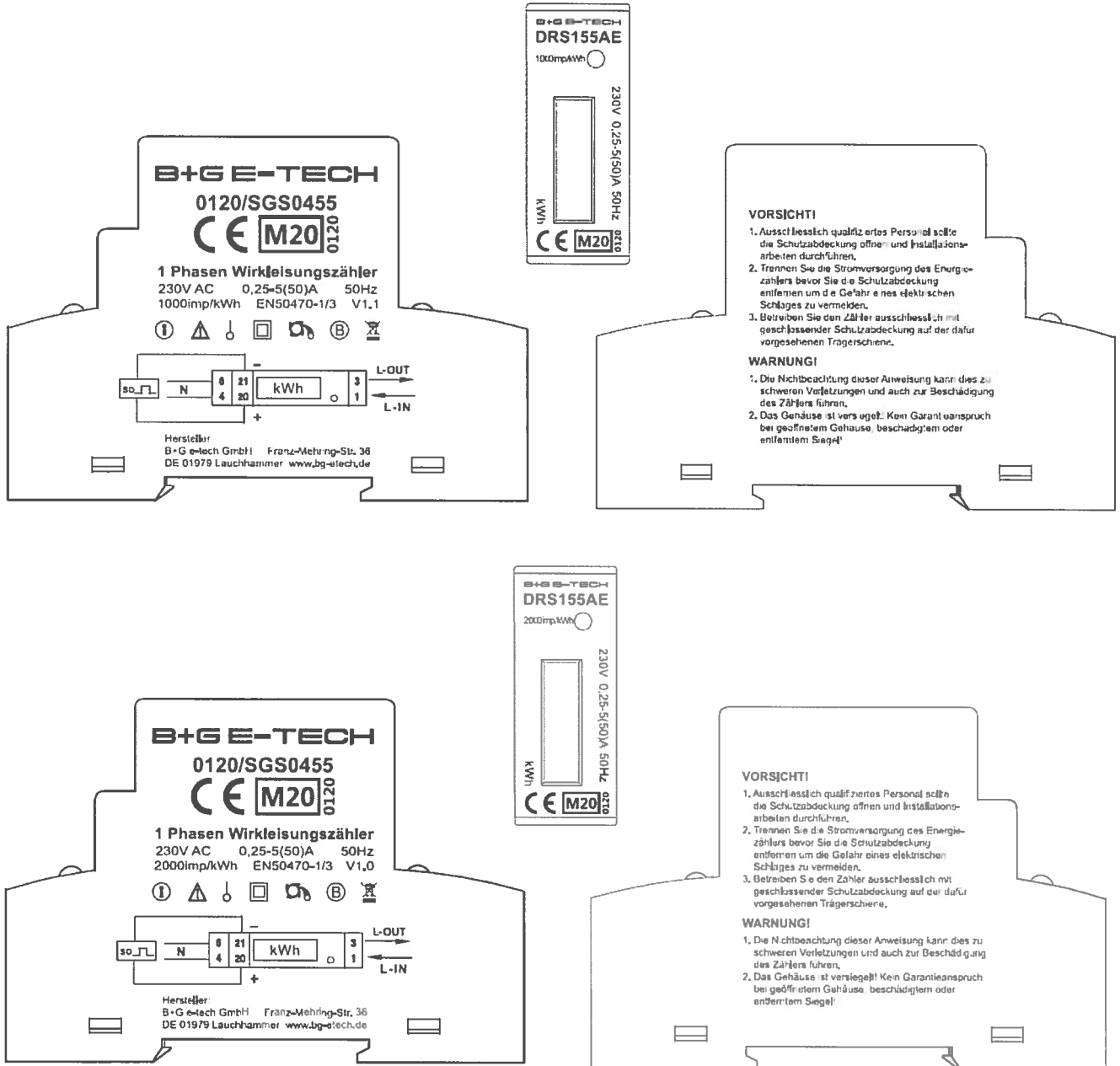
Manufacturer	B+G E-Tech GmbH
Meter Type	DRS155AE
Voltage Rating (U_n)	230V
Current Rating ($I_{min} - I_{ref} (I_{max})$)	0.25-5(30)A, 0.25-5(32)A, 0.25-5(40)A, 0.25-5(45)A, 0.25-5(50)A
Frequency (F_n)	50Hz
Active Accuracy Class (kWh)	B (kWh)
Type of circuit	1p2w
Temperature Range	-25°C to +55°C
Software/ Firmware Version No	F+R Version(2000imp/kWh):V1.0 F+R Version(1000imp/kWh):V1.1 F+R Version(100imp/kWh): V1.2
Identification Location	Nameplate
Bill Of Materials Number	2000imp/kWh, V1.0, F+R: D111042-02 1000imp/kWh, V1.1: D111042; 100imp/kWh, V1.2: D111042-01;
IP Rating	IP51
Insulation Protective Class	Class II
LED Pulse Constant	2000imp/kWh, 1000imp/kWh, 100imp/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	Mechanical
Terminal Arrangement(s)	DIN
Location of Manufacturers Address	Nameplate

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2. Photograph of Meter and Sealing Plan



3. Examples of Nameplates



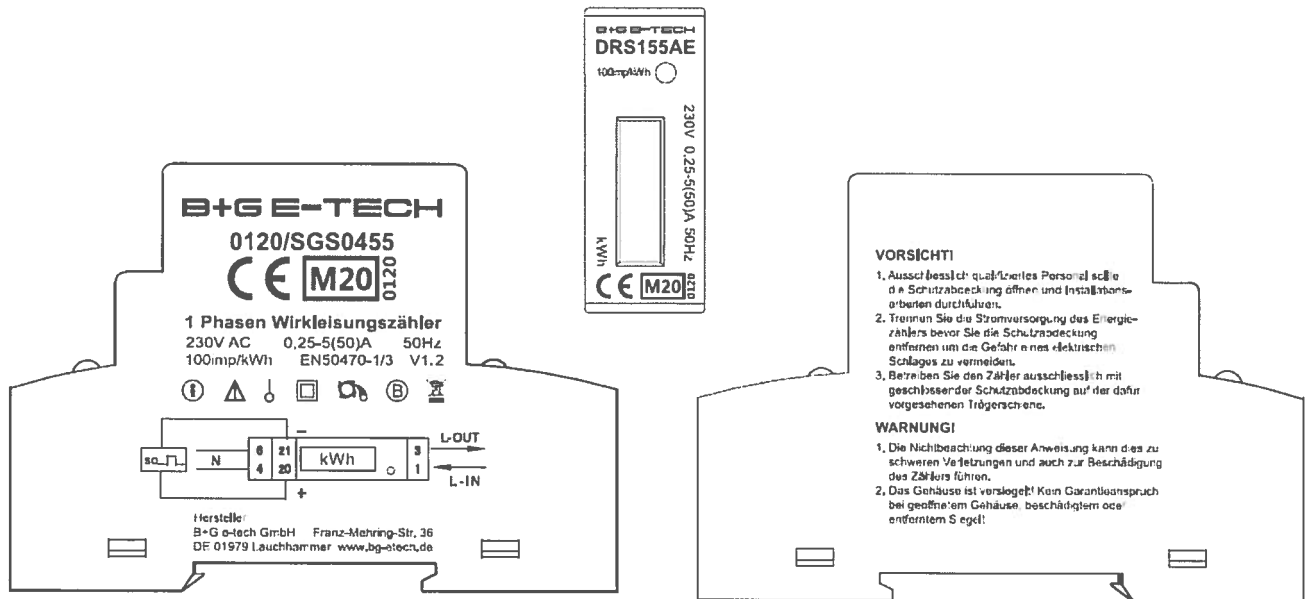
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4. Calculation of the composite error/ MPE

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	0.64	0.57	0.48	0.29	0.34	0.40
I _{tr}	1.0	0.57	0.39	0.28	0.20	0.25	0.37
10I _{tr}	1.0	0.49	0.36	0.22	0.14	0.24	0.38
I _{max}	1.0	0.49	0.40	0.29	0.14	0.18	0.29
I _{tr}	0.5ind	0.48	0.44	0.43	0.43	0.50	0.57
10I _{tr}	0.5ind	0.34	0.26	0.21	0.26	0.32	0.45
I _{max}	0.5ind	0.41	0.34	0.28	0.19	0.19	0.25
I _{tr}	0.8cap	0.69	0.55	0.39	0.23	0.27	0.38
10I _{tr}	0.8cap	0.58	0.45	0.27	0.13	0.22	0.38
I _{max}	0.8cap	0.60	0.50	0.35	0.13	0.15	0.26


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5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter	
DRS155AE	0.25-5(30)A 0.25-5(32)A 0.25-5(40)A 0.25-5(45)A 0.25-5(50)A	Hardware the same for all currents and impulse constants. The only differences are in software.

Modifications to the meter(s) described according to approval No.**0120/SGS0455** 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	25/03/2020	Initial Issue

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