EU Type Examination Certificate Number: **0120/SGS0622**

B+G E-Tech GmbH

Franz-Mehring Str.36 01979 Lauchhammer, Germany

Instrument Identification:
DS-009, DS**-00B, DS**-00B-R, DS**-10B, DS**-20B, DS**-30B**

Polyphase, Direct Connected, Active Import/Export (kWh), DIN Rail, Electricity Meter

Instrument Traceable Number
0120/SGS0622

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 November 2032
Issue 1

Certification is based on report number(s):
SHES220801488301 dated 21st November 2022, EMA310134/1/TR50579 dated 18th November 2022
SHES230100046701 dated 27th February 2023, EMA310134/1
EMA314014/1

Authorised Signature

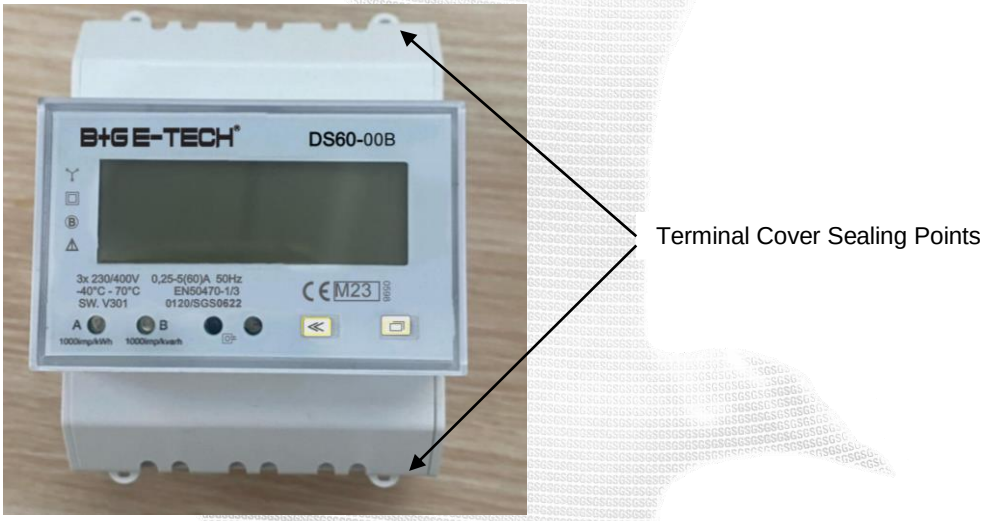
Mikko Välimäki

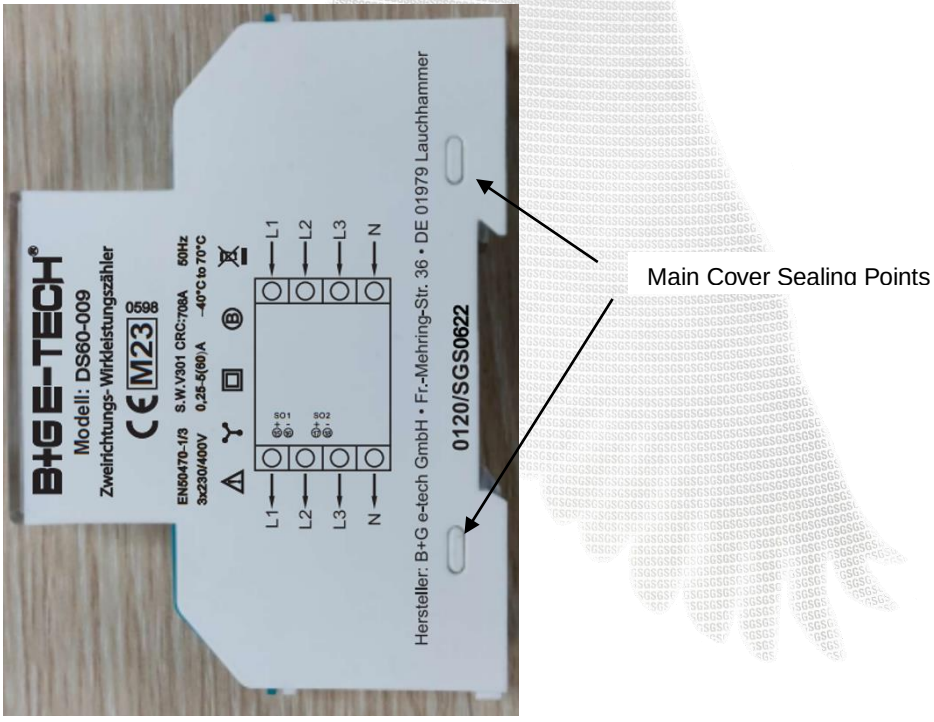
SGS Fimko OY, Notified Body 0598
Takomotie 8, FI-00380 Helsinki, Finland
t +358 9 6963 61 www.sgs.fi

1. Technical Data

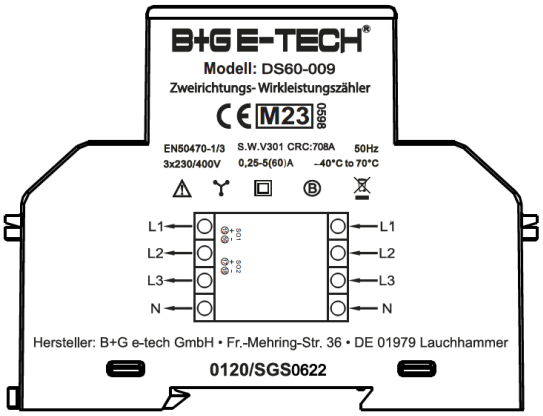
Manufacturer	B+G E-Tech GmbH
Meter Types	DS60-009, DS80-009, DS100-009 DS60-00B, DS80-00B, DS100-00B DS60-00B-R, DS80-00B-R, DS100-00B-R DS60-10B, DS80-10B, DS100-10B DS60-20B, DS80-20B, DS100-20B DS60-30B, DS80-30B, DS100-30B
Voltage Rating *(Un)*	3x230/400V
Current Rating *(Imin – Iref (Imax))*	0.25-5(60)A, 0.25-5(80)A, 0.25-5(100)A
Frequency *(Fn)*	50Hz
Active Accuracy Class *(kWh)*	B (kWh)
Type of circuit	3p4w
Temperature Range	-40ºC to +70ºC
Software/ Firmware Version No's	V301
CRC Checksum No's	DS60-009, DS80-009, DS100-009: 708A DS60-00B, DS80-00B, DS100-00B, DS60-20B, DS80-20B, DS100-20B: 5B61 DS60-10B, DS80-10B, DS100-10B, DS60-30B, DS80-30B, DS100-30B:2B60 DS60-00B-R, DS80-00B-R, DS100-00B-R: 6D95
Identification Location	LCD
BoM No's	DS60-009, DS80-009, DS100-009: D513084 BOM V0.1 & V0.2 DS60-00B, DS80-00B, DS100-00B: D513083 BOM V0.1 & V0.2 DS60-00B-R, DS80-00B-R, DS100-00B-R: D513083-01 BOM V0.1 & V0.2 DS60-10B, DS80-10B, DS100-10B: D513082 BOM V0.1 & V0.2 DS60-20B, DS80-20B, DS100-20B: D513085 BOM V0.1 & V0.2 DS60-30B, DS80-30B, DS100-30B: D513086 BOM V0.1 & V0.2
IP Rating	IP51 Must be installed in a suitable IP rated enclosure
Insulation Protective Class	Class II
LED Pulse Constant	1000 imp/kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	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
Location of Manufacturers Address	Nameplate or Associated Documents

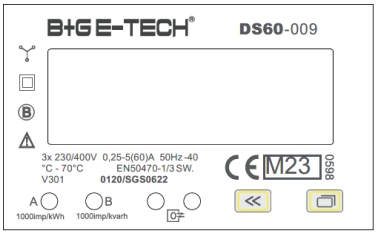
2. Photograph of Meter and Sealing Plan

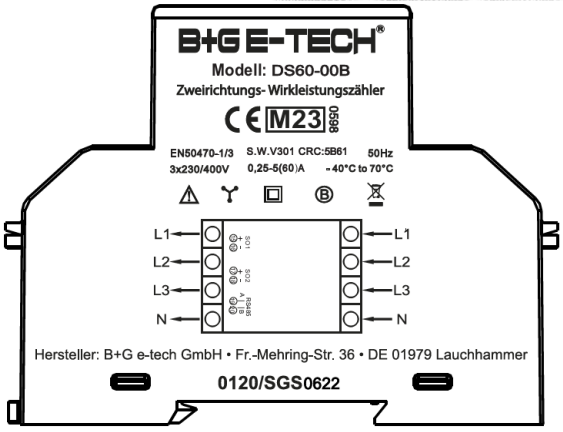


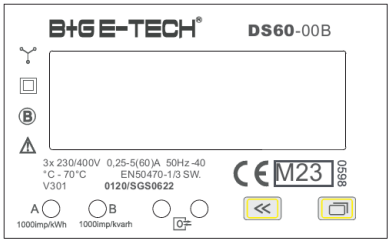


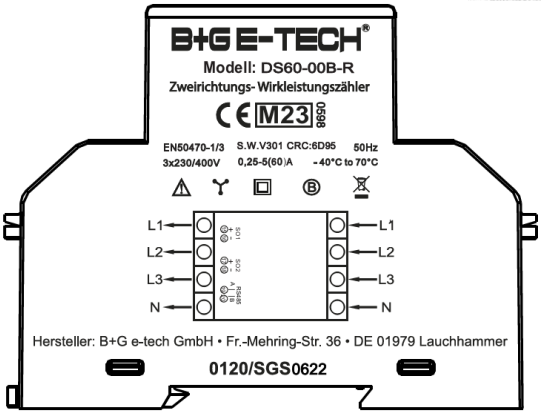
3. Examples of Nameplates

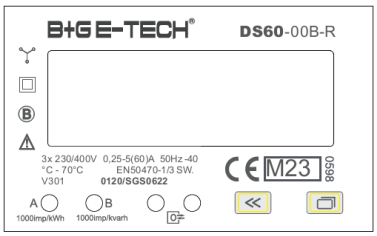


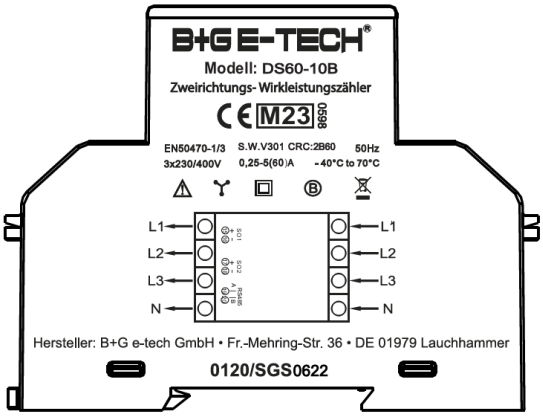


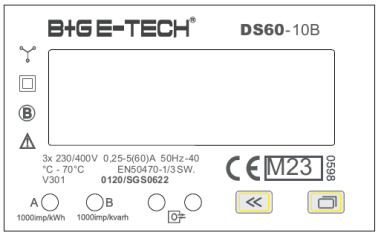









B+G E-TECH
Modell: DS60-10B
Zweirichtungs- Wirkleistungszähler
M23
0598
EN50470-1/3 S.W.V301 CRC:2B60 50Hz
3x230/400V 0,25-5(60)A -40°C to 70°C
L1
L2
L3
N
Hersteller: B+G e-tech GmbH • Fr.-Mehring-Str. 36 • DE 01979 Lauchhammer
0120/SGS0622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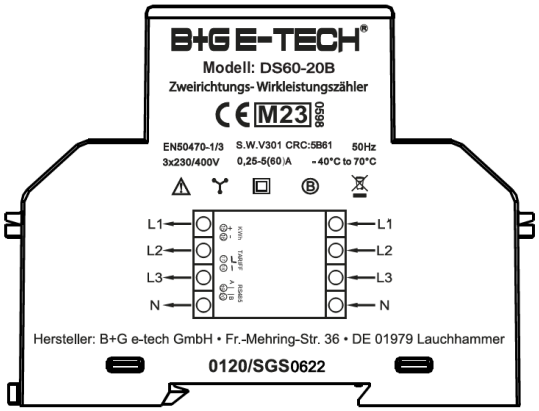
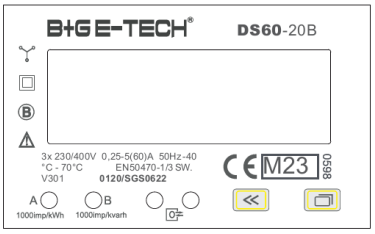
DS60-10B
3x 230/400V 0,25-5(60)A 50Hz-40
°C - 70°C EN50470-1/3 SW.
V301 0120/SGS0622
M23
0598
A
B
1000imp/kWh
1000imp/kvarh


B+G E-TECH
Modell: DS60-20B
Zweirichtungs- Wirkleistungszähler
M23
0598
EN50470-1/3 S.W.V301 CRC:5B61 50Hz
3x230/400V 0,25-5(60)A -40°C to 70°C
L1
L2
L3
N
Hersteller: B+G e-tech GmbH • Fr.-Mehring-Str. 36 • DE 01979 Lauchhammer
0120/SGS0622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DS60-20B
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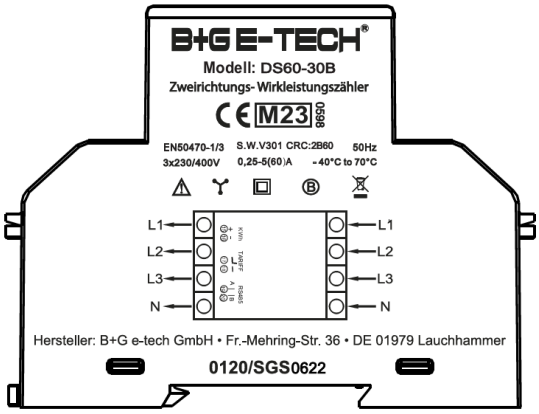
°C - 70°C EN50470-1/3 SW.
V301 0120/SGS0622
M23
0598
A
B
1000imp/kWh
1000imp/kvarh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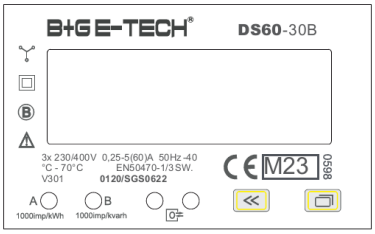
Modell: DS60-30B
Zweirichtungs- Wirkleistungszähler
M23
0598
EN50470-1/3 S.W.V301 CRC:2B60 50Hz
3x230/400V 0,25-5(60)A -40°C to 70°C
L1
L2
L3
N
Hersteller: B+G e-tech GmbH • Fr.-Mehring-Str. 36 • DE 01979 Lauchhammer
0120/SGS0622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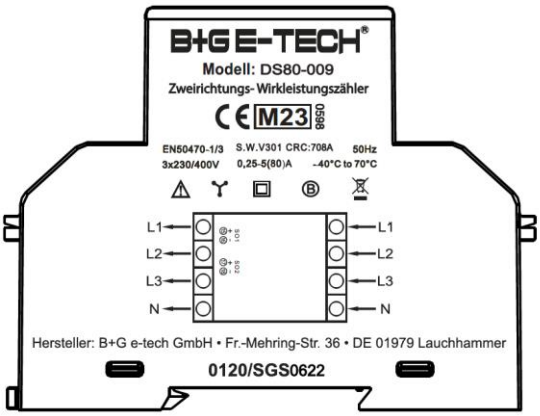
DS60-30B
3x 230/400V 0,25-5(60)A 50Hz-40
°C - 70°C EN50470-1/3 SW.
V301 0120/SGS0622
M23
0598
A
B
1000imp/kWh
1000imp/kvarh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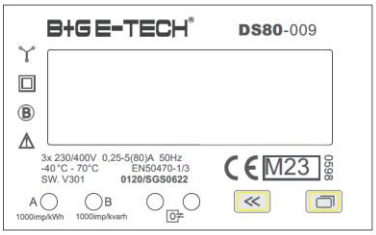
Zweirichtungs- Wirkleistungszähler
M23
0598
EN50470-1/3 S.W.V301 CRC:708A 50Hz
3x230/400V 0,25-5(80)A -40°C to 70°C
L1
L2
L3
N
Hersteller: B+G e-tech GmbH • Fr.-Mehring-Str. 36 • DE 01979 Lauchhammer
0120/SGS0622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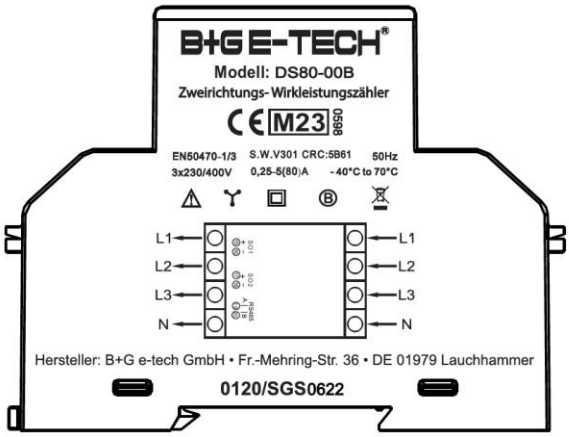
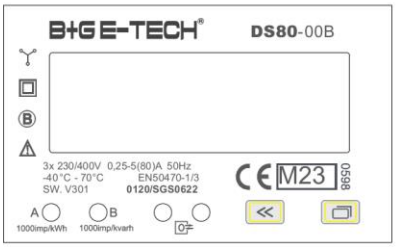
DS80-009
3x 230/400V 0,25-5(80)A 50Hz
-40 °C - 70°C EN50470-1/3
SW. V301 0120/SGS0622
M23
0598
A
B
1000imp/kWh
1000imp/kvarh


B+G E-TECH
Modell: DS80-00B
Zweirichtungs- Wirkleistungszähler
M23
0598
EN50470-1/3 S.W.V301 CRC:5B61 50Hz
3x230/400V 0,25-5(80)A -40°C to 70°C
L1
L2
L3
N
Hersteller: B+G e-tech GmbH • Fr.-Mehring-Str. 36 • DE 01979 Lauchhammer
0120/SGS0622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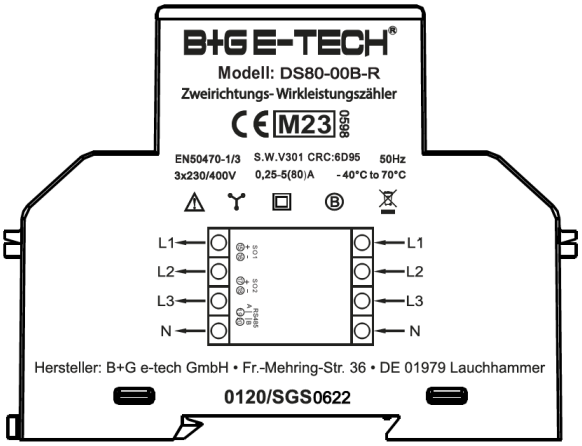
DS80-00B
3x 230/400V 0,25-5(80)A 50Hz
-40 °C - 70°C EN50470-1/3
SW. V301 0120/SGS0622
M23
0598
A
B
1000imp/kWh
1000imp/kvarh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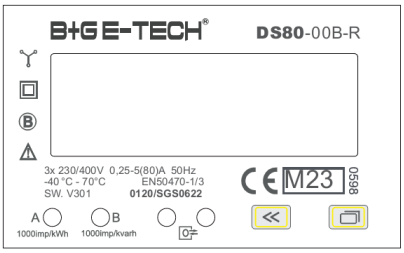
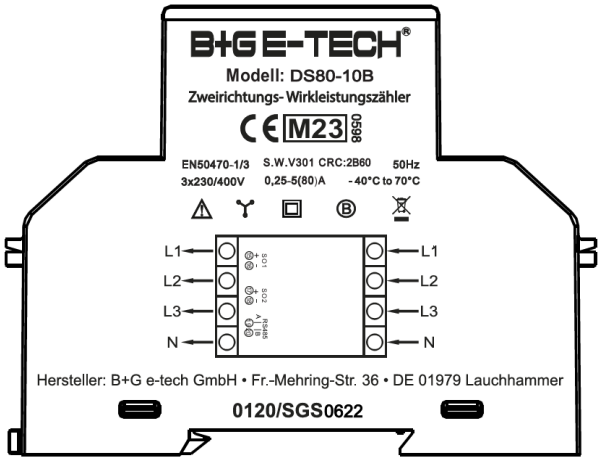
Modell: DS80-00B-R
Zweirichtungs- Wirkleistungszähler
M23
0598
EN50470-1/3 S.W.V301 CRC:6D95 50Hz
3x230/400V 0,25-5(80)A -40°C to 70°C
L1
L2
L3
N
Hersteller: B+G e-tech GmbH • Fr.-Mehring-Str. 36 • DE 01979 Lauchhammer
0120/SGS0622


B+G E-TECH
DS80-00B-R
3x 230/400V 0,25-5(80)A 50Hz
-40 °C - 70°C EN50470-1/3
SW. V301 0120/SGS0622
M23
0598
A
B
1000imp/kWh
1000imp/kvarh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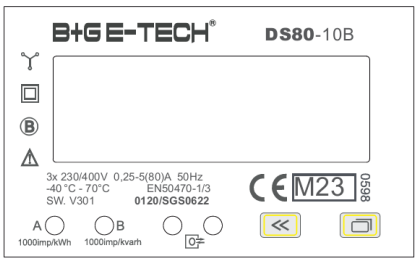
Modell: DS80-10B
Zweirichtungs- Wirkleistungszähler
M23
0598
EN50470-1/3 S.W.V301 CRC:2B60 50Hz
3x230/400V 0,25-5(80)A -40°C to 70°C
L1
L2
L3
N
Hersteller: B+G e-tech GmbH • Fr.-Mehring-Str. 36 • DE 01979 Lauchhammer
0120/SGS0622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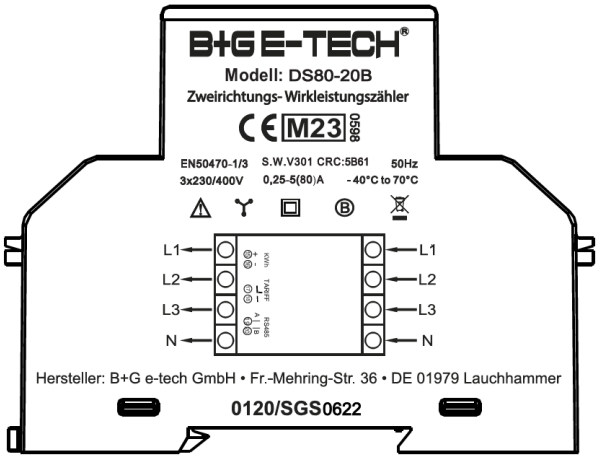
DS80-10B
3x 230/400V 0,25-5(80)A 50Hz
-40 °C - 70°C EN50470-1/3
SW. V301 0120/SGS0622
M23
0598
A
B
1000imp/kWh
1000imp/kvarh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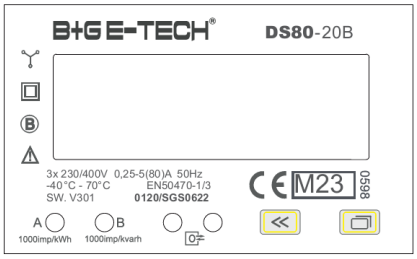
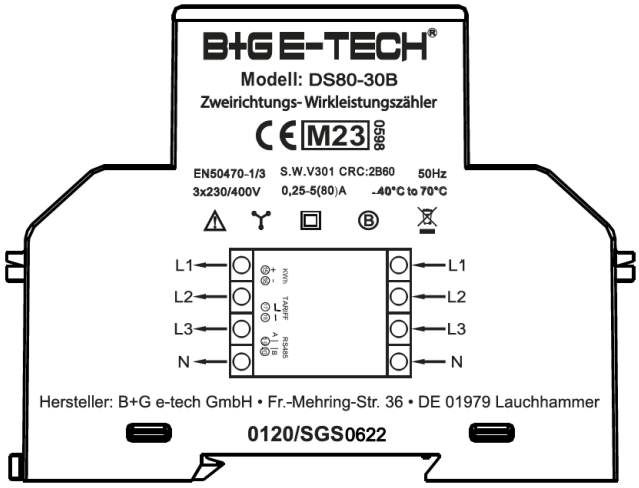
Modell: DS80-20B
Zweirichtungs- Wirkleistungszähler
M23
0598
EN50470-1/3 S.W.V301 CRC:5B61 50Hz
3x230/400V 0,25-5(80)A -40°C to 70°C
L1
L2
L3
N
Hersteller: B+G e-tech GmbH • Fr.-Mehring-Str. 36 • DE 01979 Lauchhammer
0120/SGS0622


B+G E-TECH
DS80-20B
3x 230/400V 0,25-5(80)A 50Hz
-40 °C - 70°C EN50470-1/3
SW. V301 0120/SGS0622
M23
0598
A
B
1000imp/kWh
1000imp/kvarh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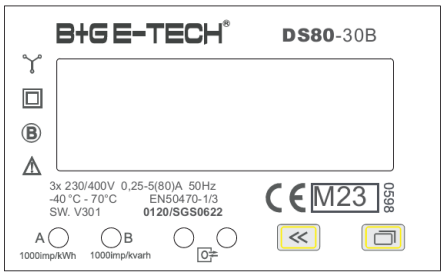
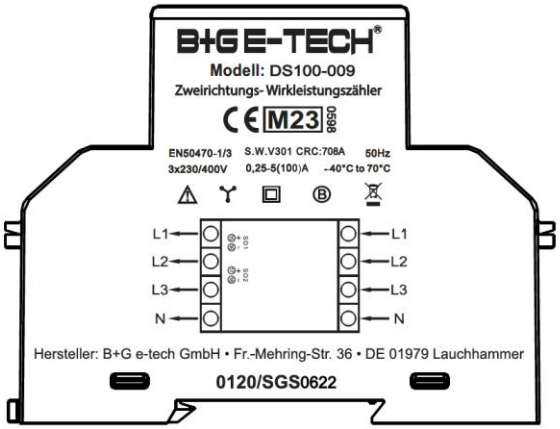
Modell: DS80-30B
Zweirichtungs- Wirkleistungszähler
M23
0598
EN50470-1/3 S.W.V301 CRC:2B60 50Hz
3x230/400V 0,25-5(80)A -40°C to 70°C
L1
L2
L3
N
Hersteller: B+G e-tech GmbH • Fr.-Mehring-Str. 36 • DE 01979 Lauchhammer
0120/SGS0622


B+G E-TECH
DS80-30B
3x 230/400V 0,25-5(80)A 50Hz
-40 °C - 70°C EN50470-1/3
SW. V301 0120/SGS0622
M23
0598
A
B
1000imp/kWh
1000imp/kvarh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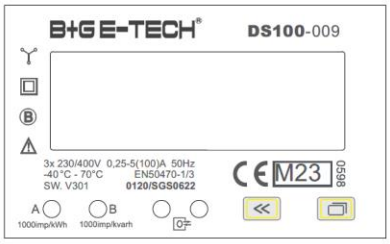
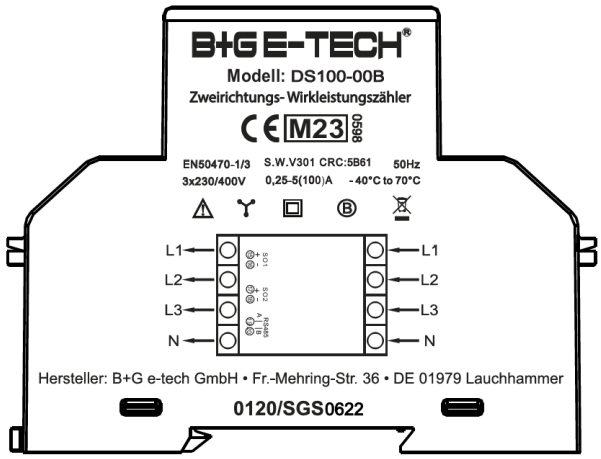
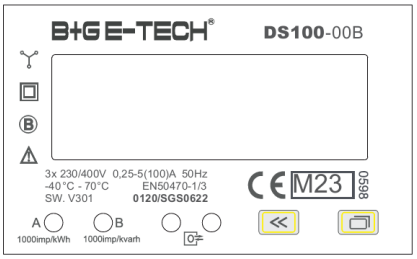
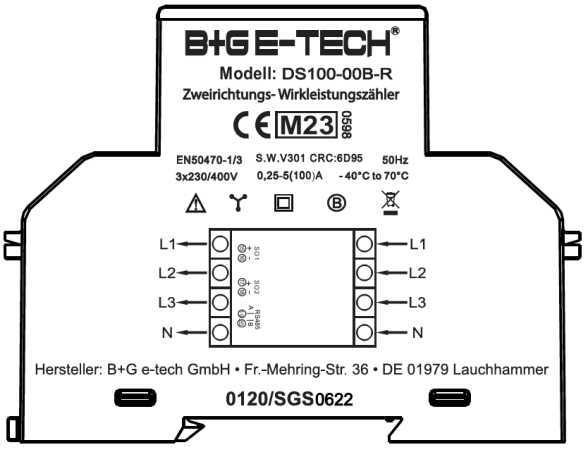
Zweirichtungs- Wirkleistungszähler
CE M23 0598
EN50470-1/3 S.W.V301 CRC:708A 50Hz
3x230/400V 0,25-5(100)A -40°C to 70°C
L1
L2
L3
N
Hersteller: B+G e-tech GmbH • Fr.-Mehring-Str. 36 • DE 01979 Lauchhammer
0120/SGS0622


B+G E-TECH
DS100-009
3x 230/400V 0,25-5(100)A 50Hz
-40°C - 70°C EN50470-1/3
SW. V301 0120/SGS0622
CE M23 0598
A
B
1000imp/kWh
1000imp/kvarh


B+G E-TECH
Modell: DS100-00B
Zweirichtungs- Wirkleistungszähler
CE M23 0598
EN50470-1/3 S.W.V301 CRC:5B61 50Hz
3x230/400V 0,25-5(100)A -40°C to 70°C
L1
L2
L3
N
Hersteller: B+G e-tech GmbH • Fr.-Mehring-Str. 36 • DE 01979 Lauchhammer
0120/SGS0622


B+G E-TECH
DS100-00B
3x 230/400V 0,25-5(100)A 50Hz
-40°C - 70°C EN50470-1/3
SW. V301 0120/SGS0622
CE M23 0598
A
B
1000imp/kWh
1000imp/kvarh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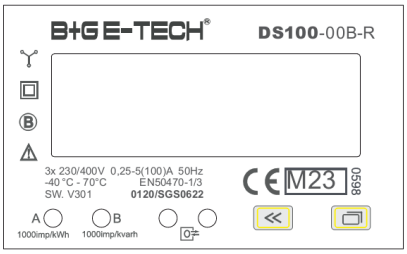
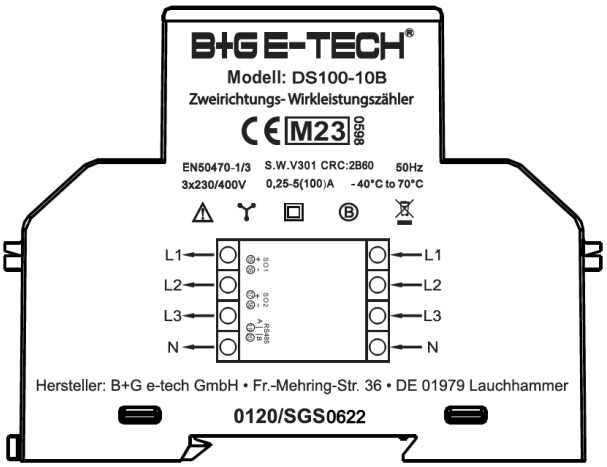
Modell: DS100-00B-R
Zweirichtungs- Wirkleistungszähler
CE M23 0598
EN50470-1/3 S.W.V301 CRC:6D95 50Hz
3x230/400V 0,25-5(100)A -40°C to 70°C
L1
L2
L3
N
Hersteller: B+G e-tech GmbH • Fr.-Mehring-Str. 36 • DE 01979 Lauchhammer
0120/SGS0622


B+G E-TECH
DS100-00B-R
3x 230/400V 0,25-5(100)A 50Hz
-40°C - 70°C EN50470-1/3
SW. V301 0120/SGS0622
CE M23 0598
A
B
1000imp/kWh
1000imp/kvarh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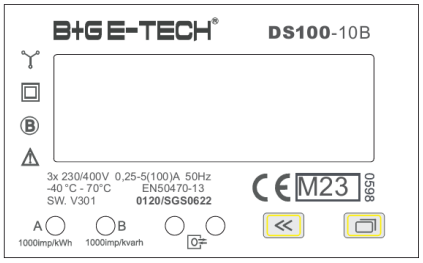
Modell: DS100-10B
Zweirichtungs- Wirkleistungszähler
M23 0598
EN50470-1/3 S.W.V301 CRC:2B60 50Hz
3x230/400V 0,25-5(100)A -40°C to 70°C
L1 L2 L3 N
Hersteller: B+G e-tech GmbH • Fr.-Mehring-Str. 36 • DE 01979 Lauchhammer
0120/SGS0622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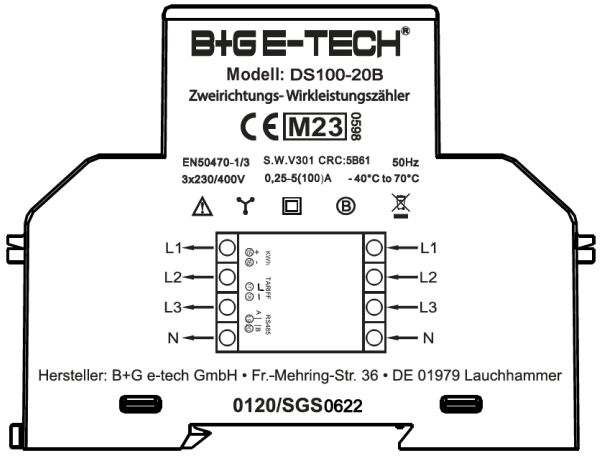
DS100-10B
3x 230/400V 0,25-5(100)A 50Hz
-40 °C - 70°C EN50470-13
SW. V301 0120/SGS0622
M23 0598
A B
1000imp/kWh 1000imp/kvarh


B+G E-TECH
Modell: DS100-20B
Zweirichtungs- Wirkleistungszähler
M23 0598
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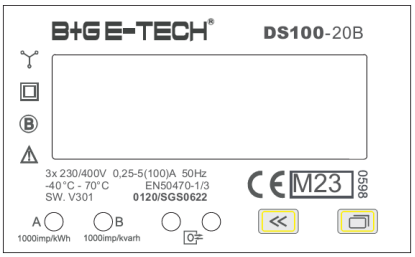
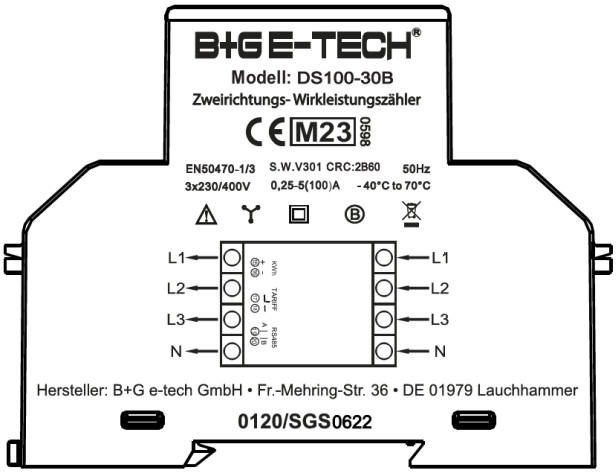
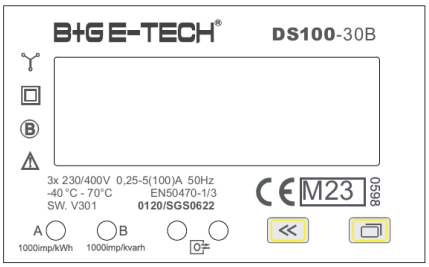
3x230/400V 0,25-5(100)A -40°C to 70°C
L1 L2 L3 N
Hersteller: B+G e-tech GmbH • Fr.-Mehring-Str. 36 • DE 01979 Lauchhammer
0120/SGS0622


B+G E-TECH
DS100-20B
3x 230/400V 0,25-5(100)A 50Hz
-40 °C - 70°C EN50470-1/3
SW. V301 0120/SGS0622
M23 0598
A B
1000imp/kWh 1000imp/kvarh


B+G E-TECH
Modell: DS100-30B
Zweirichtungs- Wirkleistungszähler
M23 0598
EN50470-1/3 S.W.V301 CRC:2B60 50Hz
3x230/400V 0,25-5(100)A -40°C to 70°C
L1 L2 L3 N
Hersteller: B+G e-tech GmbH • Fr.-Mehring-Str. 36 • DE 01979 Lauchhammer
0120/SGS0622


B+G E-TECH
DS100-30B
3x 230/400V 0,25-5(100)A 50Hz
-40 °C - 70°C EN50470-1/3
SW. V301 0120/SGS0622
M23 0598
A B
1000imp/kWh 1000imp/kvarh

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:-

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

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

		Influence Factors for Temperature. Frequency & Voltage							
Current	**PF Cos**	-40°C	-25°C	-10°C	5°C	30°C	40°C	55°C	70°C
Imin	1.0	***0.15***	***0.09***	***0.12***	***0.12***	***0.11***	***0.19***	***0.38***	***0.51***
Itr	1.0	***0.15***	***0.04***	***0.08***	***0.08***	***0.09***	***0.18***	***0.36***	***0.49***
10Itr	1.0	***0.28***	***0.12***	***0.12***	***0.12***	***0.28***	***0.28***	***0.45***	***0.67***
Imax	1.0	***0.52***	***0.52***	***0.52***	***0.53***	***0.62***	***0.68***	***0.80***	***0.91***
Itr	0.5ind	***0.11***	***0.10***	***0.15***	***0.14***	***0.12***	***0.19***	***0.34***	***0.49***
10Itr	0.5ind	***0.14***	***0.06***	***0.10***	***0.10***	***0.14***	***0.23***	***0.41***	***0.52***
Imax	0.5ind	***0.30***	***0.29***	***0.29***	***0.33***	***0.49***	***0.59***	***0.73***	***0.87***
Itr	0.8cap	***0.11***	***0.06***	***0.09***	***0.08***	***0.13***	***0.22***	***0.39***	***0.56***
10Itr	0.8cap	***0.25***	***0.17***	***0.17***	***0.17***	***0.43***	***0.38***	***0.52***	***0.69***
Imax	0.8cap	***0.25***	***0.25***	***0.25***	***0.28***	***0.28***	***0.55***	***0.70***	***0.85***
L1									
Itr	1.0	***0.58***	***0.51***	***0.40***	***0.22***	***0.15***	***0.31***	***0.55***	***0.72***
10Itr	1.0	***0.52***	***0.50***	***0.37***	***0.19***	***0.16***	***0.35***	***0.58***	***0.75***
Imax	1.0	***0.55***	***0.45***	***0.25***	***0.08***	***0.37***	***0.56***	***0.75***	***0.91***
Itr	0.5ind	***0.54***	***0.47***	***0.38***	***0.21***	***0.26***	***0.36***	***0.58***	***0.76***
10Itr	0.5ind	***0.52***	***0.49***	***0.35***	***0.18***	***0.22***	***0.38***	***0.60***	***0.76***
Imax	0.5ind	***0.49***	***0.38***	***0.19***	***0.05***	***0.43***	***0.59***	***0.80***	***0.96***
L2									
Itr	1.0	***0.85***	***0.61***	***0.35***	***0.24***	***0.25***	***0.24***	***0.24***	***0.31***
10Itr	1.0	***0.86***	***0.59***	***0.30***	***0.09***	***0.05***	***0.04***	***0.08***	***0.21***
Imax	1.0	***0.62***	***0.49***	***0.44***	***0.44***	***0.44***	***0.45***	***0.48***	***0.57***
Itr	0.5ind	***0.81***	***0.45***	***0.21***	***0.10***	***0.15***	***0.11***	***0.10***	***0.21***
10Itr	0.5ind	***0.77***	***0.49***	***0.22***	***0.04***	***0.13***	***0.10***	***0.04***	***0.16***
Imax	0.5ind	***0.66***	***0.52***	***0.45***	***0.44***	***0.44***	***0.46***	***0.50***	***0.58***
L3									
Itr	1.0	***0.16***	***0.18***	***0.25***	***0.23***	***0.16***	***0.23***	***0.39***	***0.54***
10Itr	1.0	***0.10***	***0.08***	***0.16***	***0.10***	***0.10***	***0.23***	***0.45***	***0.57***
Imax	1.0	***0.50***	***0.52***	***0.49***	***0.47***	***0.53***	***0.60***	***0.75***	***0.83***
Itr	0.5ind	***0.22***	***0.26***	***0.30***	***0.28***	***0.23***	***0.28***	***0.48***	***0.54***
10Itr	0.5ind	***0.08***	***0.16***	***0.22***	***0.17***	***0.09***	***0.19***	***0.45***	***0.52***
Imax	0.5ind	***0.45***	***0.46***	***0.45***	***0.46***	***0.32***	***0.61***	***0.81***	***0.86***

5. Annex of Variants

Product Variant Identification Details:

Model No.	DS60-10B DS80-10B DS100-10B	DS60-30B DS80-30B DS100-30B	DS60-00B DS80-00B DS100-00B	DS60-00B-R DS80-00B-R DS100-00B-R	DS60-20B DS80-20B DS100-20B	DS60-009 DS80-009 DS100-009
Voltage range	3x230/400V					
Current range	0.25-5(60)A, 0.25-5(80)A, 0.25-5(100)A					
Frequency range	50Hz					
IR	●					
RS485	●	●	●	●	●	
Battery	●	●				
Multi-Tariff	●	●				
2 SO	●		●	●		●
1 SO,1 External Signal input port		●			●	
Software version	V301	V301	V301	V301	V301	V301
Checksum	2B60	2B60	5B61	6D95	5B61	708A

Modifications to the meter(s) described according to approval No.**0120/SGS622**must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).

6. Document Revision History

Issue	Date	Comments
1	20/03/2023	Initial Issue

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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