

EU Type Examination Certificate Number: **0120/SGS0574**

B+G E-Tech GmbH

Franz-Mehring-Str. 36 01979 Lauchhammer Germany

Instrument Identification:
**WS60-1942, WS80-1942, WS100-1942,
WS60-1943, WS80-1943, WS100-1943,
WS60-19L3, WS80-19L3, WS100-19L3**

Single phase, Active Import/Export (kWh), Electricity Meter

Instrument Traceable Number
0120/SGS0574

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 from 6th September 2022 until 22nd May 2032
Issue 1

Certification is based on report number(s) SHES220300395901 dated 19th May 2022
EMA304043/1/TR50579 dated 18th May 2022
EMA304043/1
EMA307394/1

Authorised Signature



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Dated: 12th September 2022**1. Technical Data**

| | |
|--|--|
| Manufacturer | B+G E-Tech GmbH |
| Meter Types | WS60-1942, WS80-1942, WS100-1942 WS60-1943, WS80-1943, WS100-1943 WS60-19L3, WS80-19L3, WS100-19L3 |
| 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, 0.25-5(60)A 0.25-5(80)A, 0.25-5(100)A |
| Frequency (F_n) | 50Hz |
| Active Accuracy Class (kWh) | B (kWh) |
| Type of circuit | 1p2w |
| Temperature Range | -25°C to +70°C |
| Software/ Firmware Version No's | WS60-1942, WS80-1942, WS100-1942: V101 CRC: 5A8E WS60-1943, WS80-1943, WS100-1943: V101 CRC: B6C9 WS60-19L3, WS80-19L3, WS100-19L3: V101 CRC: 6B8D |
| Identification Location | LCD & Nameplate |
| Bill of Materials No's | WS60-1942, WS80-1942, WS100-1942: D118089-BOM V1.0 WS60-1943, WS80-1943, WS100-1943: D118090-BOM V1.0 WS60-19L3, WS80-19L3, WS100-19L3: D118091 BOM V1.0 |
| IP Rating | IP51 |
| Insulation Protective Class | Class II |
| LED Pulse Constant | 1000imp/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 Name & Address | Side of the meter and associated documentation |

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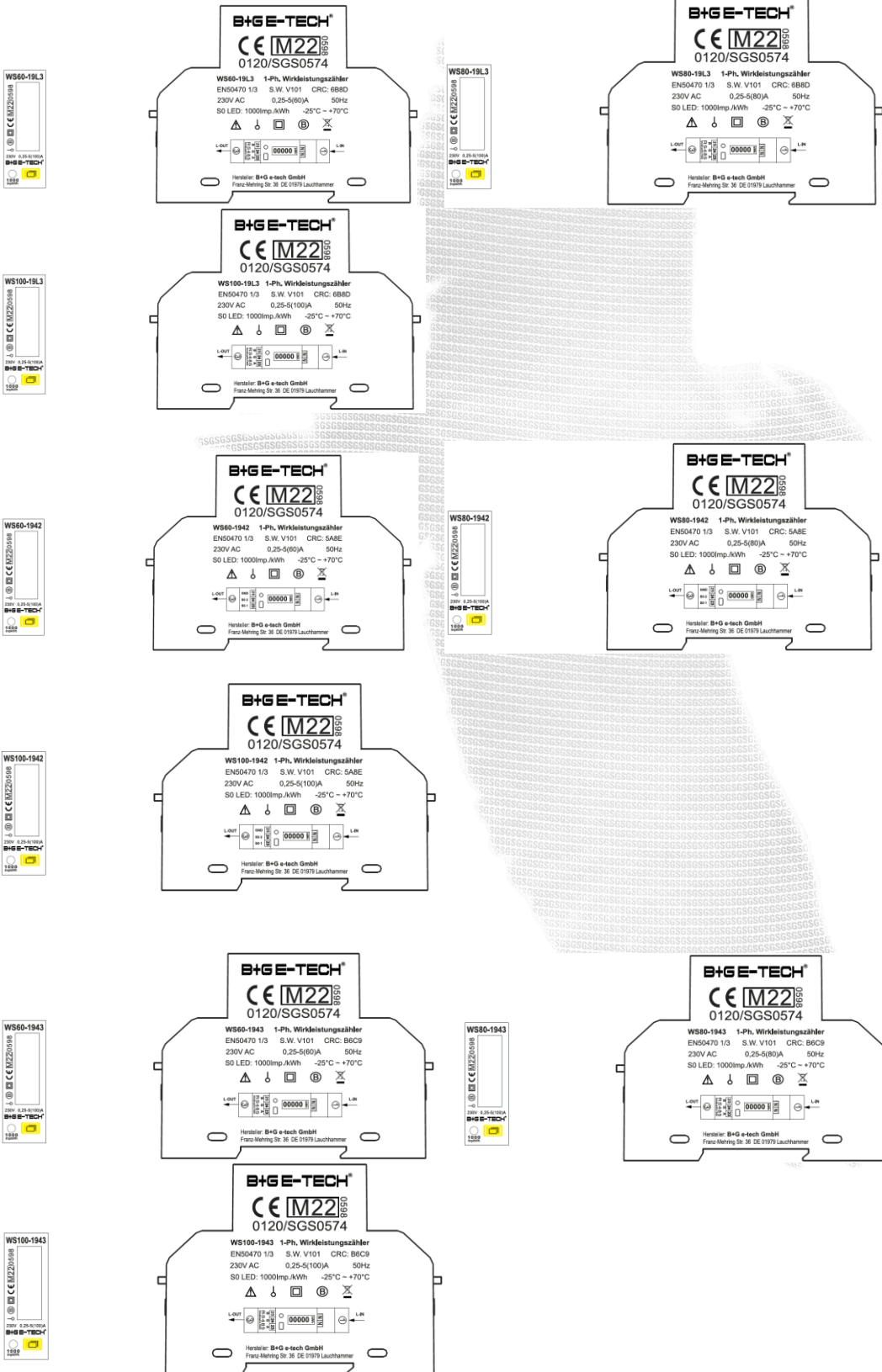
2. Photograph of Meter and Sealing Plan

Terminal Cover sealing points



Main cover sealing points

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 | 70°C |
| I _{min} | 1.0 | 0.94 | 0.73 | 0.45 | 0.15 | 0.34 | 0.45 | 0.72 |
| I _{tr} | 1.0 | 0.87 | 0.61 | 0.35 | 0.20 | 0.31 | 0.48 | 0.76 |
| 10I _{tr} | 1.0 | 0.89 | 0.64 | 0.37 | 0.24 | 0.23 | 0.47 | 0.72 |
| I _{max} | 1.0 | 1.38 | 1.20 | 1.01 | 0.71 | 0.72 | 0.70 | 0.76 |
| I _{tr} | 0.5ind | 0.89 | 0.75 | 0.48 | 0.36 | 0.32 | 0.48 | 0.69 |
| 10I _{tr} | 0.5ind | 0.71 | 0.65 | 0.37 | 0.31 | 0.30 | 0.51 | 0.75 |
| I _{max} | 0.5ind | 1.38 | 1.35 | 1.14 | 0.85 | 0.86 | 0.82 | 0.84 |
| I _{tr} | 0.8cap | 0.95 | 0.74 | 0.52 | 0.25 | 0.28 | 0.49 | 0.73 |
| 10I _{tr} | 0.8cap | 0.92 | 0.69 | 0.45 | 0.19 | 0.25 | 0.47 | 0.73 |
| I _{max} | 0.8cap | 1.68 | 1.52 | 1.36 | 1.08 | 1.06 | 1.01 | 1.01 |



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5. Annex of Variants

Product Variant Identification Details:

| Model No. | WS60-19L3, WS80-19L3, WS100-19L3 | WS60-1943, WS80-1943, WS100-1943 | WS60-1942, WS80-1942, WS100-1942 |
|-----------------|--|-------------------------------------|-------------------------------------|
| Voltage range | 230V | | |
| Current range | 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, 0.25-5(60)A, 0.25-5(80)A, 0.25-5(100)A | | |
| Frequency range | 50Hz | | |
| RS485 | ● | ● | |
| Battery | ● | | |
| Tariff | ● | | |
| SO | | | ● |

Modifications to the meter(s) described according to approval No. **0120/SGS0574** 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 | 12/09/2022 | Initial Issue |

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END OF CERTIFICATE