

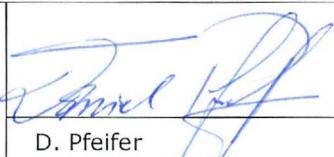
# EU - DECLARATION OF CONFORMITY

## EU - KONFORMITÄTSERKLÄRUNG

<b>Name and Address of Manufacturer</b> Name und Anschrift des Herstellers	Bachmann electronic GmbH Kreuzäckerweg 33 6800 Feldkirch Austria
<p><b>This declaration of conformity is made under the sole responsibility of the manufacturer.</b> Diese Konformitätserklärung erfolgt in der alleinigen Verantwortung des Herstellers.</p>	
<b>Product identification</b> Produktbezeichnung	<b>M1 System for GRID-Applications</b> M1 System für Netzanwendungen
<b>EMC-Directive:</b> EMV-Richtlinie:  <b>2014/30/EU</b>	<b>Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to electromagnetic compatibility, OJ L 96, 29.3.2014, p. 79–106</b> Richtlinie 2014/30/EU des Europäischen Parlaments und des Rates vom 26. Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit, ABI. L 96 vom 29.3.2014, S. 79–106
<b>RoHS-Directive:</b> RoHS-Richtlinie:  <b>2011/65/EU</b>	<b>Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment, OJ L 174, 1.7.2011, p. 88–110</b> Richtlinie 2011/65/EU des Europäischen Parlaments und des Rates vom 8. Juni 2011 zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten, ABI. L 174 vom 1.7.2011, S. 88–110
 <b>2015/863</b>	<b>Commission delegated directive (EU) 2015/863 of 31 March 2015 amending Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances</b> Delegierte Richtlinie (EU) 2015/863 der Kommission vom 31. März 2015 zur Änderung von Anhang II der Richtlinie 2011/65/EU des Europäischen Parlaments und des Rates hinsichtlich der Liste der Stoffe, die Beschränkungen unterliegen, ABI. L 137 vom 4.6.2015, S. 10–12
<b>Low Voltage-Directive:</b> Niederspannungs-Richtlinie:  <b>2014/35/EU</b>	<b>Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits, OJ L 96, 29.3.2014, p. 357–374</b> Richtlinie 2014/35/EU des Europäischen Parlaments und des Rates vom 26. Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die Bereitstellung elektrischer Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen auf dem Markt, ABI. L 96 vom 29.3.2014, S. 357–374

**The mentioned manufacturer hereby declares that these products are conform to the fundamental health- and safety requirements stipulated in the directives concerning compatibility issued by the EC- Council to ensure conformance to legal regulations in member countries of 2014/30/EU, 2014/35/EU and 2011/65/EU including the rule for Annex II (Directive 2015/863).**

Der genannte Hersteller erklärt hiermit, dass diese Produkte den wesentlichen Gesundheits- und Sicherheitsanforderungen entsprechen, die in der Richtlinie des Rates zur Angleichung der Rechtsvorschriften der Mitgliedsstaaten über die Verträglichkeit nach 2014/30/EU, 2014/35/EU und über die Beschränkung der Verwendung gefährlicher Stoffe in Elektro- und Elektronikgeräten nach 2011/65/EU, inkl. der Änderung zum Anhang II (Richtlinie 2015/863), festgelegt sind.

Feldkirch, Jan 08 <sup>th</sup> , 2024	 D. Pfeifer Director Technology	 B. Zangerl Chief Executive Officer
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The product met its published specifications at the time of extradition and has been produced in compliance with the Quality System certified according to EN ISO 9001:2015.

Das Produkt erfüllt zum Zeitpunkt der Auslieferung die veröffentlichten Spezifikationen und wurde unter Einhaltung des zertifizierten Qualitätssystems nach EN ISO 9001:2015 gefertigt.

## **Annex to Product identification, M1 System for GRID-Applications / Anhang zur Produktbezeichnung, M1 System für Netzanwendungen**

### **Product names:**

Produktnamen:

BS2xx/S, DOR206/xxx, GM260, GMP232/x, GMP232/x2, GSP274

x... Stand for any number, letter or can be optional.

Product names may be followed by CC.

## **Annex to EMC-Directive / Anhang zur EMV-Richtlinie**

### **This evidence includes the following standards:**

Dieser Nachweis beinhaltet folgende Normen:

Specifications: EN 61000-6-4:2007 + AMD1:2011; IEC 61000-6-4:2018

Electromagnetic compatibility (EMC) Part 6-4 Generic standards - Emission standard for industrial environments

Basic: EN 55016-2-3:2017 + A1:2019 + A2:2023

CISPR 16-2-3:2016 + AMD1:2019 + AMD2:2023

Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-3: Methods of measurement of disturbances and immunity - Radiated disturbance measurements

30MHz – 230MHz, Q-Peak limit 40dB $\mu$ V/m, 10m distance, SAC

230MHz – 1GHz, Q-Peak limit 47dB $\mu$ V/m, 10m distance, SAC

1GHz – 3GHz, Average limit 56dB $\mu$ V/m, 3m distance, FAR

Peak limit 76dB $\mu$ V/m, 3m distance, FAR

3GHz – 6GHz, Average limit 60dB $\mu$ V/m, 3m distance, FAR

Peak limit 80dB $\mu$ V/m, 3m distance, FAR

Basic: EN 55016-2-1:2014 + A1:2017; CISPR 16-2-1:2014 + AMD1:2017

Specification for radio disturbance and immunity measuring apparatus and methods – Part 2-1: Methods of measurement of disturbances and immunity – Conducted disturbance measurements

150kHz – 500kHz, Q-Peak limit 79dB $\mu$ V

Average limit 66dB $\mu$ V

500kHz – 30MHz, Q-Peak limit 73dB $\mu$ V

Average limit 60dB $\mu$ V

150kHz – 500kHz, Q-Peak limit 53dB $\mu$ A – 43dB $\mu$ A

Average limit 40dB $\mu$ A – 30dB $\mu$ A

500kHz – 30MHz, Q-Peak limit 43dB $\mu$ A

Average limit 30dB $\mu$ A

Specifications: EN 61000-6-2:2005; IEC 61000-6-2:2016

Electromagnetic compatibility (EMC) Part 6-2: Generic standards - Immunity for industrial environments

Basic: EN 61000-4-2:2009; IEC 61000-4-2:2008

Electromagnetic compatibility (EMC) Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test

±4kV, ±2kV contact discharge, ≥ 10 per polarity and test point

±8kV, ±4kV, ±2kV air discharge, ≥ 10 per polarity and test point

Basic: EN 61000-4-3:2020; IEC 61000-4-3:2020

Electromagnetic compatibility (EMC) Part 4-3: Testing and measurement techniques - Radiated, radio-frequency electromagnetic field immunity test

80MHz-1GHz: 10V/m, 1.4GHz - 6GHz: 3V/m

Modulation: AM, Modulation depth: 80 %, Modulation frequency: 1 kHz

Basic: EN 61000-4-4:2012; IEC 61000-4-4:2012

Electromagnetic compatibility (EMC) Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test

Signal / Control lines all interfaces >3 m: ±1kV, 5ns/50ns, 5 & 100kHz

AC/DC mains inputs and outputs: ±2kV, 5ns/50ns, 5 & 100kHz

Basic: EN 61000-4-5:2014 + A1:2017; IEC 61000-4-5:2014 + AMD1:2017

Electromagnetic compatibility (EMC) Part 4-5: Testing and measurement techniques - Surge immunity test

Signal/Control lines>30m: Line(s) to Ground: ±0,5kV, ±1kV

DC mains input: Line to Line: ±0,5kV; Line(s) to Ground: ±0,5kV, ±1kV

AC mains input: Line to Line: ±0,5kV, ±1kV; Line(s) to Ground: ±0,5kV, ±1kV, ±2kV

Angle (AC): 0°, 90°, 180°, 270°

Basic: EN 61000-4-6:2023; IEC 61000-4-6:2023

Electromagnetic compatibility (EMC) Part 4-6: Testing and measuring techniques - Immunity to conducted disturbances, induced by radio-frequency fields

Frequency range: 150kHz - 80MHz, 10V

Modulation: 80% AM, 1kHz

Basic: EN 61000-4-8:2010; IEC 61000-4-8:2009

Electromagnetic compatibility (EMC) Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test

Frequency: 50Hz / 60Hz, 30A/m, Field direction: X, Y, Z

Basic: EN 61000-4-9:2016; IEC 61000-4-9:2016

Electromagnetic compatibility (EMC) Part 4-9: Testing and measuring techniques - Impulse magnetic field immunity test

Frequency: 50Hz, 1000A/m, Field direction: X, Y, Z

Additional Specifications:

- Basic: EN 61000-3-2:2019 + A1:2021; IEC 61000-3-2:2018 + AMD1:2020  
Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current  $\leq$  16 A per phase)
- Even: 2<sup>nd</sup> max 1.08A, 4<sup>th</sup> max 0.43A, 6<sup>th</sup> max 0.30A,  
 $8^{\text{th}} \leq n \leq 40^{\text{th}}$  max  $0.23A * 8/n$
- Odd: 3<sup>rd</sup> max 2.30A, 5<sup>th</sup> max 1.14A, 7<sup>th</sup> max 0.77A,  
9<sup>th</sup> max 0.40A, 11<sup>th</sup> max 0.33A, 13<sup>th</sup> max 0.21A,  
 $15^{\text{th}} \leq n \leq 39^{\text{th}}$  max  $0.15A * 15/n$
- Basic: EN 61000-3-3:2013 + A1:2019 + A2:2021  
IEC 61000-3-3:2013 + AMD1:2017 + AMD2:2021  
Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current  $\leq$  16 A per phase and not subject to conditional connection
- Flicker impedance:  $Z_{\text{Ref}}$  (IEC EN 60725)  
Observation time for P<sub>ST</sub>: 10min
- Basic: EN 61000-4-12:2017; IEC 61000-4-12:2017  
Electromagnetic compatibility (EMC) Part 4-12: Testing and measuring techniques – Ring wave immunity test
- Signal/Control lines shielded: Line(s) to Ground:  $\pm 0,5kV$   
Signal/Control lines unshielded: Line to Line:  $\pm 0,5kV$ ; Line(s) to Ground:  $\pm 1kV$   
AC mains input: Line to Line:  $\pm 1kV$ ; Line(s) to Ground:  $\pm 2,5kV$   
Test pulse: 120Ω; Angle (AC): 0°, 90°, 180°, 270°
- Basic: EN 61000-4-29:2000, IEC 61000-4-29:2000  
Electromagnetic compatibility (EMC) - Part 4-29: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations on d.c. input power port immunity tests
- 0% residual voltage, d.c. supply interruption  $\geq$  10ms

## **Annex to RoHS-Directive / Anhang zur RoHS-Richtlinie**

### **The directive concerns the following substances:**

Es handelt sich bei der Richtlinie um folgende Substanzen:

- Blei (Pb)
- Quecksilber (Hg)
- Cadmium (Cd)
- Sechswertiges Chrom (Cr)
- Polybromierte Biphenyle (PBB)
- Polybromierte Diphenylether (PBDE)
- Di(2-ethylhexyl)phthalat (DEHP)
- Butylbenzylphthalat (BBP)
- Dibutylphthalat (DBP)
- Diisobutylphthalat (DIBP)

## **Annex to Low Voltage-Directive / Anhang zur Niederspannungs-Richtlinie**

### **This evidence includes the following standard:**

Dieser Nachweis beinhaltet folgende Norm:

Specifications: EN 61131-2:2007; IEC 61131-2:2017

Industrial-process measurement and control - Programmable controllers - Part 2:  
Equipment requirements and tests