



Marine & Offshore

Certificate number: 39656/B1 BV

File number: AP4602

Product code: 4501H

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

www.veristar.com

## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**Bachmann electronic GmbH**

Feldkirch - AUSTRIA

*for the type of product*

**PROGRAMMABLE LOGIC CONTROL UNITS**

Safety modules

SDI208, SDO204, SLC284, SCT202, SAI205

**Requirements:**

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 33

*This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 23 Jul 2025**

**For Bureau Veritas Marine & Offshore,**

At BV HAMBURG, on 15 Jan 2021,

Dirk Hoepfner



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarnb.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=zepfb0hast>

BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION:

The safety modules from controller hardware of **M1** series comprises the following components:

| Module type    | Model  | Description   |
|----------------|--------|---|
| Safety Modules | SDI208 | 2x8 digital input   |
|                | SDO204 | 2x4 digital output  |
|                | SLC284 | Controller with 2x8 digital inputs and 2x4 digital outputs  |
|                | SCT202 | Pulse counter module with 2 incremental encoder inputs, 2 counter inputs, 2 digital inputs, 2 digital outputs |
|                | SAI205 | 2x2 temperature inputs, 2x2 analogue inputs and 1x2 strain gauge inputs                                       |

Power supply: 24VDC nominal voltage

Degree of protection: IP20

Firmware version: M-Base V4.xx and V3.xx

### 2. DOCUMENTS AND DRAWINGS:

- Data sheets dated 03/2014; SCT202 Doku\_13228-000-24.doc, Rev.000
- Operating manuals: Benutzerhandbuch M-BASE V4.00, revision 02, dated 28 April 2016
- Software Quality Assurance documents: G130, dated 28.07.2016; G135, dated 28.07.2016; G142, dated 16.08.2016; G150, dated 07.10.2016; G161, dated 11.10.2016; G162, dated 11.10.2016; G170, dated 29.11.2016; G180, dated 07.10.2016; G194, dated 01.08.2016; RLG100-20, REV 000.1, dated 13.02.2013; RLG100-01, REV 017, dated 11.4.2016; RLG100-07, REV 005, dated 27.04.2015; RLG100-17, REV 008.1, dated 15.02.2011; RLG100-08, REV002, dated 09.02.2015; RLG100-18, REV 005.1, dated 09.03.2011
- For B1 version:
  - SAI205B dated 14.06.2018; Data sheet SAI205 dated 09/2019;

### 3. TEST REPORTS:

- Bachmann: 12482 dated 05 May 2011, 13 June 2011 and 19 Aug 2011; 12718.00.03/04 dated 29.10.2014; 12718.00.05/06/11 dated 28.11.2014; 12718.00.10 dated 24.11.2014; 12718.00.13/14/17/18 dated 30.10.2014; 12718.00.19 dated 30.10.2014; 12718.00.20 dated 30.10.2014; 12718.00.21 dated 22.01.2015 Rev.1; 12718.0023 dated 29.11.-30.11.14; 13228-000-3,4, dated 01.02.2016, Rev.000; 13228-000-5,6,11, dated 21.03.2016, Rev.000; 13228-000-9, dated 21.03.2016, Rev.000; 13228-000-10, Rev.000, dated 04.02.2016; 13228-002-13,14,15,16,17,18, Rev.003, dated 06.06.2016; 13228-000-19,20, Rev.000, dated 01.02.2016; 13228-000-21, Rev.000, dated 21.01.2016
- TÜV SÜD: 71366028 dated 2010-06-21; 14312-03974-1(Ed. 1) dated 28 July 2011 and 71386807 dated 2011-08-04; 713051191 dated 2014-11-25; 14312-52016-01 Ed.1 dated 13 Nov 2014; 713077298, Rev.1, dated 2016-02-16
- For B0 version:
  - TÜV SÜD: TR-14312-89434-01 Ed.01 dated 2020-07-02
- For B1 version:
  - Bachmann: 13870-000-3,4 Rev.0 dated 03.12.2019; 13870-00-5,6,11 Rev.02 dated 2020-03-31; 13870-00-9,10 Rev.0 dated 2019-12-12; 13870-000-13,14,15,16,17,18 Rev.01 dated 18.12.2019; 13870-000-19,20 Rev. 0 dated 13.12.2019; 13870-000-21 dated 17.12.2019
  - TÜV SÜD: 713177494 Rev.01 dated 31.01.2020

### 4. APPLICATION / LIMITATION:

- 4.1 - Bureau Veritas Rules for the Classification of Steel Ships
- 4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT** and **AUT-IMS**.
- 4.3 - Bureau Veritas Environmental Category, **EC Code: 33**
- 4.4 - The equipment fulfils the EMC/EMI requirements for installation on bridge or deck zones by using an interference filter on the power supply lines as specified in the M-Base V4.xx Operating manual.
- 4.5 - The product designation of some modules may be followed by "CC" and additional marked with "\*" at the front and the product designation of processor modules may be followed by "W". These features are not relevant for the certificate.
- 4.6 - Each application and configuration is to be submitted to the Society's examination prior to fitting on board.
- 4.7 - Depending on the application, submission of documents, Factory Acceptance and On-board Tests are to be performed in accordance with requirements for programmable electronic system categories II or III.
- 4.8 - Functional safety aspects and related certification, and the use of the equipment in a safety instrumented system are not covered by this type approval certificate.
- 4.9 - Only Hardware and Software successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer is covered by this certificate.
- 4.10 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev7.

**5. PRODUCTION SURVEY REQUIREMENTS:**

5.1 - The above products are to be supplied by **Bachmann electronic GmbH** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **Bachmann electronic GmbH** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products :

**Bachmann electronic GmbH**  
**Kreuzäckerweg 33**  
**6800 Feldkirch**  
**AUSTRIA**

**6. MARKING OF PRODUCT:**

- Maker's name or trademark
- Date of manufacture and/or serial number
- Equipment type or model identification under which it was type-tested.
- For each application title and version of each software element included in the installed software system shall be either marked on the equipment or displayed on a panel on command.

**7. OTHERS:**

7.1 - It is the responsibility of **Bachmann electronic GmbH - AUSTRIA** to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 39656/B0 BV issued on 23 Jul 2020 by the Society.

\*\*\* END OF CERTIFICATE \*\*\*