



Marine &amp; Offshore

Certificate number: 03482/10 BV

File number: AP 0428

Product code: 3840H

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

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to***Bachofen AG**

Uster - SWITZERLAND

*for the type of product***LEVEL SWITCH**

Trimod Besta Level Switches

**Requirements:**

Bureau Veritas Rules for the Classification of Steel Ships

*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 is a renewal of certificate N° 03482/H2 BV expiring on 20/04/2020***This certificate will expire on: 20 Apr 2025****For Bureau Veritas Marine & Offshore,**

At BV HAMBURG, on 16 Apr 2020,

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](http://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 SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION:

The **Trimod-Besta** series are level switches with electric, electronic or pneumatic switch elements.

#### **- Switch modules:**

- Consisting of: .A...-B...-C...-I...-IN...-IE9...-Z...-X...-P...-M... and combinations there of

#### **- Flange modules types:** 01, 011, 03, 04, 06 Trimod-Besta, standard and special flanges

- with flanges according to international standards:

- 21... to 64... DIN (a)
- 301... to 604... DIN (b)
- 131... to 164... ANSI (a)
- 1313... to 1614... ANSI (b)
- 230R... to 264R... BS (a)
- 2303... to 2604... BS (b)
- 320... to 354... JIS (a)
- 3303... to 3604 JIS (b)

(a) = SS, Hastelloy C, CS range

(b) = Plastic range

#### **- Float modules types:** 01... to 900... (SS, Monel, Hastelloy C, plastic, glass)

#### **Accessories:**

- counterflanges for Trimod-Besta standard and special flanges
- test actuators

**Float chambers:** Various float chamber types are available according to Trimod-Besta and international standards.

### 2. DOCUMENTS AND DRAWINGS:

- Catalogue LTXEN 2015.10, English

- Note: Documents filed in AP0428.

For H2 version:

- Catalogue LTKEN 2017.08; Modification report TR-BV-18.0001 dated 20.09.18

- Second source - micro switch dated 03.09.12

For I0 version:

- Catalogue LTKEN 1910, English

### 3. TEST REPORTS:

- Note: Test reports filed in AP0428

For H2 version:

- Mettler-Toledo: 20181115.A02.01 dated 23 Aug 2018

### 4. APPLICATION/LIMITATION:

4.1 - Bureau Veritas Rules and Regulations 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 - May not be used for flammable oil tanks in passenger ships where penetration below tank top would be necessary.

4.4 - Equipment is to be supplied with manual(s) for installation, use and maintenance.

### 5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above mentioned products are to be supplied by **Bachofen AG** 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 - **Bachofen AG** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

**Bachofen AG**  
**Ackerstrasse 42**  
**8610 Uster**  
**SWITZERLAND**

**6. MARKING OF PRODUCT:**

- Maker's name or trademark
- Equipment type or model identification
- Date of manufacture and/or serial number

**7. OTHERS:**

7.1 - It is in the responsibility of **Bachofen AG - SWITZERLAND** 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° 03482/H2 BV issued on 15 Oct 2018 by the Society.

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