



Marine & Offshore

Certificate number: 53627/A0 BV

File number: AP4873

Product code: 2643H

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

JUMO GmbH & Co. KG

Fulda - GERMANY

for the type of product

CONTROL AUXILIARIES

Controller and digital indicator units

diraTRON 104/116 and diraVIEW 104/116

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 31

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: 07 Nov 2024

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 07 Nov 2019,

Dirk Hoefner



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=jyaiphv9yu>

BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The **diraTRON 104/116** series (Type 702114/702111) are controller units and the **diraVIEW 104/116** series (Type 701514/701511) are digital indicator units, both series for panel mounting.

1.1 - Main characteristics:

Power supply: 104: 110 - 240V AC
116: 20 - 30V DC

Input: 1 analog input,
2 digital inputs (digital input 1, alternative to logic output)

Output: Depending on option:
Relay (N/O contact), Logic output 0/14 V, Analog output, PhotoMos relay,
Relay (N/O contact) with longer life

Interface: RS485, USB

Housing: 104: 96 x 96 mm
116: 48 x 48 mm

Degree of protection: IP 65 (front side), IP2x (back side)

Firmware: 383.01.xx

2. DOCUMENTS AND DRAWINGS:

- 70151000T10Z001K000 V4.00; 70151000T90Z001K000 V5.00
- 70151400A00Z000K000 Rev. 04; 70151100A00Z000K000 Rev. 03
- 70211000T10Z001K000 V4.00; 70211000T90Z001K000 V5.00
- 70211400A00Z000K000 Rev. 05; 70211100A00Z000K000 Rev. 04
- 70211200C54Z002K000 Rev. 01; 70211200C54Z004K000 Rev. 00; 70211200C54Z005K000 Rev. 01
- 70211200C54Z006K000 Rev. 01; 70211200C54Z007K000 Rev. 00; 70211100C54Z004K000 Rev. 02
- 70211100C54Z005K000 Rev. 01; 70211100C54Z006K000 Rev. 01; 70211100C54Z007K000 Rev. 00
- 70211100C54Z008K000 Rev. 00

3. TEST REPORTS:

Institute for International Product Safety:

- 2019-0076201 dated 2019-06-26; 2019-0064704 dated 2019-07-09; 2019-0083603 dated 2019-07-09
- 2019-0084603 dated 2019-07-09; 2019-0084203 dated 2019-07-09

VDE Testing and Certification Institute:

- 262121-TL7-4 dated 2019-05-21; 262121-TL7-2 dated 2019-05-21

Phoenix Testlab:

- U190692E2 dated 14.06.2019S190692E1 dated 07.05.2019

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 - Bureau Veritas Environmental Category, **EC Code: 31**

4.4 - The equipment fulfils the EMC requirements for installation in General Power Distribution Zone.

4.5 - Documents relating to each application are to be submitted to the Society's examination prior fitting on board.

4.6 - Factory Acceptance and On-board Tests of the application are to be performed in accordance with requirements for Category II Equipment.

4.7 - 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 **JUMO GmbH & Co. KG** 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 - **JUMO GmbH & Co. KG** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

JUMO GmbH & Co. KG
Moritz-Juchheim-Straße 1
36039 Fulda
GERMANY

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 the responsibility of **JUMO GmbH & Co. KG - GERMANY** 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.

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