

# TYPE APPROVAL CERTIFICATE

## This is to certify:

### That the Peripheral Equipment

with type designation(s)  
**Compact controller with program function dTRON 304**

Issued to

**JUMO GmbH & Co. KG**  
**Fulda Hessen, Germany**

is found to comply with  
**DNV GL rules for classification – Ships, offshore units, and high speed and light craft**

## Application :

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

### Location classes:

**Temperature B**  
**Humidity B**  
**Vibration A**  
**EMC B**  
**Enclosure A (rear), B (front, IP65 tested)**

Issued at **Hamburg** on **2017-07-12**

This Certificate is valid until **2022-07-24**.

DNV GL local station: **Magdeburg**

for **DNV GL**

Approval Engineer: **Klaus-Peter Schröder**

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**Joannis Papanuskas**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



## Product description

Instrument version: 703044/191-320-23/214, 062, 056

|        |                                                                                                                                                       |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 703044 | Basic type incl. 1 analog and 2 binary inputs, 2 relays and 2 logic outputs                                                                           |
| 191    | Basic type extensions<br>1 = Basic type 1<br>9 = Proprogramming to customer specification, logic outputs (2 are available as standard)<br>1 = 0 / 12V |
| 320    | Option slot<br>3 = 2 relays, make (SPST-NO)<br>2 = relay, changeover (SPDT)<br>0 = not used                                                           |
| 23     | Supply voltage = 110-240V AC                                                                                                                          |
| 214    | Extra codes = math and logic module                                                                                                                   |
| 062    | GL Approval                                                                                                                                           |
| 056    | DIN approval                                                                                                                                          |

## Application/Limitation

The Type Approval covers hardware listed under Product description.

When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL RU SHIP Pt.4 Ch.9 Sec. 1.

### Product certificate

If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After the certification the clause for application software control will be put into force.

### Clause for application software control

All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNV for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

## Type Approval documentation

### Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, Edition November 2016.

### Marking of product

The products to be marked with:

- manufacturer name
- serial number
- type 703044

### Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type



Job Id: **262.1-025658-1**  
Certificate No: **TAA00001B3**

approved documents and/or referenced system, software, component and material specifications

- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE