

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Redudancy Unit**with type designation(s)  
**CP-C.1-A-RU(-L), CP-C.1-A-RU-C**

Issued to

**ABB Stotz-Kontakt GmbH**  
**Heidelberg, 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:**

<b>Temperature</b>	<b>B</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>A</b>
<b>EMC</b>	<b>B</b>
<b>Enclosure</b>	<b>A</b>

Issued at **Hamburg** on **2019-07-09**for **DNV GL**This Certificate is valid until **2022-09-06**.DNV GL local station: **Augsburg**Approval Engineer: **Dariusz Lesniewski**

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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.



Job Id: **262.1-026152-3**  
Certificate No: **TAA00001C0**  
Revision No: **2**

## Product description

Redundancy unit CP-C.1-A-RU: standard version (cover colour RAL704)  
Redundancy unit CP-C.1-A-RU-L: standard version (cover colour RAL7035)  
Redundancy unit CP-C.1-A-RU-C: version with coated PWB

Rated input voltage: 24 V DC  
Rated input current per channel: 1-20 A  
Input voltage range per channel: 10-28.5 V DC  
Rated output voltage: 24 V DC  
Rated output current: 1-40 A  
Operating current range per channel: 1-30 A

## Place of manufacture

Dongguan Teamwise Electronic Co., Ltd.  
No.1, Ao Bei Road, Cross Xiang Xin West Road  
Yantian, Fenggang, Dongguan, Guangdong, China

## Approval conditions

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 rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

## Type Approval documentation

Test Reports: paconsult no. 17-8735 dated 2017-07-31 and no. 17-9425 dated 2017-08-25  
Test Reports: ABB Stotz-Kontakt of 2017-07-28 and 2017-08-01  
Product Data Sheet dated 2017-02-21  
Drawings: 1SVR360060F1100 Rev. A, 1SVR360060F1001 Rev. C  
Type approval assessment report issued at Guangzhou on 2019-05-07  
Type approval assessment report issued at Augsburg on 2019-02-25

## Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

## Marking of product

The products to be marked with:  
- manufacturer name  
- model name  
- serial number


## 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 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.



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END OF CERTIFICATE