DNV·GL

Certificate No: TAA0000293

TYPE APPROVAL CERTIFICATE

This is to certify: That the Electrical Measuring and Protection Relay

with type designation(s) CM-SRS.11S/P, CM-SRS.21S/P, CM-SRS.M1S/P, CM-SFS.21S/P, CM-SRS.12S/P, CM-SRS.22S/P, CM-SRS.M2S, CM-SFS.22S/P

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:

Temperature	В
Humidity	В
Vibration	В
EMC	Α
Enclosure	Α

Issued at Hamburg on 2019-03-18

This Certificate is valid until **2024-03-17**. DNV GL local station: Augsburg

Approval Engineer: Dariusz Lesniewski

Joannis Papanuskas Head of Section

for DNV GL

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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.

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Product description

Current Monitoring Relay, Series CM

Model variants:

..SRS..: current monitoring relay with one adjustable threshold value

...SFS.. : current monitoring relay with two adjustable threshold values

- ..1*.. : one change-over contact /..2*.. : two change-over contacts
- ..*1.. : ranges: 3..30mA, 10..100mA, 0.1..1A /..*2.. : ranges: 0.3..1.5A, 1..5A, 3..15A
- ..M.. : multi-function device with two change-over contacts
- ...S : screw type terminals / ...P : push-in terminals

Functions (model dependent):

- Over- and/or under current monitoring
- Latching function
- Fixed or adjustable hysteresis
- Adjustable tripping delay
- On- or off delay
- Adjustable start up delay

• Open- or closed circuit principle Supply voltage: 24-240V AC/DC, 110-130V AC or 220-240V AC (model dependent) Relay Rating: AC 15: 3A / 230Vac / DC 13: 2A / 24Vdc Mounting: DIN rail (IEC/EN 60715) Degree of protection: IP50 housing, IP20 terminals Firmware Version(s): A0, A1 (model dependent)

Place of manufacture

ABB STOTZ-KONTAKT GmbH Hauptstraße 14-16 78132 Hornberg, GERMANY

Type Approval documentation

Test Reports: EMV Rhein-Neckar No. 3808-305; IEC 60947-5-1 No. 11CA57826 ABB STOTZ-KONTAKT Test Reports: 06/2014 (GL File Pr. 13-092749) Data sheets; Circuit diagram; Part List, Software Development Documentation Doc.: SAP Firmware Reference dated, 31.01.2014 Test protocol: HSP- und Funktionstest CM-SRS.Mx_05_6x0.xls, 2018.06.11 Type approval assessment report issued at Augsburg at 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
- power supply ratings

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

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- 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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE