DNV·GL

Certificate No:
TAA0000292

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electrical Measuring and Protection Relay

with type designation(s)
CM-ESS.1S/P, CM-ESS.2S/P, CM-ESS.MS/P, CM-EFS.2S/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	**B**
Humidity	**B**
Vibration	**B**
EMC	**A**
Enclosure	**A**

Issued at **Hamburg** on **2019-03-18**
This Certificate is valid until **2024-03-17**.
DNV GL local station: **Augsburg**

Approval Engineer: **Dariusz Lesniewski**

for **DNV GL**

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.

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Job Id: **262.1-030764-1**
Certificate No: **TAA0000292**

Product description

Voltage Monitoring Relays, Series CM
Model variants:
..ESS.. : voltage monitoring relay with one adjustable threshold value
..EFS.. : voltage monitoring relay with two adjustable threshold values
..1.. : one change-over contact / ..2.. : two change-over contacts
..M.. : multi-function device with two change-over contacts
..S : screw type terminals / ..P : push-in terminals
Functions (model dependent):
- Over- and/or under voltage monitoring
- Latching function
- Fixed or adjustable hysteresis
- Adjustable tripping delay
- On- or off delay
- Open- or closed circuit principle

Supply voltage: 24-240V AC/DC, 110-130V AC or 220-240V AC (model dependent)
Measuring ranges: 3-30V, 6-60V, 30-300V, 60- 600V
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

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

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

- 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