

TYPE APPROVAL CERTIFICATE

Certificate No: **TAA00000XR** Revision No: **2**

This is to certify:

That the Electronic Timer Relays, Series CT-S

with type designation(s)

CT-MFS.xyz, CT-MVS.xyz, CT-ERS.xyz, CT-APS.xyz, CT-MBS.xyz, CT-AHS.xyz, CT-WBS.xyz, CT-SDS.xyz, CT-MXS.xyz, CT-WDS.12z

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.

Location classes:

Temperature B Humidity B Vibration A EMC B

Enclosure A (Terminals) / B (unit)

Issued at Hamburg on 2021-12-03

for **DNV**

This Certificate is valid until 2026-12-02.

DNV local station: Augsburg

Approval Engineer: Dariusz Lesniewski

Joannis Papanuskas Head of Section

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



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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.



Job Id: **262.1-024038-3**Certificate No: **TAA00000XR**

Revision No: 2

Product description

Electronic Timer Relays of type:

CT-MFS.xyz, CT-MVS.xyz, CT-ERS.xyz, CT-APS.xyz, CT-MBS.xyz CT-AHS.xyz, CT-WBS.xyz, CT-SDS.xyz, CT-MXS.xyz, CT-WDS.12z

Dimensions: 22.5 mm width

Supply voltage (y): y=1 24...220Vdc, 24...240Vac

y=2 24... 48Vdc, 24...240Vac

y=3 380...440Vac

Mains frequency: 50Hz ...60Hz

Time Range: 0.05s...300hrs
Output (x) x=1 1 SPDT contact

x=2 2 SPDT contacts (in one or two separate relay/-s)

Kind of terminal (z): z=S screw

z=P push-in-spring-force

Function (CT-..S.xyz):

MF, MV, MB, WB, MX Multifunctional Timer

ER Single-functional ON delay timer
AP, AH, WD Single-functional OFF delay timer
SD Single-functional Star/Delta timer

Degree of protection: IP 20 (Terminals)

IP 50 (Unit)

Place of manufacture

ABB STOTZ-KONTAKT GmbH Hauptsraße 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, 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 rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Type Approval documentation

Test Reports: EMV Rhein-Neckar No. 3893-368 and 3893-366e

ABB STOTZ-Kontakt Test Reports 2006, 2011 and 2016

VDE Test Report 606800-9020-0001/84202

Data sheets; Circuit diagrams; Part lists; Catalogue (04/06)

Software development documentation

(UL) DEMKO CB Test Certificate No. DK-5903 and Test Report No. 11CA14935 (IEC 60947-5-1)

Extension 2019:

Changes Notification Document: 'Tabelle-Änderungen CT-xxS.xls', dated 17.06.2019

Test Report: paconsult no. 19-12068, dated 19.09.2019

Test Report: EMV Rhein-Neckar no. 3808-322, dated 10.10.2019

ABB Test Records:

PN_CT-xxS-update_19-146_DR1_DNVGL-CG-0339_Performance Test_A0.docx

PN_CT-xxS-update_19-147_DR1_DNVGL-CG-0339_Electrical power supply failure test_A0.docx

PN_CT-xxS-update_19-148_DR1_DNVGL-CG-0339_Power supply variation tests_A0.docx

PN_CT-xxS-update_19-203_DR1_DNVGL-CG-0339_High voltage test_A0.docx

Schematics as the doc-package 'Schematics Updated CT-xxS 2019.zip

Extension 2021:

Test Report: EMV Rhein-Neckar No. 3808-322a, dated 14.09.2021

Test Report (PN): ABB PN CT-WDS 12 21 294 Serie DNV- Renewal-whitness-Test-A0, dated 26.11.2021

Drawing No. 1SVR730050S3100 Rev. A

ABB Catalogue Extract: 'Time Relays' CT-S range

Type approval assessment report issued at Augsburg on 2021-11-26

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021.

Marking of product

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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

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