

# TYPE APPROVAL CERTIFICATE

## This is to certify:

### That the Time Relays

with type designation(s)

**CT-...; ERE; AHE; VWE; AWE; EBE; YDE; SDE; ARE; IRE; MKE; AKE; EKE; MFE**

Issued to

**ABB Stotz-Kontakt GmbH**  
**HEIDELBERG, Germany**

is found to comply with

**DNV GL rules for classification – Ships**

## 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>B</b>
<b>EMC</b>	<b>A</b>
<b>Enclosure</b>	<b>A / Unit: IP 50, Terminals: IP 20</b>

This Certificate is valid until **2021-09-19**.

Issued at **Hamburg** on **2016-09-20**

DNV GL local station: **Augsburg**

Approval Engineer: **Dariusz Lesniewski**

for **DNV GL**

.....  
**Duy Nam Le**  
**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

Supply Voltage: 24 V ... 415 V AC/DC  
Mains Frequency: 50 Hz ... 60 Hz  
Time Range: 0.05 s ... 30 min

CT-ERE, ERE, CT-EKE, EKE	Delay on operate
CT-AHE, AHE, CT-ARE, ARE	Delay on release
CT-AKE, AKE	Delay on release
CT-VWE, VWE	Single pulse on operate
CT-AWE, AWE	Single pulse on release
CT-EBE, EBE	Flasher, starting with OFF
CT-YDE, YDE	Star - delta timer
CT-SDE, SDE	Star - delta timer with delay
CT-IRE, IRE	Switching relays
CT-MKE, MKE	Multi-function
CT-MFE, MFE	Multi-function timer

## Place(s) of manufacture

ABB STOTZ-KONTAKT GmbH  
Hauptstraße 14  
78132 Hornberg, Germany

ATM Electronics OOD  
Trayan Tanev Str. 89  
District Suhodol  
1362 Sofia, Bulgaria

ATM Electronics OOD  
Varna Str. 1  
2850 Petrich, Bulgaria

## Application/Limitation

General application

## Type Approval documentation

Test reports: No. EMV SCHIEB04 of 07-08-1992, No. MFE\_HFFE + ... \_HFFI of 07-03-2001  
MFE\_HFLE + ... \_HFLI dated 08-03-2001; LR 12684-43 dated 10-11-1992  
ARE\_ dated 01-09-93 to 16-02-95; MKE\_ dated 01-09-93 to 16-02-95; AKE\_ dated 16-02-95 to 21-12-95  
ABB Prüf-Notz (PN) 'DNVGL-CG-0339 Kapitel 7: Trockenen Wärme - B' dated 24-06-2016

Type Approval Assessment Report issued at Augsburg on 2016-06-14  
Type Approval Assessment Report issued at Sofia (Bulgaria) on 2016-09-08

## Tests carried out

Applicable tests according to Class Guideline DNVGL CG-0339, November 2015

## Periodical assessment

The scope of the retention/renewal survey 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 survey 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: **262.1-021833-1**  
Certificate No: **TAA00000F2**

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

Retention survey is to be performed at least once in the period of validity and at renewal of the certificate.

END OF CERTIFICATE