

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Overcurrent- and Short-Circuit Relay

with type designation(s)
TF 65, TF 96 & TF 140DU

Issued to

ABB Stotz-Kontakt GmbH
Heidelberg, Baden-Württemberg, Germany

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Electronic overload relay for installations inside switchboard/enclosures onboard ships and offshore units.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Issued at **Hamburg** on **2019-12-06**

This Certificate is valid until **2024-12-05**.

DNV GL local station: **Augsburg**

for **DNV GL**

Approval Engineer: **Harald Amberger**

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Arne Schaarmann
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: **262.1-017917-2**
Certificate No: **TAE00003UF**

Name and place of manufacturer

ABB Xinhui low Voltage Switchgear Co. Ltd Xinhui District, JianMen, Guangdong China (TF65 & TF96)	ABB Bulgaria EOOD – Petrich branch 1, Varna str. 2850 Petrich (TF140DU)
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Product description

Type: Thermal Overload Relay TF65, TF96 and TF140U

Type designation	Current range (A)	Order code.	Trip class
TF65-28	22 - 28 A	1SAZ811201R1001	10
TF65-33	25 - 33 A	1SAZ811201R1002	10
TF65-40	30 - 40 A	1SAZ811201R1003	10
TF65-47	36 - 47 A	1SAZ811201R1004	10
TF65-53	44 - 53 A	1SAZ811201R1005	10
TF65-60	50 - 60 A	1SAZ811201R1006	10
TF65-67	57 - 67 A	1SAZ811201R1007	10
TF96-51	40 - 51 A	1SAZ911201R1001	10
TF96-60	48 - 60 A	1SAZ911201R1002	10
TF96-68	57 - 68 A	1SAZ911201R1003	10
TF96-78	65 - 78 A	1SAZ911201R1004	10
TF96-87	75 - 87 A	1SAZ911201R1005	10
TF96-96	84 - 96 A	1SAZ911201R1006	10
TF140DU-90	66 - 90 A	1SAZ431201R1001	10A
TF140DU-90-V1000*	66 - 90 A	1SAZ431301R1001	10A
TF140DU-110	80 - 110 A	1SAZ431201R1002	10A
TF140DU-110-V1000*	80 - 110 A	1SAZ431301R1002	10A
TF140DU-135	100 - 135 A	1SAZ431201R1003	10A
TF140DU-135-V1000*	100 - 135 A	1SAZ431301R1003	10A
TF140DU-142	110 - 142 A	1SAZ431201R1004	10A
TF140DU-142-V1000*	110 - 142 A	1SAZ431301R1004	10A

*Modules characterized with V1000 are identical to the normal modules without V1000. The V1000 modules indicate ATEX certified.

Max. insulation voltage U_i : 690 V
Max impulse voltage U_{imp} : 8 kV
Max. operating voltage U_e : 690V AC

Application/Limitation

Temperature class: D (-25 to 70 °C)
Humidity class: A (up to 96% humidity)
Vibration class: A (5-100 Hz)

Type Approval documentation

Tests carried out

Type tested according to IEC 60947-4-1 & IEC 60947-5-1

Marking of product

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ABB STOTZ-KONTAKT - Type designation.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and 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