DNV·GL

Certificate No:
TAE000018N

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Circuit Breaker

with type designation(s)
MS 325, MS 326, MO 325

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.

Rated Voltage (V)	**Up to 690 AC / 440 V DC**
Rated Current (A)	**0.1 - 25**
Frequency (Hz)	**40 - 60**

This Certificate is valid until **2022-03-19**.

Issued at **Hamburg** on **2017-03-20**
DNV GL local station: **Augsburg** for **DNV GL**

Approval Engineer: **Thomas Hartmann**

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.

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Job Id:
Certificate No: **TAE000018N**

Product description

Motor protection circuit breaker type: MS 325, MS 326*, MO 325**

Rated Voltage Ue: 690 V AC / 440 V DC
Rated frequency: 40 – 60 Hz
Utilisation category: AC-3

Tripping values, rated switching capacity:

Thermal tripping operating current (A)	**Magnetic tripping operating current (A)**	**Rated short circuit capacity Ics at U_e=380/400V (kA)**	**Rated short circuit capacity I_{cs} at U_e=440V (kA)**	**Rated short circuit capacity I_{cs} at U_e=500V (kA)**	**Rated short circuit capacity I_{cs} at U_e=690V*** (kA)**
0,1 - 0,16	1,6	100	100	100	100
0,16 - 0,25	2,5	100	100	100	100
0,25 - 0,4	4	100	100	100	100
0,4 - 0,63	6,3	100	100	100	100
0,63 - 1	12	100	100	100	100
1 - 1,6	19	100	100	100	100
1,6 - 2,5	30	100	100	100	40
2,5 - 4	48	100	100	60	10
4 - 6,3	75	100	70	40	7
6,3 - 9	108	100	50	30	5
9 - 12,5	150	75	45	27	4.5
12,5 - 16	192	60	40	25	4
16 - 20	240	55	35	22	3.5
20 - 25	300	50	30	20	2

* Optional without phase failure protection
** Optional without thermal overload protection
*** See Application / limitation

Rated insulation voltage U_i: 690 V
Rated impulse voltage U_{imp}: 6 kV
Rated voltage auxiliary contacts U_e: 400 V AC

Application/Limitation

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

The product(s) can be used in applications with directly earthed systems with rated voltage up to 400/690V. For isolated systems the rated system voltage is limited to 600V (U_{imp}=6kV).

Type Approval documentation

Tests carried out

Type tests according to IEC 60947-2 Sequence I and II, including Annex H, and IEC 60947-4-1 Sequence I, II, III and V. Power supply variations, Vibration test, Humidity, Dry heat test, Low temperature test, High voltage test, Shock test and Insulation resistance test.

Marking of product

ABB Stotz – Type designation – Voltage – Current – Breaking capacity

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