



TYPE APPROVAL CERTIFICATE

Certificate No:
TAE00002D1
Revision No:
1

This is to certify:

That the Circuit Breaker

with type designation(s)
MS 116

Issued to

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

is found to comply with

Application :

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

Issued at **Hamburg** on **2023-06-02**

for **DNV**

This Certificate is valid until **2028-03-14**.

DNV local unit: **Augsburg**

Approval Engineer: **Harald Amberger**

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Marta Alonso Pontes
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.

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.



Form code: TA 251

Revision: 2022-12

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Name and place of manufacturer

ABB Stotz-Kontakt GmbH
HEIDELBERG, Germany

ABB Xinhui Low Voltage Switchgear Company Ltd
529100, JiangMen, GuangDong, China

Product description

Motor protection circuit breaker type: MS 116

Rated Voltage U_e: 600 (690)* V AC / 440 V DC

U_{imp} = 6 kV

Rated frequency: 40 - 60 Hz

Utilisation category: AC3

Tripping values, rated switching capacity:

Thermal tripping, setting ranges (A)	Instantaneous tripping range (A)	Rated short circuit capacity I _{cs} 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	1,25 - 1,87	50	50	30	30
0,16 - 0,25	1,95 - 2,93	50	50	30	30
0,25 - 0,4	3,12 - 4,68	50	50	30	30
0,4 - 0,63	4,91 - 7,37	50	50	30	30
0,63 - 1	9,20 - 13,80	50	50	30	30
1 - 1,6	14,72 - 22,08	50	50	30	30
1,6 - 2,5	23,00 - 34,50	50	10 / 25**	10 / 25**	5 / 25**
2,5 - 4	40,00 - 60,00	50	6 / 25**	6 / 25**	2 / 25**
4 - 6,3	63,00 - 94,50	50	6 / 63**	6 / 63**	2 / 40**
6,3 - 10	120,0 - 180,0	50	6 / 63**	6 / 63**	2 / 50**
8 - 12	144,0 - 126,0	25	6 / 63**	6 / 63**	2 / 50**
10 - 16	192,0 - 288,0	16 / 80**	4 / 63**	4 / 63**	2 / 63**
16 - 20	240,0 - 360,0	10	3	3	2
20 - 25	300,0 - 450,0	10	3	3	2
25 - 32	384,0 - 576,0	10	3	3	2

* See use of 690 V under Application

** In combination with upstream fuse.

Rated voltage auxiliary contacts U_e: 400 V AC

Application/Limitation

With U_{imp} = 6 kV the max. rated voltage is 600 V when used in a IT-grid (ship's mains). It can be used in applications with directly earthed systems with rated voltage of 400/690 V.

Suitable for use in an IT-grid (ship's mains) system with a capacity of 1.2 times the maximum trip current up to including 600 V AC.

Type Approval documentation

Technical info:

ABB datasheet "Manual motor starter MS116", doc no. 2CDC131025D0201
ABB-Technical Catalogue "Manual Motor Starter MS 116."

Test reports / Test Certificates:

CQC CB Test Certificate no. CN55007 dated 2021-10-14, CN47528-A2/M1 dated 2020-11-25

Paconsult Nr. 90/02 dated 2002-11-11. KEMA reports 2024892.50 issued 2002-12-01, 2024892.51 issued 2002-11-15 & 2024892.52 issued 2003-06-18. ABB Stotz report no. 4483/08 issued 2008-07-02.

Tests carried out

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

Marking of product

ABB Stotz – Type designation – Voltage – Current – Breaking capacity – Manufacturing Place.

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