

TYPE APPROVAL CERTIFICATE

Certificate no.:
TAE000018D
Revision No:
2

This is to certify:
that the Motor Starter

with type designation(s)
MS 165 / MO 165

issued to
ABB AG – STOTZ-KONTAKT
Heidelberg, Germany

is found to comply with
DNV 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.

Rated voltage (V) 400 / 690 AC
Rated current (A) 16 - 65
Frequency (Hz) 50 / 60

Issued at **Hamburg** on **2022-05-20**

This Certificate is valid until **2027-05-19**.
DNV local unit: **Augsburg**

Approval Engineer: **Ramy Abdelal**



for **DNV**

This document has been digitally signed and will
therefore not have handwritten signature

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 USD 300 000.

Product description

Manual motor starter with short-circuit protection (MO 165)
 Manual motor starter with overload and short-circuit protection (MS 165)

Rated Voltage Ue: 400V AC, 690V AC
 Rated frequency: 50 / 60 Hz
 Rated impulse withstand voltage Uimp: 8 kV
 Rated insulation voltage Ui: 1000 V
 Trip class (MS 165): 10
 Utilisation category: AC-3
 Degree of protection: IP20 (housing)
 IP10 (main circuit terminals)

Rated short-circuit characteristic:

Type	Rated operational current In (A)	Rated short circuit instantaneous short-circuit current setting Ii (A)	Rated service short circuit breaking capacity at Ue=400V Ics (kA)	Rated ultimate short-circuit breaking capacity at Ue=400V Icu (kA)	Rated service short circuit breaking capacity at Ue=690V Ics (kA)	Rated ultimate short-circuit breaking capacity at Ue=690V Icu (kA)
MO165-16	16	240	100	100	10	10
MO165-20	20	300	100	100	10	10
MO165-25	25	375	100	100	10	10
MO165-32	32	480	100	100	10	10
MO165-42	42	630	50	50	10	10
MO165-54	54	810	30	50	6	8
MO165-65	65	975	30	50	6	8
MO165-73	73	1022	30	30	6	8
MO165-80	80	1120	30	30	6	8
MS165-16	10...16	240	100	100	10	10
MS165-20	14...20	300	100	100	10	10
MS165-25	18...25	375	100	100	10	10
MS165-32	23...32	480	100	100	10	10
MS165-42	30...42	630	50	50	10	10
MS165-54	40...54	810	30	50	6	8
MS165-65	52...65	975	30	50	6	8
MS165-73	62...73	1022	30	30	6	8
MS165-80	70...80	1120	30	30	6	8

Auxiliary Contacts:

front mounted auxiliary contact: HKF1-11
 right mounted auxiliary contact: HK1-11, HK1-20, HK1-02, HK1-20L
 right mounted signal contact: SK1-11, SK1-20, SK1-02, CK1-11, CK1-20, CK1-02
 Shunt release: AA1
 Undervoltage release: UA1 (only modules manufactured after week 28 of the year 2003, see indication on the module in the format YYYY)

Place of manufacture

ABB Xinhui Low Voltage Switchgear Co. Ltd.
 Jinguzhou Industrial Development Zone
 Xinhui District, JiangMen,
 Guangdong 529100 China

Application/Limitation

Location classes :

Temperature **B**
 Humidity **B**
 Vibration **A**
 EMC **B**
 Enclosure **A** / housing: IP 20, terminals: IP 10

Type Approval documentation

Test Report No. 15-7022 dated 09th Sept. 2015
Test Report No. LAB201312-02-TR-10 dated 26th Sept. Dec. 2013
Test Protocol No. TT2015054 dated 21st July 2015
Test protocol No. D2015030 dated 30th Oct. 2015
CB Test Report 00901-CB2021CQC-096131-2 dated 2021-03-10
CB Test Report 00901-CB2021CQC-096131-1 dated 2021-03-10
CB Test Certificate No. CN53128, dated 31st March 2021
Ex Type Approval Certificate BVS 15 ATEX F 004
Data Sheet 2CDC131083D0201(2015-03-27)
Data Sheet 2CDC131084D0201(2015-03-27)
Installation Instruction: 2CDC131081M6801 (I) / 06.2021
Catalogue: 1SBC001008C0115 rev. G 10/2021
Drawings: 1SA M40 0402 A.2, 1SA M40 0401 A.9
Type Approval Assessment Report issued at Augsburg on 2022-05-17

Tests carried out

Type tests according to DNV-CP-0396, IEC 60947-2 and IEC 60947-4-1

Marking of product

Type designation – Serial Number - Manufacturer Name

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