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## **Type Approval Certificate**

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

| Manufacturer        | ATB Nordenham GmbH  |
|---------------------|---|
| Address             | Helgolaender Damm 75, Nordenham, 26954, Germany   |
| Place of Production | ATB Nordenham GmbH  |
|                     | Helgolaender Damm 75, Nordenham, 26954, Germany   |
| Туре                | Electric Motors   |
| Description         | Induction motors<br>BD , dBD<br>CD , dCD  |
| Trade Name          | BD, dBD, CD, dCD  |
| Application         | Marine and industrial applications (not environmental tested)   |
| Specified Standard  | EN 60079-0: 2018 (CD63/71, CD 80-160, CD 225-315)<br>EN 60079-0: 2012(BD/CD/CD2)<br>EN 60079-0: 2006 (dBD)<br>EN 60079-1: 2014 / -7: 2015 / -31: 2014<br>EN 60034-1: 2011 / -5: 2007 / -6: 1993 / -7: 2001 / -8: 2014 /-9: 2007<br>EN60034-12: 2017 / -14: 2018 |

Jochen Koerner

Senior Specialist to Lloyd's Register EMEA A member of the Lloyd's Register Group

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Ratings

| Size: 63 up to 500  |  |
|---|--|
| Rated voltage: 200 V up to 690 V                                  |  |
| Rated power: S1, 0.1 kW up to 750 kW                              |  |
| Speed: 50 1/min up to 5220 1/min                                  |  |
| Rated frequency: 50 Hz, 60 Hz, 5 Hz up to 87 Hz (conv. operation) |  |
| Ambient temperature: 45 °C  |  |
| Duty type: S1 up to S10, acc. to EN60034-1                        |  |
| Insulation class: F   |  |
| Type of enclosure: IP56, IP6X                                     |  |
| No. of poles: 2, 4, 6, 8, 10, 12, 4/2, 6/4, 8/4                   |  |
|   |  |

| Ex-marking BD      | II 2G Ex db IIB T3T6 Gb resp. Ex db eb IIBT3T6 Gb  |
|--------------------|--|
|                    | II 2D Ex tb IIIC T200°C -T85°C Db                  |
| Ex-marking dBD 500 | II 2G Ex d IIB T3T6 resp. Ex de IIBT3T6            |
|                    | II 2D Ex tD A21 IP6x T200°C – T85°C                |
| Ex-marking CD      | II 2G Ex db IIC T3T6 Gb resp. Ex db eb II CT3T6 Gb |
|                    | II 2D Ex tb IIIC T200°C – T85°C Db                 |

Other ConditionsSpecific Conditions of Use as stated in applicable Ex-certificates and the<br/>conditions of the LR Ship Rules & Regulations of Classification of Ships Part 6,<br/>Chapter 2 shall be observed when installed in hazardous areas. The Ex-<br/>certification does not form part of this certificate.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document No. HTS/ETS 39984-20/MK/JK and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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