



# TYPE APPROVAL CERTIFICATE

Certificate no.:  
**TAE00003KX**  
Revision No:  
**1**

**This is to certify:**  
**that the Electric Motor**

with type designation(s)  
**ACA..., FCA..., FCPA...**

issued to  
**AC-Motoren GmbH**  
**Eppertshausen, 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.**

Issued at **Hamburg** on **2024-07-30**

for **DNV**

This Certificate is valid until **2029-07-01**.

DNV local unit: **Augsburg**

Approval Engineer: **Harald Amberger**

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.



## Product description

Induction motors, Aluminium frame motors

Types: ACA 56 up to 160 (IM B3)  
FCA 56 up to 160 (IM B5, B14)  
FCPA 56 up to 160 (IM B3/B5, IM B3/B14)

Sizes: A, B, S, SA, SB, M, MA, MB MC, MD, L, LA, LB, LC, LD  
Rated voltage: 220 V up to 830 V  
Rated power: S1 0,06 kW up to 36 kW  
Duty Type: S1, S2-10min, S2-30min, S3, S6-20%, S6-40%, S6-60%  
Synchronous speed: 600 1/min up to 3600 1/min  
Rated frequency: 50 Hz, 60 Hz  
Ambient temperature: 45° C  
Thermal class: 155 (F), temperature rise 130 (B)  
Degree of protection: IP 55, IP 56  
No. Of poles: 2, 4, 6, 8, 10  
Spec. Model: For marine applications / environments

## Application/Limitation

Place of manufacturing: Taizhou City, PR China

This certificate is issued on the basis of Type approval scheme DNV-CP-0338, Edition September 2021

## Type Approval documentation

Drawings: 1JL.050.10683 / JL1-160M-4-11kW dated 2013-12-04

Technical data: 2014-05-07 List of motors, techn. Data, dated 2014-05-07

Test reports: SX201405004 ACA 160M-4-11KW IE2 dated 2014.05.07

Catalogue: AC - Motoren GmbH AC 2014-7 dated 15.10.2014As per tech.-docs. in NPS 262.1-029597-1

## Tests carried out

IEC 60034-1, 2010-02

DNV-CP-0393 Rotating electrical machines, Edition January 2022

## Marking of product

Acc. IEC 60034-1 subclause 10.2

## 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



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## Product description

Induction motors, Cast iron motors

Types: ACM 71 up to 400 (IM B3)  
FCM 71 up to 400 (IM B5, B14)  
FCMP 71 up to 400 (IM B3/B5, B3/B14)

Sizes: A, B, S, SA, SB, M, MA, MB MC, MD, L, LA, LB, LC, LD  
Rated voltage: 220 V up to 830 V  
Rated power: S1 0,25 kW up to 756 kW  
Duty Type: S1, S2-10min, S2-30min, S3, S6-20%, S6-40%, S6-60%  
Synchronous speed: 600 1/min up to 3600 1/min  
Rated frequency: 50 Hz, 60 Hz  
Ambient temperature: 45° C  
Thermal class: 155 (F), temperature rise 130 (B)  
Degree of protection: IP 55, IP 56  
No. Of poles: 2, 4, 6, 8, 10  
Spec. Model: For marine applications / environments

## Application/Limitation

Place of manufacturing: Taizhou City, PR China

This certificate is issued based on Type approval scheme DNV-CP-0338, Edition September 2021

## Type Approval documentation

Drawings: 1JL.050.250E000 / 106751JL.050.10675-10676 dated 2013-12-04  
Technical data: 2014-05-07 List of motors, techn. Data, dated 2014-05-07  
Test reports: SX201405008 ACM 355M-2-250KW IE3 dated 2014.05.09  
Catalogue: AC - Motoren GmbH AC 2014-7 dated 15.10.2014

## Tests carried out

IEC 60034-1, 2010-02  
DNV-CP-0393 Rotating electrical machines, Edition January 2022

## Marking of product

Acc. IEC 60034-1 subclause 10.2

## 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.

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