

TYPE APPROVAL CERTIFICATE

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 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.

Issued at **Hamburg** on **2019-07-02**

This Certificate is valid until **2024-07-01**.

DNV GL local station: **Augsburg**

Approval Engineer: **Harald Amberger**

for **DNV GL**

.....
Arne Schaarmann
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.



Job Id: **262.1-029597-1**
Certificate No: **TAE00003KX**

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 GL Guidelines for the Performance of Type Approvals, Chapter 1 - Procedure (VI-7-1), Edition 2007

Type Approval documentation

Tests carried out

IEC 60034-1, 2010-02
GL Test Requirements for Electrical Machinery (VI-7-6), Edition 1999

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

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Electric Motor**with type designation(s)
ACM..., FCM..., FCMP...

Issued to

**AC-Motoren GmbH
Eppertshausen, 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.**Issued at **Hamburg** on **2019-07-02**This Certificate is valid until **2024-07-01**.DNV GL local station: **Augsburg**Approval Engineer: **Harald Amberger**for **DNV GL**

**Arne Schaarmann
Head of Section**

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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

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