

TYPE APPROVAL CERTIFICATE

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

with type designation(s)
M3GP Ex protected

Issued to

ABB Oy, Motors and Generators / Vaasa
VAASA, Finland

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

Degree of protection	IP55, IP56 or IP65
Insulation class	F, H
Temp. class (°C)	45
Voltage (V)	220 - 690
Power (kW)	Max 1000
Frequency (Hz)	50, 60
Speed (RPM)	500 - 3600

Issued at **Høvik** on **2019-02-08**

This Certificate is valid until **2023-12-05**.

DNV GL local station: **Turku**

for **DNV GL**

Approval Engineer: **Georgy Abramenko**

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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.



Job Id: **262.1-030298-1**
Certificate No: **TAE00003AG**

Product description

Type M3GP, 3-phase squirrel cage induction motors according to IEC/EN-standards, IEC frame of cast iron for hazardous areas, frame sizes 71 up to 450.

Type: M3GP 71 up to M3GP 450
Nominal power, S1 duty: Max 1000 kW
Duty type: S1, S2 ... S9 according to IEC standard
Number of poles: 2, 4, 6, 8, 10, 12, multiple poles
Degree of protection: IP55, IP56, IP65
Insulation class: F, H
Degree of Ex protection: Ex-ec; Ex-tb; Ex-tc

Application/Limitation

For installation in hazardous area. The information related to Ex-certification from recognized test institution is given as information only. Ex installations to be approved in each case according to the Rules and Ex-certification/ Special conditions for safe use, listed in valid Ex certificate issued by a notified/ recognized body.

Certificate of Conformity	Ex protection data
IECEx UL 18.0081X	Ex-ec IIC T3...T1 Gc, Ex-tc IIIC T100°C...T150°C Dc Ex-tb IIIC T100°C...T150°C Db

For installation on open deck DNVGL Rules for Ships Pt.4 Ch.8/ Offshore Standard D201 Ch.2 Sec.10 Table B1 to be followed.

Type Approval documentation

Tests carried out

Tests according to IEC 60034-1 – 2010-02.
GL Regulations for the Performance of Type Tests, part 4, edition 1999.

Marking of product

ABB Oy – type designation – technical data

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