DNV·GL

Certificate No:
TAE000000H

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electric Motor

with type designation(s)
B4J 355 up to 400 & B5J 355 & B5J 450 up to 630

Issued to
MARELLI MOTORI SPA
ARZIGNANO VI, Italy

is found to comply with
DNV GL rules for classification – Ships and offshore units

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Enclosure class	**IP55**
Insulation class	**F**
Temp. class (°C)	**155**
Voltage (V)	**380-720**
Power (kW)	**230-3500**
Frequency (Hz)	**50-60**
Speed (RPM)	**750-1800**

This Certificate is valid until **2020-10-15**.

Issued at **Høvik** on **2015-10-16**

for **DNV GL**

DNV GL local station: **Venice**

Approval Engineer: **Ludovico Gullifa**

Marit Laumann
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.

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Product description

Type B4J 3-phase induction motor:

Rated Voltage:	380V up to 720V
Rated Frequency:	50Hz, 60Hz
Number of poles:	4, 6, & 8
Duty type:	S1
Enclosure class:	IP55
Cooling:	Water (water inlet temp = 38 °C)
Ambient air temp.:	NA
Material:	Carbon steel S275 or P265
Ex rating:	NA
Insulation class:	F

Type	No of poles	Rated Power 50Hz (kW)	Rated Power 60Hz (kW)
355 LA4	4	330	400
355 LB4	4	400	480
355 LC4	4	450	540
355 LD4	4	500	600
355 LF4	4	550	660
400 LA4	4	600	720
400 LB4	4	700	830
400 LC4	4	770	920
355 LA6	6	230	280
355 LB6	6	300	350
355 LC6	6	380	450
400 LA6	6	450	530
400 LB6	6	530	630
400 LC6	6	610	735
400 LA8	8	400	480
400 LB8	8	440	530
400 LC8	8	500	600

Type B5J 3-phase induction motor:

Rated Voltage:	380V up to 720V
Rated Frequency:	50Hz, 60Hz
Number of poles:	4, 6, & 8
Duty type:	S1
Enclosure class:	IP55
Cooling:	Water (water inlet temp = 38 °C)
Ambient air temp.:	NA
Material:	Carbon steel S275 or P265
Ex rating:	NA
Insulation class:	F

Type	No of poles	Rated Power 50Hz (kW)	Rated Power 60Hz (kW)

Type	No of poles	Rated Power 50Hz (kW)	Rated Power 60Hz (kW)
355 LF4 Int. Vent.	4	550	660
450 LA4 Int. Vent.	4	980	1150
450 LC4 Int. Vent.	4	1180	1400
450 LA4	4	980	1150
450 LB4	4	1050	1250
450 LC4	4	1180	1400
500 LA4	4	1400	1600
500 LB4	4	1560	1800
500 LC4	4	1750	2000
560 LA4	4	2000	2300
560 LB4	4	2400	2800
560 LC4	4	2700	3200
450 LA6 Int. Vent.	6	760	900
450 LB6 Int. Vent.	6	850	1000
450 LA6	6	760	900
450 LB6	6	850	1000
450 LC6	6	930	1100
500 LA6	6	1130	1300
500 LB6	6	1300	1500
500 LC6	6	1570	1800
560 LA6	6	1800	2100
560 LB6	6	2100	2400
560 LC6	6	2400	2800
630LC6	6	2900	3500
450 LA8	8	550	650
450 LB8	8	610	740
450 LC8	8	700	830
500 LA8	8	780	930
500 LB8	8	880	1050
500 LC8	8	1000	1200
560 LA8	8	1250	1450
560 LB8	8	1450	1650
560 LC8	8	1700	2000

Application/Limitation

For installation in non-hazardous area only. A DNV product certificate is required case by case. Over-torque to be verfied by calculations for machines > 3.000 kW.

The motor shaft (rotor shaft) is included in this Type Approval according to Pt.4 Ch.4 Sec.1 B with the following limitation: The starting- and drive system of the motors must ensure that the maximum transient peak torques are below 140% of the rated torque.

Ratings are referred to an inlet temperature of 38 °C while the inlet water temperature in the DNC Rules is 32 °C.

Motors are suitable for inverter operation. Manufacturer’s recommendations (derating of rated power) to be followed in accordance with Marelli Motori Catalogue ASI.CT.036.1GB

Type Approval documentation

Tests carried out

Vibration, Temperature rise, Overload/ torque, Overspeed, Insulation resistance, High voltage, Winding resistance, No load.

Marking of product

Manufacturers name and type designation, Serial number and date of manufacture, voltage, frequency, number of poles, duty (S1), power class (kW / kVA), winding insulation class, degree of protection

Periodical assessment

The scope of the periodical assessment to verify that the conditions stipulated for the Type approval is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the periodical assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and 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 to be performed at least every second year.

END OF CERTIFICATE