



Confirmation of Product Type Approval

Company Name: ABB SHANGHAI MOTORS CO., LTD

Address: 88, TIANNING ROADMINHANG ECONOMIC AND TECHNOLOGICAL DEVELOPMENT ZONE 200245 China

Product: Motor

Model(s): M2BAX Series

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	20-2034791-PDA	16-SEP-2020	15-SEP-2025
Manufacturing Assessment (MA)	19-SQ3706025	29-JUL-2019	28-JUL-2024
Product Quality Assurance (PQA)	NA	NA	NA

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Intended Service
Marine & Offshore Installations.

Description
Three Phase Induction Motor for Marine & Offshore Use

Ratings
Rated voltage: 220 to 690 V (General used: 220/230/380/400/415/440/460/660/690V)

Rated frequency: 50Hz and 60Hz

Synchronous speed: 1000 to 3600 r/min

Rated Output: 0.18kW to 355kW

Duty type: S1, S2, S3, S4, S5, S6, S7, S8, S9 according to IEC standard

Insulation class: F and H

Ambient temperature: 45°C

Degree of protection: IP55, IP56 and IP65

See attachment for more details.

Service Restrictions

1. Unit Certification is required when motors rated at 100kW and over intended for essential services or LNG cargo handling services or LNG vapor handling services.

2. The motors are not to be used for propulsion or in hazardous area.
3. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes, Drawings and Documentation

Please see the attached drawing list.

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 15/Sep/2025 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ABS Rules

2020 Rules for Conditions of Classification, Part 1: 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

2020 Marine Vessel Rules 4-8-3/3, 4-8-3/13.1 and 4-8-3/13.3

2020 Rules for Conditions of Classification - Offshore Units and Structures , Part 1: 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

2020 Facilities on Offshore Installations Rules 3-6/7

2020 Mobile Offshore Units Rules 4-3-3/9.1, 6-1-7/3.1 and 6-1-7/5

International Standards

NA

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



A handwritten signature in blue ink, appearing to read "Joseph W. White".

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 17-Sep-2020 1:46

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.

Product Design Assessment (PDA) – Rating

PDA Certificate No: 20-2034791-PDA

Issue date: 16-Sep-2020

Company: ABB SHANGHAI MOTORS CO., LTD (WCN: 625642)

Product/Equipment: Motor

Expiration date: 15 September 2025

Model: M2BAX Series

Product:	Motor
Model:	M2BAX Series
Intended Service:	Marine & Offshore installations
Description:	Three phase Induction Motor for Marine & Offshore Use
Ratings:	
Rated voltage:	220 to 690 V (General used: 220/230/380/400/415/440/460/660/690V)
Rated frequency:	50Hz and 60Hz
Synchronous speed:	1000 to 3600 r/min
Rated Output:	0.18kW to 355kW
Duty type:	S1, S2, S3, S4, S5, S6, S7, S8, S9 according to IEC standard
Insulation class:	F and H
Ambient temperature:	45°C
Degree of protection:	IP55, IP56 and IP65

Maximum rated power at S1

Motor Type	Power	Power	Power	Power	Power	Power
	3600r/min 60Hz	3000r/min 50Hz	1800r/min 60Hz	1500r/min 50Hz	1200r/min 60Hz	1000r/min 50Hz
71MA	0.37	0.37	0.25	0.25	0.18	0.18
71MB	0.55	0.55	0.37	0.37	0.25	0.25
80MA	0.75	0.75	0.55	0.55	0.37	0.37
80MB	1.1	1.1	0.75	0.75	0.55	0.55
90SA	1.5	1.5	1.1	1.1	0.75	0.75
90LA	2.2	2.2	1.5	1.5	1.1	1.1
100LA	3	3	2.2	2.2	1.5	1.5
100LB	-	-	3	3	-	-
112MA	4	4	4	4	2.2	2.2
132SA	5.5	5.5	5.5	5.5	3	3
132SB	7.5	7.5	-	-	-	-
132MA	-	-	7.5	7.5	4	4
132MB	-	-	-	-	5.5	5.5
160MLA	11	11	11	11	7.5	7.5
160MLB	15	15	15	15	11	11
160MLC	18.5	18.5	-	-	-	-
180MLA	22	22	18.5	18.5	15	15
180MLB	-	-	22	22	-	-
200MLA	30	30	30	30	18.5	18.5
200MLB	37	37	-	-	22	22
225SMA	45	45	37	37	30	30
225SMB	-	-	45	45	-	-
250SMA	55	55	55	55	37	37
280SA	75	75	75	75	45	45
280SB	-	-	-	-	55	55
280SMB	90	90	90	90	-	-



315SMA	110	110	110	110	75	75
315SMB	132	132	132	132	90	90
315SMC	160	160	160	160	110	110
315MLA	200	200	200	200	132	132
355SMA	250	250	250	250	160	160
355SMB	315	315	315	315	200	200
355SMC	355	355	355	355	250	250