



Certificate no.:
TAE000054D

TYPE APPROVAL CERTIFICATE

This is to certify:
that the Electric Motor

with type designation(s)
SM Motor

issued to
Sumitomo (SHI) Cyclo Drive Asia Pacific Pte. Ltd.
Singapore, Singapore

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 **Høvik** on **2025-08-14**

This Certificate is valid until **2030-08-13**.

for **DNV**

DNV local unit: **Certification of Materials - Singapore**

Approval Engineer: **Andreas Andrecht**

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 USD 300 000.

Product description

Series Three-Phase Induction Motor

Type	Voltage/ Current/ Hz	Power(kW)
SC105	220V-690V 50/60Hz	0,55
SC107	220V-690V 50/60Hz	0,75
SC111	220V-690V 50/60Hz	1,1
SC115	220V-690V 50/60Hz	1,5
SC122	220V-690V 50/60Hz	2,2
SC130	220V-690V 50/60Hz	3
SC140	220V-690V 50/60Hz	4
SC155	220V-690V 50/60Hz	5,5
SC175	220V-690V 50/60Hz	7,5
SC1A2	220V-690V 50/60Hz	11
SC1A5	220V-690V 50/60Hz	15
SC1A8	220V-690V 50/60Hz	18,5
SC1B2	220V-690V 50/60Hz	22
SC1C0	220V-690V 50/60Hz	30
SC1C7	220V-690V 50/60Hz	37
SC1D5	220V-690V 50/60Hz	45
SC1E5	220V-690V 50/60Hz	55
SC1F8	220V-690V 50/60Hz	75
SC1F9	220V-690V 50/60Hz	90
SC1G1	220V-690V 50/60Hz	110
SC1G3	220V-690V 50/60Hz	132
SC1G6	220V-690V 50/60Hz	160
SC1H0	220V-690V 50/60Hz	200
SC1H2	220V-690V 50/60Hz	220
SC1H5	220V-690V 50/60Hz	250
SC1J1	220V-690V 50/60Hz	315
SC1J5	220V-690V 50/60Hz	355

Degree of protection	IP 55, IP 56,
Insulation class	155 (F), 180 (H)
Temp. class (°C)	45° C
Voltage (V)	220 V up to 690 V
Power (kW)	0,55 kW up to 355 kW
Frequency (Hz)	50 Hz, 60 Hz
Speed (RPM)	750 1/min up to 3600 1/min

Application/Limitation

For use as propulsion motor documentation according to DNV rules must be submitted for approval for each project. Product certification shall be carried out for motors of 300kW and above, as required by DNV rules Pt.4 Ch.8 Sec.1 Table 8.

Type Approval documentation

Tests carried out

Type tests according to applicable DNV rules and standards as listed below have been carried out.
DNV-RU-SHIP Pt.4 Ch.8 Section 5 Table 2, IEC 60349-4:2012

Marking of product

- Manufacturers name and type designation
- Serial number
- Year of production
- Voltage, frequency, rpm
- Power class (kW / kVA)
- Winding insulation class
- Degree of protection
- IEC60349-4

Manufactured by

10798943 - Sumitomo (SHI) Cyclo Drive Asia Pacific Pte. Ltd.

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