



Confirmation of Product Type Approval

Company Name: ABB OY DRIVES

Address: HIOMOTIE 13PO BOX 184 FIN-00380 Finland

Product: Frequency Converter

Model(s): ACS880-07CLC Compact Drive ACS880-17LC ACS880-37LC ACS880-104LC

ACS880-107LC ACS880-204LC ACS880-207LC ACS880-304LC+A019 ACS880-307LC+A019

ACS880-604LC ACS880-607LC ACS880-1007LC ACS880-1604LC ACS880-1607LC

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	18-LD1754604-1-PDA	27-FEB-2020	27-SEP-2023
Manufacturing Assessment (MA)	19-TU3713893	19-AUG-2019	18-AUG-2024
Product Quality Assurance (PQA)	NA	NA	NA

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Intended Service

ABS Classed vessels and offshore installations in accordance with the listed ABS Rules and International Standards.

Description

The ACS880LC drive modules (-x04LC) and drive cabinets (-x7/-x07-xx07LC) for controlling asynchronous AC induction motors, synchronous motors with external excitation, permanent magnet motors, AC induction servomotors and ABB synchronous reluctance motors (SynRM motors)

Ratings

Refer to the attachment.

Service Restrictions

1. Unit Certification is required for semiconductor converters used to control motor drives having a rated power of 100 kW(135 hp) and over intended for essential services as per the ABS Steel Vessels Rules 4-8-3/1.5, 4-8-3/5.11, 4-8-3/8 and ABS MODU Rules 4-1-1/ Table 3&4 or 6-1-7/9.1.1(b) and 6-1-7/19.7.

2. Inspection and testing of equipment should comply with ABS Steel Vessels Rules 4-8-3/8.7. When incorporated in a system of Category I, II or III in accordance with 4-9-3/7.1 and 4-9-3/Table 1 of the ABS Steel Vessels Rules, the documentation detailed in 4-9-3/Table 2 is to be submitted to ABS or to be available for review by ABS as applicable.

Comments

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

product.

2. Each particular application configuration is to be specifically approved in conjunction with the relevant system in which the inverter are being used.
3. Drives are not intended for installation in hazardous areas.
4. Drives are to be installed in an Enclosure with IP rating accordance with 4-8-3/Table 2 of the ABS Steel Vessels Rules.
5. Wiring schematics & assembly drawings to be submitted for each installation.
6. Installations are to be in accordance with manufacturer's instruction and installation manual.
7. Approval is for Hardware only.
8. Converter to be installed in "special distribution zone" and "general power distribution zone", in accordance with IEC 60533 provided measures are taken to attenuate these effects on the distribution system.

Notes, Drawings and Documentation

Drawing No. 3AXD10000461740_LC, ACS880LC modules_R8i_Circuit diagram, Revision: -, Pages: -

Drawing No. 3AXD10000671237, 289705-2-3 EMC test report, Revision: -, Pages: -

Drawing No. 3AXD10000671242, 289705-1-1 EMC test report, Revision: -, Pages: -

Drawing No. 3AXD10000685663, VTT-S-06945-17D, Revision: -, Pages: -

Drawing No. 3AXD10000685993, VTT-S-06943-17D, Revision: -, Pages: -

Drawing No. 3AXD10000690789, ACS880-207LC-1180A-7 type test report TempRise_AbnorOper_v04, Revision: -, Pages: -

Drawing No. 3AXD10000733140, ACS880-17_37_LC EMC_Insulation_Pressure, Revision: -, Pages: -

Drawing No. 3AXD10000737173_Test, Vibration_test_report_of_ACS880-1607LC-0900A-7_EUT76, Revision: -, Pages: -

Drawing No. 3AXD10000737173_VTT, VTT-S-02559-18, Revision: -, Pages: -

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 27/Sep/2023 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

- Steel Vessel Rules (2018): 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-1-1/7.15, 4-8-3/8, 4-9-8/3, 4-9-8/13, 4-9-8/Table 1 and Table 2
- Steel Vessels Under 90 Meters (295 Feet) in Length (2018): 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-1-1/37, 4-6-4/10, 4-7-2/Table 1
- Facilities on Offshore Installations (2018): 1-1-4/9.7, 1-1-A2, 1-1-A3

- Offshore Support Vessels (2018): 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-1-1/7.15, 4-8-3/5.11, 4-8-3/8, 4-9-8/3, 4-9-8/13, 4-9-8/Table 1 and Table 2
- Mobile Offshore Drilling Units (2018): 1-1-4/9.7, 1-1-A2, 1-1-A3, 4.1.1/7.9, 6-1-1/9, 6-1-1/13, 6-1-7/12, 6-1-7/13.5
- Steel Vessels for Service on Rivers and Intracoastal Waterways (2018): 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-1-1/21, 4-5-4/10
- High Speed Crafts (2018): 1-1-4/11.9, 1-1-A2, 1-1-A3, 4-1-1/37, 4-6-4/10, 4-7-9/15, 4-7-9/Table 9 and Table 10
- Steel Barge Rules (2018): 1-1-4/7.9, 1-1-A3, 1-1-A4

International Standards

IEC 61800-5-1 Ed2.0:2007

IEC 60533 Ed 3.0 2015

EN 61800-3:2004 +A1:2012

IEC 61000-4-11 Ed2.0:2004

IEC/EN 60204-1:2016

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



A handwritten signature in black ink, appearing to read "Joseph W. Wilson".

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 03-Mar-2020 4:31

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.