Certificate Number: 18-LD1771164-1-PDA 04/FEB/2019



Confirmation of Product Type Approval

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product.

This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 12-SEP-2023. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

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.

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.

Product Name: Contactor, Electrical

Model Name(s): Allen-Bradley: 100-C(R)*, 100S-C(R)*, 104-C(R)*, 104S-C(R)* Sprecher + Schuh: CA7-(R)*, CAS7-(R)*, CAU7-(R)*, CASU7-(R)*

Presented to:

ROCKWELL AUTOMATION SWITZERLAND GMBH INDUSTRIESTRASSE 20 Switzerland

Intended Service:

For use on ABS Classed vessels and offshore facilities with ACC or ACCU Class Notation in accordance with the listed ABS Rules and International Standards.

Description:

Electromechanical contactors and motor-starters for motor controllers; 'Allen Bradley' 100-C*, 100S-C*, 104-C*, 104S-C* / 'Sprecher + Schuh' CA7-*, CAS7-*, CAU7-*, CASU7-* Series. Including all relevant accessories according to catalogue (coil control, auxiliary contacts blocks, suppressors, timing modules, mechanical

latch and interlock, interfaces, wiring sets).

Tier:

3

Ratings:

Model/Type reference: Allen-Bradley: 100-C(R)09*, 100S-C(R)09*, 104-C(R)09*, 104S-C(R)09*, 100-C(R)12*, 100S-C(R)12*, 104S-C(R)12*, 104S-C(R)12*, 100-C(R)16*, 100S-C(R)16*, 104S-C(R)16*, 104S-C(R)16*, 100-C23*, 100S-C23*, 104S-C23* Sprecher + Schuh: CA7-(R)9*, CAS7-(R)9*, CAU7-(R)9*, CASU7-(R)9*, CAY-(R)12*, CASU7-(R)12*, CASU7-(R)12*, CASU7-(R)16*, CAST-(R)16*, CAST-(R)16*, CAST-(R)16*, CAST-23*, CAST-23*, CAU7-23*, CAST-23* • AC-1: (Ui: 200 - 690V; Ie: 32A) • AC-2 / AC-3 / AC-4: (Ui: 200 - 690V; Ie: 0.2 - 12A) • DC-13: (Ui: 24 - 690V; Ie: 0.3 - 5A) Remark: (R) indicates spring force terminals, maybe used up to 16A only Model/Type reference: Allen-Bradley: 100-C30*, 100S-C30*, 104S-C30*, 104S-C30*, 100-C37*, 100S-C37*, 104S-C37*, 104S-C37*, 100S-C40* Sprecher + Schuh:

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CA7-30*, CAS7-30*, CAU7-30*, CASU7-30*, CA7-37*, CAS7-37*, CAU7-37*, CASU7-37*, CA7-40*, CAS7-40* • AC-1: (Ui: 200 - 690V; Ie: 65A) • AC-2 / AC-3 / AC-4: (Ui: 200 - 690V; Ie: 18 - 38A) Model/Type reference: Allen-Bradley: 100-C43*, 100S-C43*, 104-C43*, 104S-C43*, 100-C55*, 100S-C55*, 104-C55*, 104S-C55* Sprecher + Schuh: CA7-43*, CAS7-43*, CAU7-43*, CASU7-43*, CA7-55*, CAS7-55*, CAU7-55*, CASU7-55* • AC-1: (Ui: 230 - 690V; Ie: 44 - 85A) • AC-3 / AC-4: (Ui: 230 - 690V; Ie: 16.5 - 56A) Model/Type reference: Allen-Bradley: 100-C60*, 100S-C60*, 104-C60*, 104S-C60*, 100-C72*, 100S-C72*, 104-C72*, 104S-C72*, 100-C85*, 100S-C85*, 104-C85*, 104S-C85*, 100-C90*, 100S-C90*, 100-C97*, 100S-C97*, 104-C97*, 104S-C97* Sprecher + Schuh: CA7-60*, CAS7-60*, CAU7-60*, CASU7-60*, CA7-72*, CAS7-72*, CAU7-72*, CASU7-72*, CA7-85*, CAS7-85*, CAU7-85*, CASU7-85*, CA7-90*, CAS7-90*, CA7-97*, CAS7-97*, CAU7-97*, CASU7-97* • AC-1: (Ui: 230 - 690V; le: 100 - 130A) • AC-3 / AC-4: (Ui: 230 - 690V; Ie: 25.5 - 97A) Rated frequency: 50-60Hz Rated duties: Uninterrupted duty Ingress protection: IP2X Ambient temperature: -25DegC to +60DegC * Type/Devices covered may be followed by additional suffixes such as numbers and/or letters Note: Ratings assigned to 'Allen-Bradley' are valid for 'Sprecher + Schuh' according to the Model/Type reference See also attached document.

Service Restrictions:

Unit Certification is not required for this product. 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 / Documentation:

Drawing No. 02a, pec-td002 -en-e, Revision: -, Pages: 1 Drawing No. E41850-Vol6-Auth ML, 100-C Accessories, UL Certification file (2017-07-04), Revision: -, Pages: 55 Drawing No. 100-C1XF2 Contactor, 03601-A-15CB0018-S-A, DEKRA Certification B.V. (2013-07-01), Revision: -. Pages: 131 Drawing No. 100-C1X F1_Contactor, 03601-A-15CB0019-S-A, DEKRA Certification B.V. (2013-07-01), Revision: -, Pages: 127 Drawing No. 100-C1X F0 Contactor, 03601-A-15CB0020-S-A, DEKRA Certification B.V. (2013-07-01), Revision: -, Pages: 207 Drawing No. 100-C60 Contactor, 03601-A-15CB0018-S-A, DEKRA Certification B.V. (2013-07-01), Revision: -, Pages: 131 Drawing No. 100-C09 Contactor, 2084757.50, KEMA Certification BV. (2005-09-01), Revision: -, Pages: 57 Drawing No. 100-C30 Contactor, 2084757.51, KEMA Certification BV. (2005-09-01), Revision: -, Pages: 140 Drawing No. 100-C43 Contactor, 2170396.50, DEKRA Certification B.V. (2014-05-23), Revision: -, Pages: 119 Drawing No. 100-C60 Contactor, 2160286.50, DEKRA Certification B.V. (2013-03-01), Revision: -, Pages: 103

Term of Validity:

This Product Design Assessment (PDA) Certificate 18-LD1771164-1-PDA, dated 13/Sep/2018 remains valid until 12/Sep/2023 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product. Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA. Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

ABS Rules:

- Steel Vessels (2018): 1-1-4/7.7, 1-1-A3 & A4, 4-1-1/7.15, 4-8-3/1.5, 4-8-3/1.7, 4-8-3/5.3.3 - Steel Vessels Under 90 Meters (295 Feet) in Length (2018): 1-1-4/7.7. 1-1-A3 & A4, 4-1-1/37, 4-6-1/15, 4-6-4/11.1 - Offshore Support Vessels (2018): 1-1-4/7.7, 1-1-A3 & A4, 4-1-1/7.15, 4-8-3/1.7, 4-8-3/1.7, 4-8-3/5.3.3 - Facilities on Offshore Installations (2018): 1-1-4/9.7, 1-1-A2 & A3, 3.6/11.3.3 - Mobile Offshore Drilling Units (2018): 1-1-4/9.7, 1-1-A2 & A3, 4.1.1/7.9, 4-3-1/15, 6-1-7/13.1 - Steel Vessels for Service on Rivers and Intracoastal Waterways (2018): 1-1-4/7.7, 1-1-A3 & A4, 4-1-1/21, 4-5-4/11.1 - High Speed Crafts (2018): 1-1-4/11.9, 1-1-A2 & A3, 4-1-1/37, 4-6-4/11 - Steel Barges (2018): 1-1-4/7.7, 1-1-A3 & A4

National Standards: International Standards:

IEC60947-1:2007+A1:2010+A2: Ed. 5.2 b: 2014 IEC 60947-4-1:2009+A1: Ed. 3.1

b: 2012 UL 60947-1: Ed.5: 2013 UL 60947-4-1: Ed.4: 2017

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Government Authority:

EUMED: Others:

Model CertificateModel Certificate NoIssue DateExpiry DatePDA18-LD1771164-1-PDA27-SEP-201812-SEP-2023

ABS Programs

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 was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. 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.