

Type Approval Certificate Extension

This is to certify that Certificate No. 11/60005(E1) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER	Vacon Ltd Runsorintie 7 65380 Vaasa Finland	
PLACE OF PRODUCTION	Vacon Ltd Runsorintie 7 65380 Vaasa Finland	Vacon (China) Drives Co., Ltd. Haiyan Branch Block 6-7, No. 339 North Xinqiao Road, Wuyuan Street, Haiyan County, Jianxing City, Zhejiang Province, P.R. China
DESCRIPTION	Frequency Converters	
TYPE	NXS Air Cooled FR4 to FR12 NXP Air Cooled FR4 to FR14, FI9-FI13 NXP Liquid Cooled CH3, CH4, CH5, CH61, CH62, CH72, CH63, CH64, CH74 NXP can also be replaced by NXA, NXI, NXF, NXB, NXN, depending on application. All drives can be accompanied with external brake resistors, AC-chokes, SIN-, RFI- DUT-, L- or LCL-filters.	
APPLICATION	For use in environmental category ENV1 and ENV2	
STANDARD	Lloyd's Register Test Specification Number 1, July 2015. IEC 61800-5-1: 2007 IEC 61800-3: 2004+A1:2012	
Certificate No.	11/60005(E2)	
Issue Date	01 October 2018	
Expiry Date	11 April 2021	
Sheet	1 of 2	



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OTHER CONDITIONS

Installation of this equipment for marine applications is to be in accordance with the Rules and Regulations for the Classification of Ships.

See producer's literature for ambient conditions and associated equipment ratings.

Modules are to be suitably installed to meet EMC requirements.

Type Approved devices used System Software: 33.02.10719

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register Canada Limited of any modification or changes to the equipment in order to obtain a valid certificate."

The attached Design Appraisal Document No. 11/60005(E2) and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No. 11/60005(E1) to which this extension should be attached.

Certificate No.	11/60005(E2)
Issue Date	01 October 2018
Expiry Date	11 April 2021
Sheet	2 of 2



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LR031.1.2016.06

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Issue number 1

DESIGN APPRAISAL DOCUMENT

Date 01 October 2018	Please quote the document number on all future communications.
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LLOYD'S REGISTER TYPE APPROVAL SYSTEM 2015

Issued to: VACON LTD

For: FREQUENCY CONVERTERS

Types: NXS AIR COOLED FR4 TO FR12, NXP AIR COOLED FR4 TO FR14,
NXP LIQUID COOLED CH3, CH4, CH5, CH61, CH72, CH63, CH74
TYPE APPROVAL CERTIFICATE NO: 11/60005(E2)

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System, TA14 and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

Application for Type Approval
Danfoss – Product Statement

29 June 2018
28 August 2018

TEST REPORTS

VTT-S-00992-09 – RESEARCH REPORT

13 February 2009

Also all the documentation listed on Design Appraisal Documents associated with Type Approval Certificate No. 11/60005(E1)

Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

Lloyd's Register Canada Limited reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.



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LR031.1.2016.06
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Surveyor, Toronto Technical Support Office
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**Part 2
Electronic Frequency Converter (Part 2)**

Producer/Licence No.	Type	Technical Details	Category/ Additional Tests	Remarks	Cert. No.
Vacon Ltd Runsorintie 7 65380 Vaasa Finland	Frequency Converters <u>Types:</u> NXS Air Cooled: FR4 to FR12 NXP Air Cooled: FR4 to FR14, F19-F113 NXP Liquid Cooled: CH3, CH4, CH5, CH61, CH62, CH72, CH63, CH64, CH74	208~240V 3 phase, 380~500V 3 phase, 525~690V 3 phase, 45~66Hz 208~240V 3 phase, 380~500V 3 phase, 525~690V 3 phase, 45~66Hz 400~500V 3 phase, 525~690V 3 phase, 45~66Hz	ENV1, ENV2 (2015) EN 61800-5-1:2003 EN 61800-3:1996 + A11:2000 EN 50178:1998 EN 60068-2-6:2008	Expires: 11 April 2021 Installation of this equipment for marine applications is to be in accordance with the Rules and Regulations for the Classification of Ships. See producer's literature for ambient conditions and associated equipment ratings. Modules are to be suitably installed to meet EMC requirements. NXP can also be replaced by NXA, NXI, NXF, NXB, NXX, depending on application. All drives can be accompanied with external brake resistors, AC-choke, SIN-, RFI- DUT-, L- or LCL-filters. Type Approved devices used System Software: 33.02.10719	11/60005(E2)



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LBC311.2016.006



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