

## Type Approval Certificate Extension

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

This certificate is issued to:

<b>PRODUCER</b>	Vacon Ltd Runsorintie 7 65380 Vaasa Finland	
<b>PLACE OF PRODUCTION</b>	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
<b>DESCRIPTION</b>	Frequency Converters	
<b>TYPE</b>	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.	
<b>APPLICATION</b>	For use in environmental category ENV1	
<b>STANDARD</b>	Lloyd's Register Test Specification Number 1, July 2015. IEC 61800-5-1: 2007	
<b>Certificate No.</b>	11/60005(E1)	
<b>Issue Date</b>	25 October 2016	
<b>Expiry Date</b>	11 April 2021	
<b>Sheet</b>	1 of 2	




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LR031.1.2016.06

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IEC 61800-3: 2004+A1:2012

**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(E1) and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

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

<b>Certificate No.</b>	11/60005(E1)
<b>Issue Date</b>	25 October 2016
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<b>Sheet</b>	2 of 2



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Document number 11/60005(E1)
Issue number 1

**DESIGN APPRAISAL DOCUMENT**

Date 25 October 2016	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(E1)

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System, 2015 and this Design Appraisal Document forms part of the Certificate.

**APPROVAL DOCUMENTATION**

Application for Type Approval

Production Quality Assessment Form – Vacon (China) Drives Co.

Quality Scheme Certificate - VACON PLC Finland

19 February 2016

13 October 2016

27 September 2014

**TEST REPORTS**

2903\_001 - TEST REPORT

282088-1 - Statement of Test Results L 1634

270705-1 - STR1436 FR13-14\_F19-14

STR 1604 - VACON NX FR4-6 STR

269500-1 - VACON NX FR10-12 STR

269500-2 - VACON NX FR11 STR

STR 1309 - Vacon NX FR7-9 STR

NXP3 NXPTTEST2V193 - Testreport NXP 0038 5 NXPTTEST2V193 NXP3 + FR5 + OPT-AF test

12 May 2016

15 May 2013

26 May 2015

07 Jan 2013

07 Jan 2013

01 Dec 2011

07 July 2016

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

**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.*



Lloyd's Register

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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, FI9-FI13  NXP Liquid Cooled: CH3, CH4, CH5, CH61, CH62, CH72, CH63, CH64, CH74	Mains Supply Voltage Rating Frequency 48~63 Hz  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 (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, NXN, depending on application.  All drives can be accompanied with external brake resistors, AC-chokes, SIN-, REI- DUT-, L- or LCL-filters.  Type Approved devices used System Software: 33.02.10719	11/60005(E1)

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