



中国船级社
CHINA CLASSIFICATION SOCIETY

证书编号/Certificate No.
SW24PTA00003_01

型式认可证书
CERTIFICATE OF TYPE APPROVAL

兹证明本证书所述制造厂具备按照下列标准的要求生产本证书所列产品的能力和条件。

This is to certify that the manufacturer stated in the certificate meets the requirements of the standards listed below and is available with the ability and conditions to produce the products described in the certificate.

制造厂/Manufacturer

Danfoss Drives Oy

地址/Address

Runsorintie 7, FI-65380 Vaasa, Finland

产品名称/Product

变频器
Frequency Converter

附加标志/Notations

无/Nil.

认可标准/Approval Standard

- 中国船级社《钢质海船入级规范》（2024）及其变更通告 第4篇第1、2、3章
Chapters 1, 2 and 3, Part Four of China Classification Society Rules for Classification of Sea-Going Steel Ships 2024 and its Change Notices
- 中国船级社《钢质海船入级规范》（2024）及其变更通告 第7篇第2章
Chapter 2, Part Seven of China Classification Society Rules for Classification of Sea-going Steel Ships 2024 and its Change Notices

用于/Intended for

船舶/Ships

证书有效期至/ This Certificate is valid until 2029年06月14日/ Jun. 14, 2029

发证机构/ Issued by 中国船级社 斯德哥尔摩办事处
CCS Stockholm Office 签发日期/ Date 2024年06月12日
Jun. 12, 2024

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Form No: Q01.

联系方式/Contact Us, 见本社官方网站/See official web site of the Society (<http://www.ccs.org.cn>)

UTN:P024-97021184

产品明细/Product Description**变频器/Frequency Converter (M0001)**

名称/Name	属性(值)/Value	单位/Unit
型号/Type	NXS, NXP, NXA, NXB (Brake-chopper unit), NXN, NXI (Inverter unit)	
功率/Power	0.55~5300	kW
频率/Frequency	Input: 45~66/ Output: 0~320	Hz
冷却方式/Cooling Method	Air-cooled or Liquid cooled	
外壳防护等级/Degree of Protection of Enclosure	IP00, IP21, IP54	
额定输入电压/Rated Input Voltage	AC 208~240, 380~500, 500~690/ DC 465~1100 (NXI inverter unit)	V
额定输出电压/Rated Output Voltage	0~Uin	V

变频器/Frequency Converter (M0002)

名称/Name	属性(值)/Value	单位/Unit
型号/Type	Vacon 100	
功率/Power	0.55~800	kW
频率/Frequency	Input: 50/60/ Output: 0~320	Hz
冷却方式/Cooling Method	Air cooled	
外壳防护等级/Degree of Protection of Enclosure	IP00, IP21, IP54	
额定输入电压/Rated Input Voltage	AC208~240, 380~500, 525~600, 525~690	V
额定输出电压/Rated Output Voltage	0~Uin	V

变频器/Frequency Converter (M0003)

名称/Name	属性(值)/Value	单位/Unit
型号/Type	iC7-60SL	
功率/Power	90~6532 kW/ 170~6872 kVA	
频率/Frequency	Input: 45~66/ Output: 0~599	Hz
冷却方式/Cooling Method	Liquid cooled	
外壳防护等级/Degree of Protection of Enclosure	IP00	
额定输入电压/Rated Input Voltage	AC 380~500, 525~690/ DC 400~800, 640~1200	V
额定输出电压/Rated Output Voltage	0~Uin	V

批准的图纸/Approved Drawings

图纸批准号/ Drawings Approval No. : NP16A00074, NP19PPP01572, NP20PPP02304, NP23PPP04039

产品认可试验报告/ Approval Test Report

试验报告编号/ Test Report No. : 10347418
 试验报告日期/ Test Report Date : 2006-08-07
 试验单位/ Laboratory: Vacon Oy
 试验单位地址/ Test Address: Runsorintie 7, FI-65380 Vaasa, Finland

试验报告编号/ Test Report No. : VTT-S-00992-09
 试验报告日期/ Test Report Date : 2009-02-13
 试验单位/ Laboratory: VTT
 试验单位地址/ Test Address: Technical Research Centre of Finland Jari Heikkinen

试验报告编号/ Test Report No. : 10368261
试验报告日期/ Test Report Date : 2006-09-25
试验单位/ Laboratory: CENTRIA
试验单位地址/ Test Address: PL 62, Vierimaantie 7, FI-84101 Ylivieska Finland

试验报告编号/ Test Report No. : 228338-1
试验报告日期/ Test Report Date : 2003-04-28
试验单位/ Laboratory: SGS Fimko Oy
试验单位地址/ Test Address: Särkiniementie 3 P.O.Box 30, FIN-00210 Helsinki Finland

试验报告编号/ Test Report No. : 234713-1
试验报告日期/ Test Report Date : 2004-09-23
试验单位/ Laboratory: SGS Fimko Oy
试验单位地址/ Test Address: Särkiniementie 3 P.O.Box 30, FIN-00210 Helsinki Finland

试验报告编号/ Test Report No. : 231330-1
试验报告日期/ Test Report Date : 2004-02-12
试验单位/ Laboratory: SGS Fimko Oy
试验单位地址/ Test Address: Särkiniementie 3 P.O.Box 30, FIN-00210 Helsinki Finland

试验报告编号/ Test Report No. : 14450026, 14451070, 14454195, 14454404
试验报告日期/ Test Report Date : 2016-06-02
试验单位/ Laboratory: Vacon Oy
试验单位地址/ Test Address: Runsorintie 7, FI-65380 Vaasa, Finland

试验报告编号/ Test Report No. : 295115-1-1
试验报告日期/ Test Report Date : 2019-01-30
试验单位/ Laboratory: SGS Fimko Ltd
试验单位地址/ Test Address: Särkiniementie 3 P.O.Box 30, FI-00210 Helsinki Finland

试验报告编号/ Test Report No. : VTT-S-00992-09
试验报告日期/ Test Report Date : 2009-01-25
试验单位/ Laboratory: VTT
试验单位地址/ Test Address: P.O. BOX 1000, FI-02044 Espoo Finland

试验报告编号/ Test Report No. : 290708-1-2
试验报告日期/ Test Report Date : 2018-01-15
试验单位/ Laboratory: SGS Fimko Ltd
试验单位地址/ Test Address: Särkiniementie 3 P.O.Box 30, FI-00210 Helsinki Finland

试验报告编号/ Test Report No. : Test Reports for Marine Type Approval
试验报告日期/ Test Report Date : 2015-11-23
试验单位/ Laboratory: SGS Fimko Ltd, Vacon Oy
试验单位地址/ Test Address: SGS Fimko Ltd, Vacon Oy

试验报告编号/ Test Report No. : 300620-1
试验报告日期/ Test Report Date : 2020-11-24
试验单位/ Laboratory: SGS Fimko Ltd.
试验单位地址/ Test Address: Takomotie 8, FI-0038 Helsinki Finland

试验报告编号/ Test Report No. : 300477-2-1
试验报告日期/ Test Report Date : 2020-10-28
试验单位/ Laboratory: SGS Fimko Ltd.
试验单位地址/ Test Address: Takomotie 8, FI-0038 Helsinki Finland

试验报告编号/ Test Report No. : HELES2102000122-1
试验报告日期/ Test Report Date : 2022-06-23

试验报告编号/ Test Report No. : HELES2102000122-2
试验报告日期/ Test Report Date : 2021-12-08

试验报告编号/ Test Report No. : HELES2202000152-1
试验报告日期/ Test Report Date : 2023-02-02

试验报告编号/ Test Report No. : 00775653
试验报告日期/ Test Report Date : 2022-05-09

试验报告编号/ Test Report No. : EUFI29-19006315-T2
试验报告日期/ Test Report Date : 2020-03-10

试验报告编号/ Test Report No. : EUFI29-19004589-T2, EUFI29-19004589-T4, EUFI29-19004589-T6
试验报告日期/ Test Report Date : 2019-12-12

试验报告编号/ Test Report No. : EUFI29-19004866-T2
试验报告日期/ Test Report Date : 2020-01-08

试验报告编号/ Test Report No. : EUFI29-21002279-T1
试验报告日期/ Test Report Date : 2021-06-10

试验报告编号/ Test Report No. : HELEM2204000174-1
试验报告日期/ Test Report Date : 2022-05-17

试验报告编号/ Test Report No. : EMC surge INU Linpak 416A
试验报告日期/ Test Report Date : 2023-01-02

试验报告编号/ Test Report No. : 299288-1
试验报告日期/ Test Report Date : 2020-05-06

认可后的产品检验方式/ Method of Product Inspection after Approval

认可后的产品检验由制造厂按本社批准的产品检验计划进行，本社在文件审核合格后颁发船用产品证书。

After approval, product inspection should be carried out by the Manufacturer in accordance with the product inspection scheme approved by the Society, and the Marine Product Certificate is issued by the Society upon satisfactory documents review.

认可保持条件/ Maintenance Requirements of Approval

1. 型式认可后，如果产品及其重要零部件的设计、所用材料或制造方法有所改变，且影响到产品的主要特性、特征；或产品的性能指标有所更改，且超过认可的范围，则有关图纸和文件应经检验机构审批。并在检验机构认为必要时，经本社检验人员见证有关试验和进行检查，其结果应能证实仍符合认可条件。

After type approval, if there are changes to the design, materials used or manufacturing method of the product and important components and such changes affect major characteristics and properties of the product, or property indexes of the product are changed and exceed the scope of approval, related drawings and documents are to be examined and approved by the concerned survey office. Where deemed necessary by the survey office, the surveyor to the Society will go to witness relevant tests and conduct inspection and the results should be able to demonstrate compliance with the approval conditions.

2. 工厂的质量管理体系应保持有效运行，并且与认可时一致。如果质量管理体系发生改变，应经原体系认证机构审核并报本社批准。

The quality management system of the factory shall be ensure effective operation, and shall be the same as the situation of approval. If there are any changes to the quality management system, auditing of the original certification organization for quality management system and the society's approval shall be obtained.

3. 认可证书有效期内，如果出现可能导致本社取消认可的情况，工厂应及时采取有效的纠正措施。

Within the validity of the approval certificate, if cases occur that may cause the Society to withdraw the approval, the manufacturer should take corrective actions in a prompt and effective manner.

4. 在认可证书有效期内，本社检验人员可在未经事先通知的情况下对工厂的产品制造过程进行审核，以验证产品的生产是否符合业经本社批准的图纸和文件。工厂应予以配合。

Within the validity of the approval certificate, the surveyor to the Society may pay unannounced audit to the manufacturing process of the product in order to confirm whether it is in compliance with the drawings and documents approved by the Society. The factory should provide an active cooperation and necessary for the surveyor.

5. 型式认可A证书获得者应接受本社每年一次的定期审核，定期审核日为认可证书期满之日对应的每一周年日，检查工作应在周年日的前后三个月内进行。

Those who have obtained the certificate of type approval A should be subject to periodical audit every year. The date of periodical audit shall be each anniversary date which corresponds to the date of expiry of the relevant certificate and the periodical audit shall be done within a time span of three months before and after the annual surveillance date.

备注/Remarks

1. 本社已审核了产品厂无石棉声明，但本社的审核不免除产品厂按照合同关系向订货方保证产品无石棉的责任。The declaration of asbestos-free submitted by manufacturer has been reviewed by the Society. However, liability of the manufacturer to guarantee the products are asbestos-free to purchaser

under contract will not be exempted.

2. 本证书由原型式认可证书 (No. SW22PTA00001_01) 变更并替代原证书。

This Certificate is modified from and supersedes the previous Type Approval Certificate No. SW22PTA00001_01.

3. Alternative manufacturing site and scope:

Name: Vacon (China) Drives Co., Ltd.

Address: 339, North Xinqiao Road, Wuyuan Street, Haiyan, Jiaxing, 314300, Zhejiang, P.R. China.

Scope: Vacon NX series only.

4. For air cooled drivers, temperature range for a rated output current is 0~40 °C. When operating above 40 °C, a derating of rated output current is necessary, by 1.5% per ° C from 40° C to 50° C, and by 2.5% per ° C from 50° C to 55° C.

5. Storage, installation, and operation must comply with the temperature and ambient condition requirements specified in the manufacturer's operating guides.

6. Fuses for protections from overload and short-circuit are not included.

7. Refer to user manual/ product information from approved plans for product specification and restriction details.

8. iC7-60SL system modules must be handled as a component. The actual installation shall be designed according to Danfoss Installation & Operating instructions and according to the applicable CCS Rules for the actual application.

中国船级社斯德哥尔摩办事处
CCS Stockholm Office