



中国船级社  
CHINA CLASSIFICATION SOCIETY

证书格式号/Form: T01.01-  
HQ000102

型式认可证书  
CERTIFICATE OF TYPE APPROVAL

证书编号/Certificate No. WG13T00002

兹证明本证书所述制造厂生产的下列产品能够满足下面列明认可标准的要求。

This is to certify that the following products produced by the manufacturer stated in the certificate can meet the requirements of the approval standards listed below.

认可产品/ Product Approved

控制电器

ELECTRIC APPLIANCE FOR CONTROL

变频器

FREQUENCY CONVERTER

制造厂/ Manufacturer

Danfoss, LLC

Danfoss, LLC

4401 N. Bell School Rd., Loves Park, IL61111

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认可标准/ Approval Standard

1. Part 4, Chapter 1, 3 of CCS Rules for Classification of Sea-going Steel Ships 2012

证书有效期至/ This Certificate is valid until

2016年8月26日 / Aug. 26, 2016

发证机构  
Issued by

中国船级社温哥华办事处  
CCS Vancouver Office

签发日期  
Date

2013年7月16日  
Jul. 16, 2013

本证书根据中国船级社《钢质海船入级规范》及有关程序规定签发。关于证书的有关规定见本证书页背面的说明。当本证书包括多页纸张时，则所有证书页为一个整体，必须同时使用。每一页证书均须由本社盖章方为有效。证书复印件无效。任何单位和个人均不应摘录或节选本证书的部分内容。本认可证书不代表本社对个体产品质量的检验。有关各方对所持证书的真实性有疑问时，可以向我社检验机构咨询。  
This Certificate is issued pursuant to the Rules for Classification of Sea-going Steel Ships and related procedures of the Society. Refer to the back of the certificate for detailed requirements of the certificate. When the certificate consists of more than one page, all pages of the certificate are taken as a whole and are used simultaneously. No certificate page is valid without bearing the stamp of the Society and no copied form of the certificate is regarded as valid. Any part of the certificate is not to be extracted or abridged by any unit or individual in any form. This approval certificate does not constitute the inspection of the Society about the quality of the unit/batch product. Related parties who are doubted about the authenticity of the certificate may inquire of the Society or its offices.



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WG46319010

Nº 10304061

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**产品明细/ Product Description**变频器/FREQUENCY CONVERTER  
产品型号/Type

: FC-102, FC-202, FC-302, AAF006

**批准的图纸和设计计算书/ Approved Drawings and Design Calculations**

图纸批准号/ Drawings Approval No. : NP13A00825

**产品认可试验报告/ Approval Test Report**

试验报告编号/Test Report No. : P407-151, -152, -154  
 试验报告日期/Test Report Date : 2007-03-29  
 试验单位/ Laboratory : Danfoss  
 试验单位地址/ Test Address : Denmark  
 试验报告编号/Test Report No. : Environmental and EMC test report updates  
 试验报告日期/Test Report Date : 2012-10-24  
 试验单位/ Laboratory : Danfoss  
 试验单位地址/ Test Address : Loves Park, USA

**产品适用范围/Application of the Product**

Used for ships and offshore installations.

**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. 工厂的专业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 professional 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.

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

按照规范只认可不进行产品检验的产品/The product approved only in term of the rules:

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检验, 经检验合格后由制造厂签发合格证明, 并连同该产品的本社认可证书复印件一并交付用户, 制造厂对产品符合公约、法规、本社规范和本社认可的标准规定负责。

After approval, product inspection should be carried out by the Manufacturer in accordance with the product inspection scheme approved by the Society. Upon satisfactory inspection, and the Quality Certificate issued by the Manufacturer should be provided to the purchaser together with the copy of the approval certificate issued by the Society. The manufacturer should take responsibility for the product being in compliance with the convention, statutory regulation, the Society rules and the standard accepted by the Society.

**对于原材料和零部件的检验要求/ Inspection Requirements for Materials and Components**

Nil



**责任声明/Statement of Responsibility**

本社的认可不影响、替代与本社授权或检验无关的各方对上述工厂的认可和发证，并且不对与本社授权或检验无关的各方负责，不承担其未经应允而承认、接受本社认可所导致的法律和经济责任。

The approval of the Society does not affect and replace any approval and certification of the manufacturer by any parties that bear no relation with this Society's authorization or survey and therefore takes no responsibility for these parties. The Society does not undertake any legal and economic liabilities arising from accepting this Society's certificate without prior permission from this Society.

**其他/Others**

本证书由原WG08T00004证书换证

The type approval certificate is renewal and extension on the basis of original certificate WG08T00004.

中国船级社温哥华办事处

CCS Vancouver Office



\*\*\*\*\*本证书正文完/ End of Text\*\*\*\*\*

注：本证书含有附页，共1页

Note: The certificate is attached with 1 additional page(s)



## Product Description:

## 1. Frequency Converters

## FC-102 VLT HVAC Drive Series:

Voltage/Type	Power Rating	Enclosure Type	RFI Filter Type
380-480V (T4)	110-1000kW	IP00/IP20/IP21/IP54	H2
380-480V (T4)	315-1000kW	IP00/IP21/IP54	B2
380-480V (T4)	132-630kW	IP00/IP21/IP54	L2
525-690V (T7)	75-1400kW	IP00/IP20/IP21/IP54	H2
525-690V (T7)	450-1400kW	IP00/IP21/IP54	B2

## FC-202 VLT AQUA Drive Series:

Voltage/Type	Power Rating	Enclosure Type	RFI Filter Type
380-480V (T4)	110-1000kW	IP00/IP20/IP21/IP54	H2
380-480V (T4)	315-1000kW	IP00/IP21/IP54	B2
380-480V (T4)	132-630kW	IP00/IP21/IP54	L2
525-690V (T7)	75-1400kW	IP00/IP20/IP21/IP54	H2
525-690V (T7)	450-1400kW	IP00/IP21/IP54	B2

## FC-302 VLT Automation Drive Series:

Voltage/Type	Power Rating	Enclosure Type	RFI Filter Type
380-500V (T5)	90-800kW	IP00/IP20/IP21/IP54	H2
380-500V (T5)	250-800kW	IP00/IP21/IP54	B2
380-480V (T4)	132-630kW	IP00/IP21/IP54	L2
525-690V (T7)	55-1200kW	IP00/IP20/IP21/IP54	H2
525-690V (T7)	355-1200kW	IP00/IP21/IP54	B2

## 2. Active Filter

## VLT AAF006

Voltage/Type	Current Rating	Enclosure Type	RFI Filter Type
380-480V (T4)	190A	IP21/IP54	HX
380-480V (T4)	250A		
380-480V (T4)	310A		
380-480V (T4)	400A		

## 3. Others

Next-Gen D-Frames updates D1h thru D8h.

New Low Harmonic Drive (LHD) (Option N2 in type code).

The selected marine products should be appropriate to the condition of location and manufacturer's instruction.



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