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## Manufacturers Declaration Certificate of Conformity

The below listed national and international directives/standards were observed during the design of the VLT® HVAC Drive series FC-102, VLT® AQUA Drive series FC-202 and VLT® Automation Drive series FC-301 & FC-302, VLT® Automation VT Drive series FC-322

Directive/standard/norm	Description
<b>Europe</b>	
<b>Low Voltage Directive</b> <u>2006/95/EC</u> EN/IEC 61800-5-1 : 2007 (all relevant parts)	Adjustable speed electrical power drive systems -Part 5-1: Safety requirements – Electrical, thermal and energy
<b>EMC Directive</b> <u>2004/108/EC</u> EN 61800-3 : 2004 (relevant parts) EN55011 EN/IEC61000-6-1/2 EN61000-3-2 (IEC61000-3-2) EN61000-3-12(IEC61000-3-12)	Adjustable speed electrical power drive systems Part 3: EMC requirements and specific test methods
<b>Functional Safety:</b>	
EN ISO 13849-1:2008 (Safe Stop function, PL d (MTTF <sub>d</sub> = 14000 years, DC=90%, Category 3)	Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design
EN/IEC 61508-1:2010, EN/IEC 61508-2:2010 (Safe Stop function, SIL 2 (PFH = 1e <sup>-10</sup> , SFF>99%, HFT=0))	Functional safety of electrical/electronic/programmable electronic safety-related systems Part 1: General requirements Part 2: Requirements for electrical/ electronic / programmable electronic safety-related systems
EN/IEC 61800-5-2:2007 (Safe Stop function conforms with STO – Safe Torque Off, SIL 2 Capability)	Adjustable speed electrical power drive systems - Part 5-2: Safety requirements - Functional
EN/IEC 62061:2005 (Safe Stop function, SILCL 2)	Safety of machinery - Functional safety of safety-related electrical, electronic and programmable electronic control systems
EN 60204-1 (Stopping Category 0, Unintended Restart Protection)	Safety of machinery - Electrical equipment of machines - Part 1: General requirements

**North America**

**UL 508C** Power Conversion Equipment  
(all relevant parts)

**CAN/CSA-C22.2 No. 14-05 \*** Industrial Control Equipment  
(all relevant parts)  
\* Certified by UL

**Miscellaneous standards/norms:**

**Danfoss Corporate Guideline: 500B0430** Guideline for Transportation test (Packaging)  
ISTA, procedure 1A and 1

**Danfoss Corporate Guideline: 500B0432,** Guideline for Vibration test  
Sinus Vibration, curve V (IEC 68-2-6, test Fc)  
Random vibration, curve E / F

**IEC 61800-2 (1998)**  
Adjustable Speed Electrical Electrical Power Drive Systems  
General Requirements – Rating Specifications for Low Volt  
Adjustable Frequency a.c. Power Drive Systems

**IEC 60068-2-64** Environmental testing - Part 2-64: Tests - Test  
Vibration, random, broad-band Fh: Vibration, broadband random and guidance

**VDE 0160**  
Mains transients test pulse, class 1/2

**Operation:**  
EN50178 (section 6.1, table 7)(IEC 721-3-3) Electronic equipment for use in power  
Temperature (Class 3K3), installations  
Relative humidity (Class 3K3),  
Air pressure (Class 3K3)

**Storage:**  
EN 50178 (section 6.1, table 7)(IEC 721-3-1) Electronic equipment for use in power  
Temperature (Class 1K4) installations  
Relative humidity (Class 1K3)  
Air pressure (Class 1K4)

**During transportation:** Electronic equipment for use in power  
EN 50178 (section 6.1, table 7)(IEC 721-3-2) installations  
Temperature (Class 2K3)  
Relative humidity (Class 2K3)  
Air pressure (Class 2K3)

**The conditions for observing the above mentioned directives/standards/norms, see the Operation Instruction or Design Guide for the specific product series.**

Issued by:



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