



Product Overview

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VLT® Micro Drive

A compact general purpose drive for AC motors up to 7.5 kW.

It performs perfectly even in complex application set-ups and optimize energy efficiency and operation.

- 1 phase 200 – 240 V AC: 0.18 – 2.2 kW
- 3 phase 200 – 240 V AC: 0.25 – 3.7 kW
- 3 phase 380 – 480 V AC: 0.37 – 7.5 kW
- Multipurpose
- Process PI-controller
- Automatic Energy Optimizer (AEO)
- Automatic Motor Adaptation (AMA)
- 150% motor torque up to 1 minute
- Smart Logic Controller



VLT® 2800 Series

An extremely compact series of drives prepared for side-by-side mounting and developed specifically for the low power market.

- 200 – 240 V, 0.37 – 3.7 kW
- 380 – 480 V, 0.55 – 18.5 kW
- Multipurpose
- Side-by-side mounting in any direction
- Built-in PID controller, RFI-filter and DC coils
- Bookstyle IP 20
- Integrated RS 485 interface as standard
- Integrated Profibus (optional)



VLT® AutomationDrive

An extremely flexible and cost-effective drive suitable for all industry applications – from simple speed control to dynamic servo applications.

VLT® AutomationDrive comes in a basic version (FC 301) and an advanced version (FC 302) with additional functionalities.

- 200 – 240 V, 0.25 – 37 kW
- 380 – 500 V, 0.37 – 1.0 MW
- 525 – 690 V, 37 kW – 1.2 MW
- Built-in DC coils and RFI-filter (optional)
- Bookstyle IP 20/IP 21/NEMA 1/ IP4X top
- Compact drive IP 55 and IP 66/NEMA 4
- Integrated Smart Logic Controller, (USB and RS485) as standard
- Integrated optional communication options (Profibus DP/V1, DeviceNet, CanOpen and more)
- Integrated optional additional I/O (digital I/O's, encoders, (incremental, absolute, sin/cos, resolver))
- Integrated Motion Control Option (PLC)



VLT® HVAC Drive

The VLT® HVAC Drive continues Danfoss leadership in dedicated HVAC features and applications for drives.

Advancements in energy monitoring, trending, system maintenance and operation are combined with a modular platform to make the drive "child's play" to operate.

- 200 – 240 V, 1.1 – 45 kW
- 380 – 480 V, 1.1 kW – 1.0 MW
- 525 – 600 V, 1.1 kW – 1.0 MW
- Built-in DC coils and RFI-filter (optional)
- Bookstyle IP 20/IP 21/NEMA 1/ IP4X top
- Compact drive IP 55 and IP 66/NEMA 4
- Integrated communication options (Modbus RTU, BACnet, LonWorks and more)
- Multiple PID loops for advanced HVAC control
- Platinum and Nickel temperature sensor inputs
- Application specific menus for quick and easy programming
- Capability for compressor control
- Preventive maintenance scheduling



VLT® AQUA Drive

VLT® AQUA Drive the perfect match for pumps and blowers in modern water and wastewater systems.

Advanced application protective features. Available with cascade control of up to 8 pumps in fixed speed mode or master/follower mode.

- 1 phase 200 – 240 V, 5.5 – 22 kW
- 1 phase 380 – 480 V, 7.5 – 37 kW
- 3 phase 200 – 240 V, 0.25 – 45 kW
- 3 phase 380 – 480 V, 0.37 kW – 1.0 MW
- 3 phase 525 – 600 V, 0.75 – 90 kW
- 3 phase 525 – 690 V, 11 kW – 1.2 MW
- Built-in DC coils and RFI-filter (optional)
- Bookstyle IP 20/IP 21/NEMA 1/ IP4X top
- Compact drive IP 55 and IP 66/NEMA 4
- Integrated communication options (Modbus RTU, Profibus, DeviceNet, EtherNet IP)
- Multiple PID loops for advanced AQUA control
- Platinum and Nickel temperature sensor inputs
- Application specific menus for quick and easy programming
- Capability for constant torque loads
- Preventive maintenance scheduling



VLT® Decentral FCD 300

The VLT® Decentral FCD 300 is a complete frequency converter designed for decentral mounting.

- 0.37 – 3.3 kW
- Mounted on the wall close to the motor, or directly on the motor
- IP 66, a corrosion resistant coating
- CE, also IEC 61000-3-2, UL, and C-tick
- Twin part design makes commissioning and service easy



VLT® DriveMotor FCM 300

The VLT® FCM 300 Series is a very compact alternative to the traditional solution with a VLT® frequency converter and motor as separate units.

- 380 – 480 V, 0.55 – 7.5 kW
- Pre-set adaptation between drive and motor giving precise and energy efficient control
- Meets the EMC directive
- IP 55 enclosure, optionally IP 56 and IP 66
- RS 485 protocol as standard and Profibus as built in option



VLT® Soft Starter MCD 100

The VLT® Soft Starter is a cost effective and extremely compact soft starter for AC motors from 1.1 – 11 kW.

Due to a unique semiconductor design it is a true “fit and forget” product.

- 1.5 kW (MCD 100-001), 3 A
- 7.5 kW (MCD 100-007), 15 A
- 11 kW (MCD 100-011), 25 A
- Rated for line voltage up to 600 V
- Approvals: UL/C-UL: UL508, CE: IEC 60947-4-2



VLT® Compact Starter MCD 200

The MCD 200 is a compact and cost effective soft starter range for applications where direct-on-line starting is undesirable.

MCD 200 is due to its size and functionality a good alternative to other reduced voltage starting methods such as start/delta starters.

- Versions for 200 – 575 V AC, 7.5 – 100 kW, max. 200 A
- Voltage ramps or current limit ramp soft start
- Build-in motor protection
- Compact design with internal bypass system for minimum power loss
- Add on modules for remote operation and serial communication



VLT® Soft Starter MCD 3000

The MCD 3000 is a total motor starting solution providing all the best in soft starter functionality. It offers high end functionality whatever it is for starting, stopping or protection of motor or application.

- Versions for 200 – 690 V AC, 7.5 – 800 kW
- Current limit soft start with initial current ramp up
- Four different auto-adjustable ramp down profiles
- Numerous motor protection features
- Manual or remote control and password protection of parameters



VLT® Harmonic Filter AHF 005/010

Easily & Effective Harmonic distortion reduction by connecting the AHF 005/010 harmonic filter in front of a Danfoss frequency converter.

- AHF 005 reduces total harmonic current distortion to 5%
- AHF 010 reduces total harmonic current distortion to 10%
- Small compact housing that fits into a panel
- Easy to use in retrofit applications
- User-friendly start-up – no adjustment necessary
- No routine maintenance required



VLT® dU/dt Filters

dU/dt filters reduce the dU/dt values on the motor terminal phase-to-phase voltage. The phase-to-phase voltage is still pulse shaped.

Compared to sine-wave filters, dU/dt filters cut-off frequencies above the switching frequency.

Having small inductance and capacitance, the filter is cheaper. The filters reduce the motor insulations stress and are recommended in applications with risk of flashover.

- Range**
- 3 x 200 – 500 V
 - 3 x 525 – 690 V



Sine-wave Filters

Sine-wave Filters reduce motor insulation stress and switching acoustic noise from the motor. Bearing currents are also reduced, especially in larger motors.

The perfect solution for:

- Applications with older motors
- Aggressive environments
- Applications with frequent braking

Range

3 x 200 – 500 V
3 x 525 – 690 V

Advantages:

- Protects the motor against dU/dt stress which prolongs the lifetime
- Lower the frequency depending losses in the motor, eddy current losses and stray flux losses
- Diminishing acoustic switching noise on the motor
- Reduces semi conduct losses in the drive with long motor cables
- Decrease electromagnetic radiated emissions on unshielded motor cables
- Reduce voltage peaks
- Reduce electrical discharges in the motor construction thus prolonged bearing life time



Advanced Active Filter

Danfoss Advanced Active Filters eliminate harmonic distortion from non-linear loads and improve system power factor.

The perfect solution for:

- Restoring weak networks
- Increasing network capacity
- Increasing generator power
- Meeting compact retrofit demands
- Securing sensitive environments
- Utilising energy savings

Voltage range

- 380 – 480 V AC, 50 – 60 Hz
- 500 – 690 V AC, 50 – 60 Hz

Power Range

190 A, 250 A, 310 A, 400 A, 500 A
Up to 4 units can be paralleled for higher power

Proven VLT® power electronics re-establishes optimal sinusoidal power and power factor = 1 by generating and injecting counter phased harmonic and reactive currents.

The modular build-up offers the same characteristics as our High Power VLT® family, including high energy efficiency, user-friendly operation, back channel cooling and high enclosure grades.

Danfoss Advanced Active Filters can compensate individual VLT® drives as a compact integrated solution or be installed as a compact stand alone solution at a common point of coupling compensating several loads simultaneously. Danfoss Active Filters can operate at medium voltage level by means of step down transformer.



VLT® Motion Control Tool MCT10

For Managing Drive Parameters in systems the new Motion Control Tool MCT 10 is the perfect tool to handle all drive-related data.

The MCT10 offers you:

- Project orientation, one file that contains all parameters settings plus user-defined documents
- Explorer like view, gives the user a low learning curve
- VLT® Motion Control Tool offers programming of synchronisation and positioning in same environment: one PC tool for all tasks
- Online and offline commissioning
- Support of different interfaces RS485, RS232, USB and Profibus (plus more to come)
- Import of drive setting from Windows and DOS version of Dialog