ENGINEERING TOMORROW

Fact Sheet

VLT® Midi Drive FC 280

Flexible. Communicative. Easy to use.

Access your true high-efficiency potential with the VLT® Midi Drive FC 280, the evolution of the popular VLT® 2800 drive. Profit from new savings, with a wide range of features designed to make installing, using, and maintaining the drive as simple and as easy as possible – just set and forget.

This AC drive delivers precise and efficient motor control for machine builders in the food and beverage, material handling, and processing industries. It is strong on control performance, functional safety, and flexible fieldbus communication.

It's also an easy retrofit for the VLT® 2800 in established plant or machinery concepts.

Fits
your application

The right mix of features ensures the AC drive suits your task, whether for conveyor systems, mixers, and packaging systems or driving pumps, fans, and compressors.

VLT® Midi Drive saves installation time, with all-pluggable connectors, and USB port for convenient PC connection. For easy and intelligent commissioning, transfer, or programming of factory settings, use the handy VLT® Memory Module.
Set-up wizards simplify commissioning for common applications.

Integrated features free you from finding space and budget to install extra components:

- DC chokes reduce harmonics to less than 48% THDi
- RFI filter
- Dual-channel Safe Torque Off (STO)
- Brake chopper

Product range

3 x 380 – 480 V.....0.37 – 22 kW
3 x 200 – 240 V.....0.37 – 3.7 kW
1 x 200 – 240 V.....0.37 – 2.2 kW

Feature	Benefit
Integrated harmonics and EMC design	
Integrated DC choke	– Saves installation time and panel space requirements – Improves power supply quality and helps extend DC capacitor lifetime
Integrated EMC filter	– Avoids malfunction and improves reliability of surrounding components
RFI switch	– Operates safely on IT mains – Trouble-free operation of insulation monitoring relay
Easy to install and set up	
Pluggable terminals	– Fast installation and unit exchange
Memory module (option)	– Convenient transfer of parameter set-up – Easy firmware updates – Easy and fast commissioning
Memory module programmer	– Convenient transfer files to and from the VLT® Memory Module MCM 102 via PC
Enhanced numerical LCP (option)	– Cost effective user interface
Adapter for graphical LCP supporting many languages (option)	– Easy set-up in one of six main languages – Fast troubleshooting
USB port	– Easy PC connection for troubleshooting or commissioning – No need for adapter or PC-USB driver
Application set-up wizards	– Easy commissioning
Strategic design for applications, safety, and motor control	
Integrated Safe Torque Off (STO), dual channel	– Eliminates external components – Enables reliable functional safety
Control algorithm runs both induction and PM motors	– Freedom to choose the best high-efficiency motor for the task
Integrated brake chopper for 3-phase drives in power sizes up to 22 kW	– No cost for external braking chopper
Side-by-side or horizontal mounting, without derating	– Saves panel space and cost
Operates at up to 45 °C without derating	– Saves cost for external cooling and reduces downtime for overtemperature failures

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RFI filter

The integrated RFI filter is EMC standard EN 55011-1A and EN/IEC 61800-3 C2 compliant, ensuring that the AC drive does not disrupt operation of other electrical components connected to the mains.

Your choice of fieldbus

- PROFIBUS
- PROFINET
- EtherNet/IP™
- CANopen
- Modbus RTU and FC Protocol are integrated as standard

Options

Memory module

The VLT® Memory Module facilitates helpful implementation of factory settings for machine builders, fast installation of firmware updates, and easy transfer of settings during retrofit.

24 V DC external supply

The back-up power supply keeps the control system alive in the event of mains loss.

Adapter for graphical LCP

Enable the full functional interface by connecting the graphical LCP.

Enhanced numerical LCP

Use this effective user interface to access parameters, check the drive status and reset alarms.

- Copy function
- Drive mounted, hand-held, or panel mounted

PC software tool

VLT® Motion Control Tool MCT 10

This set-up tool is ideal for ease of commissioning and servicing the drive.

Specifications

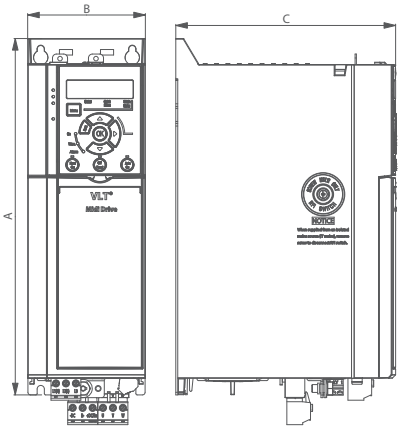
Mains supply (L1, L2, L3)	
Supply voltage	200-240 V (-15%/+10%) 380-480 V (-15%/+10%)
Supply frequency	50/60 Hz
Displacement power factor (cos φ)	Near unity (> 0.98)
Switching frequency on input supply L1, L2, L3	Switching maximum 2 times/minute
Output data (U, V, W)	
Output voltage	0–100% of supply voltage
Switching on output	Unlimited
Ramp times	0.01-3600 s
Frequency range	0-500 Hz
Programmable digital inputs and outputs	
Digital inputs / digital outputs*	6 (7) / 1
Logic	PNP or NPN
Voltage level	0-24 V DC

**Note: One digital input can be configured as pulse output*

Pulse and encoder inputs	
Pulse inputs / encoder inputs**	2/2
Voltage level	0–24 V DC

***Note: Two digital inputs can be configured as pulse inputs.*
Two digital inputs can be configured as encoder inputs

Programmable analog inputs	
Analog inputs	2
Modes	1 voltage or current / 1 current or DI
Voltage level	0 V to +10 V (scaleable)
Current level	0/4 to 20 mA (scaleable)
Programmable analog outputs	
Analog outputs	1
Current range at analog output	0/4 to 20 mA
Programmable relay outputs	
Relay outputs	1
Approvals	
Approvals	CE, UL listed, cUL, TÛV



Dimensions

Enclosure	K1	K2	K3	K4	K5
Power size [kW] at voltage 380–480 V	0.37-2.2	3.0-5.5	7.5	11-15	18.5-22
Height A [mm]	210	272.5	272.5	320	410
Width B [mm]	75	90	115	135	150
Depth C [mm]	168	168	168	245	245

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