

VLT® Decentral FCD 300



The perfect solution for:

- Installations in wash-down areas
- Material handling
- Widely distributed applications
- Application modules often applied to different set-ups

Power range

0.37 – 3.3 kW, 3 x 380 – 480 V

Enclosure

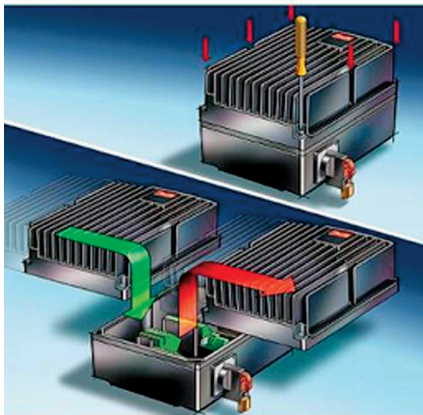
IP66

The VLT® Decentral FCD 300 is a complete frequency converter designed for decentral mounting. It can be mounted on a wall close to the motor, or directly on the motor.

The VLT® Decentral FCD 300 comes in a high enclosure class, with a robust painted surface to withstand normal cleaning methods. The design offers a smooth cleaning-friendly surface without any difficult to clean spots.

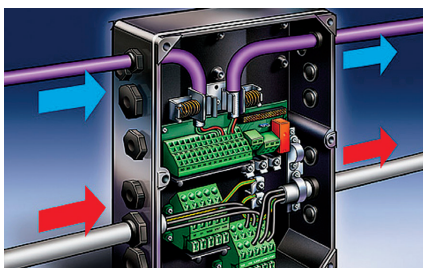
The decentral design reduces the need for central control panels and space-consuming motor control cabinets are eliminated. In addition, the need for wiring long screened motor cables is reduced.

Features	Benefits
<p>User-friendly</p> <ul style="list-style-type: none"> • Adapts to any brand of motor and geared motor • Designed for power and fieldbus looping • Visible LEDs • Set-up and controlled through a remote control panel or fieldbus communication and dedicated MCT 10 set-up software 	<p>– Save commissioning and operating cost</p> <ul style="list-style-type: none"> • Easy and flexible installation • Cable savings • Easy status check • Easy commissioning
<p>Reliable</p> <ul style="list-style-type: none"> • Special surface treatment as protection against aggressive environments • Twin part design (installation box and electronic part) • Integrated lockable service switch available • Full protection is offered 	<p>– Maximum up-time</p> <ul style="list-style-type: none"> • Easy cleaning; no dirt trap • Easy and fast service • Local disconnecting possible • Protects the motor and drive



Plug-and-drive

The bottom section contains maintenance-free Cage Clamp connectors and looping facilities for power and fieldbus cables well protected against dust, hosing and cleaning agents. Once installed, commissioning and upgrading can be performed in no time by plugging in another control lid.



Flexible installation

The FCD 300 series facilitates internal power line and fieldbus looping. Terminals for 4 mm² power cables inside the enclosure allows connection of up to 10+ units.

Available options

- Service switch
- M12 connectors for sensor input
- Harting 10E motor plug
- Dynamic braking
- 24 V back up of control and communication

Specifications

Mains supply (L1, L2, L3)	
Supply voltage	3 x 380/400/415/440/480V ± 10%
Supply frequency	50/60 Hz
Max. imbalance on supply voltage	± 2.0% of rated supply voltage
Switching on input supply	2 times/min.
Power Factor (cos φ)	0.9 / 1.0 at rated load
Output data (U, V, W)	
Output voltage	0–100% of supply
Overload torque	160% for 60 sec.
Switching on output	Unlimited
Ramp times	0.02 - 3600 sec.
Output frequency	0.2 - 132 Hz, 1 - 1000 Hz
Digital inputs	
Programmable digital inputs	5
Voltage level	0–24 V DC (PNP positive logic)
Analog inputs	
Analog inputs	2 (1 voltage, 1 current)
Voltage level/Current level	0– ± 10 V DC / 0/4–20 mA (scaleables)
Pulse inputs	
Programmable pulse inputs	2 (24 V DC)
Max. frequency	110 kHz (push-pull) / 5 kHz (open collector)
Analog output	
Programmable analog output	1
Current range	0/4–20 mA
Digital output	
Programmable digital/frequency output	1
Voltage/frequency level	24 V DC / 10 kHz (max.)
Relay output	
Programmable relay output	1
Max. terminal load	250 V AC, 2 A, 500 VA
Fieldbus communication	
FC Protocol, Modbus RTU, Metasys N2	Built-in
Profibus DP, DeviceNet, AS-interface	Optional (integrated)
Externals	
Vibration test	1.0 g (IEC 60068)
Max. relative humidity	95 % (IEC 60068-2-3)
Ambient temperature	Max. 40°C (24 hour average max. 35°C)
Min. ambient temperature in full operation	0°C
Min. ambient temperature at reduced performance	-10°C
Approvals	CE, UL, C-tick, ATEX*

* Contact Danfoss for details

Technical data

VLT® Decentral FCD		303	305	307	311	315	322	330	335*	
Output current (3 x 380–480 V)	I _{INV (60s)} [A]	1.4	1.8	2.2	3.0	3.7	5.2	7.0	7.6	
	I _{MAX (60s)} [A]	2.2	2.9	3.5	4.8	5.9	8.3	11.2	11.4	
Output power (400 V)	S _{INV} [KVA]	1.0	1.2	1.5	2.0	2.6	3.6	4.8	5.3	
Typical shaft output	P _{M,N} [kW]	0.37	0.55	0.75	1.1	1.5	2.2	3.0	3.3	
	P _{M,N} [HP]	0.5	0.75	1.0	1.5	2.0	3.0	4.0	5.0	
Mechanical dimensions H x W x D (mm)	Motor mounting	244 x 192 x 142					300 x 258 x 151			
	Stand alone	300 x 192 x 145					367 x 258 x 154			

* t_{amb} max. 35°C