

VLT® Decentral FCD 300

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



The VLT® Decentral FCD 300 comes in very robust enclosure, with a special painting treatment to withstand harsh environments and typical cleaning agents used in wash-down areas. Its design offers a smooth cleaning-friendly surface.

The decentral design reduces the need for central control panels and eliminates the need for space-consuming motor control cabinets.

The need for long screened motor cables is significantly reduced.

Power range
0.37 – 3.3 kW, 3 x 380 – 480 V

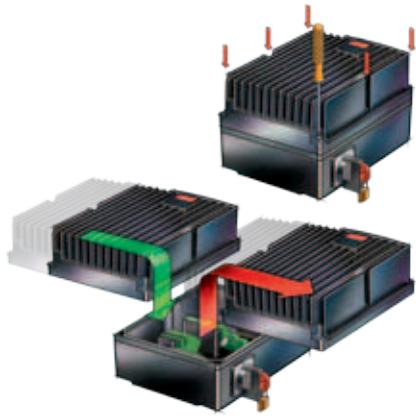
Enclosure
IP 66/Type 4X (indoor)

Feature	Benefit
Reliable Special surface treatment as protection against aggressive environments	Maximum uptime Easy cleaning; no dirt trap
Twin part design (installation box and electronic part)	Easy and fast service
Integrated lockable service switch available	Local disconnection possible
Full protection is offered	Protects the motor and drive
User-friendly Adapts to any brand of motor and geared motor	Saves commissioning and operating cost Easy and flexible installation
Designed for power and fieldbus looping	Cable savings
Visible LEDs	Quick status check
Set-up and controlled through a remote control panel or fieldbus communication and dedicated MCT 10 set-up software	Easy commissioning

Perfect

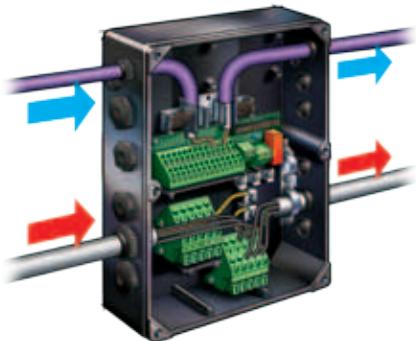
match for:

- Material handling in Food & Beverage Industry
- Installations in wash-down areas
- Widely distributed applications



Plug-and-drive

The bottom section contains maintenance-free Cage Clamp connectors and looping facilities for power and fieldbus cables. 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 external sensors
- Han 10E motor connector
- Brake chopper and resistor
- 24 V external back up of control and communication
- External electromechanical brake control and supply

Specifications

Mains supply (L1, L2, L3)	
Supply voltage	3 x 380/400/415/440/480 V ± 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