



# 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                                       |
|---|---|
| <b>Reliable</b>   | <b>Maximum uptime</b>                         |
| Special surface treatment as protection against aggressive environments   | 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                  |
| <b>User-friendly</b>  | <b>Saves commissioning and operating cost</b> |
| Adapts to any brand of motor and geared motor   | 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

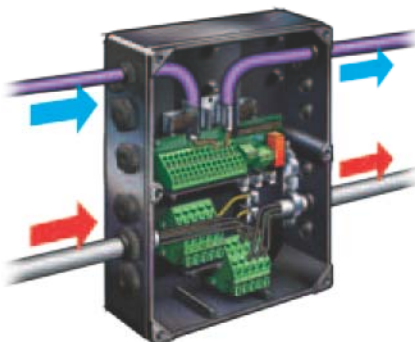
match for:

- 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 mm<sup>2</sup> 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 <sub>INV (60s)</sub> [A] | 1.4             | 1.8  | 2.2  | 3.0             | 3.7 | 5.2 | 7.0  | 7.6  |
|                                      | I <sub>MAX (60s)</sub> [A] | 2.2             | 2.9  | 3.5  | 4.8             | 5.9 | 8.3 | 11.2 | 11.4 |
| Output power (400 V)                 | S <sub>INV</sub> [KVA]     | 1.0             | 1.2  | 1.5  | 2.0             | 2.6 | 3.6 | 4.8  | 5.3  |
| Typical shaft output                 | P <sub>M,N</sub> [kW]      | 0.37            | 0.55 | 0.75 | 1.1             | 1.5 | 2.2 | 3.0  | 3.3  |
|                                      | P <sub>M,N</sub> [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<sub>amb</sub> max. 35 °C