ENGINEERING TOMORROW

Fact Sheet

VLT® Micro Drive FC 51

Small drive with maximum strength



The VLT® Micro Drive is a general-purpose drive that can control AC motors up to 22 kW. It's a small drive with maximum strength and reliability.

VLT® Micro Drive is a full member of the VLT® family sharing the overall quality of design, reliability and user- friendliness. Due to high quality components the VLT® Micro Drive is extremely reliable.

RoHS compliant

The VLT® Micro Drive is manufactured with respect for the environment, and it complies with the RoHS Directive.

Power range:

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:	0.37–22 kW

Perfect

match for:

– Industrial appliances
– HVAC applications
– OEM

Feature	Benefit
Minimum commissioning	Saves time
Copy settings via local control panel	Easy programming of multiple drives
Intuitive parameter structure	Minimal manual reading
Self-protecting features	Lean operation
Process PI-controller	No need for external controller
Automatic Motor Tuning	Ensures optimal match between drive and motor
150% motor torque up to 1 minute	Plenty of brake-away and acceleration torque
Flying start (catch a spinning motor)	Doesn't trip when started on a spinning (freewheeling) motor
Electronic Thermal Relay (ETR)	Replaces external motor protection
Smart Logic Controller	Often makes PLC unnecessary
Built-in RFI filter	Saves cost and space
Energy efficiency 98%	Minimizes heat loss
Automatic Energy Optimization (AEO)	Saves 5–15% energy in HVAC applications
Earth fault and short circuit protection	Protects the drive
Unique cooling concept with no forced air flow over electronics	Problem-free operation in harsh environments
High quality capacitors	Tolerates uneven mains supply
All drives full load tested from factory	High reliability
Dust resistant	Increased lifetime
RoHS compliant	Protects the environment

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Coated PCB standard
For harsh environments.

Power options
Danfoss VLT® Drives offers a range of external power options for use together with our drives in critical networks or applications:

- **VLT® Advanced Harmonic Filter**
  For applications where reducing harmonic distortion is critical.

PC software tools
- **MCT 10**
  Ideal for commissioning and servicing the drive including guided programming of cascade controller, real-time clock, smart logic controller and preventive maintenance.
- **VLT® Energy Box**
  Comprehensive energy analysis tool, shows the drive payback time.
- **MCT 31**
  Harmonics calculations tool.



Cabinet sizes
(mounting flange incl.)

[mm]	M1	M2	M3	M4	M5
Height	150	176	239	292	335
Width	70	75	90	125	165
Depth	148	168	194	241	248

+ 6 mm with potentiometer

Specifications

Mains supply (L1, L2, L3)	
Supply voltage	1 x 200–240 V ±10%, 3 x 200–240 V ±10% 3 x 380–480 V ±10%
Supply frequency	50/60 Hz
Displacement Power Factor (cos φ) near unity	(> 0.98)
Switching on input supply L1, L2, L3	1–2 times/min.
Output data (U, V, W)	
Output voltage	0–100% of supply voltage
Output frequency	0–200 Hz (VVC+ mode), 0–400 Hz (U/f mode)
Switching on output	Unlimited
Ramp times	0.05–3600 sec
Digital inputs	
Programmable digital inputs	5
Logic	PNP or NPN
Voltage level	0–24 VDC
Pulse inputs	
Programmable pulse inputs	1*
Voltage level	0–24 V DC (PNP positive logic)
Pulse input frequency	20–5000 Hz

** One of the digital inputs can be used for pulse inputs.*

Analogue input	
Analog inputs	2
Modes	1 current/1 voltage or current
Voltage level	0 – 10 V (scaleable)
Current level	0/4 to 20 mA (scaleable)
Analogue output	
Programmable analog outputs	1
Current range at analog output	0/4–20 mA
Relay outputs	
Programmable relay outputs	1 (240 VAC, 2 A)
Approvals	
CE, C-tick, UL	
Fieldbus communication	
FC Protocol, Modbus RTU	

Ordering numbers

	200 V			400 V	
Power [kW]	Current [I nom.]	1 ph.	3 ph.	Current [I nom.]	3 ph.
0.18	1.2	132F 0001			
0.25	1.5		132F 0008		
0.37	2.2	132F 0002	132F 0009	1.2	132F 0017
0.75	4.2	132F 0003	132F 0010	2.2	132F 0018
1.5	6.8	132F 0005	132F 0012	3.7	132F 0020
2.2	9.6	132F 0007	132F 0014	5.3	132F 0022
3.0				7.2	132F 0024
3.7	15.2		132F 0016		
4.0	Micro Drives from 1.5 kW and up have built-in brake chopper			9.0	132F 0026
5.5				12.0	132F 0028
7.5				15.5	132F 0030
11.0				23.0	132F 0058
15.0				31.0	132F 0059
18.5				37.0	132F 0060
22.0				43.0	132F 0061

VLT® Control panel LCP 11 ..... Without potentiometer: **132B0100**
VLT® Control panel LCP 12 ..... With potentiometer: **132B0101**

VLT | VACON

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