VLT® Micro Drive
The compact general purpose drive

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.

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

The perfect match for:
- Industrial appliances
- HVAC applications
- OEM

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

Features	Benefits
User friendly	
• Minimum commissioning	• Saves time
• Mount – connect – go!	• Minimum effort - minimum time
• Copy settings via local control panel	• Easy programming of multiple drives
• Intuitive parameter structure	• Minimal manual reading
• Complies with VLT® software	• Saves commissioning time
• Self-protecting features	• Lean operation
• Process PI-controller	• No need for external controller
• Automatic Motor Adaptation (AMA)	• Exploits motor's full potential
• 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
• Precise stop function	• Lean production – more up-time
• Smart Logic Controller	• Often makes PLC unnecessary
• Built-in RFI filter	• Saves cost and space
Energy saving	**Less operation cost**
• Energy efficiency 98 %	• Minimises heat loss
• Automatic Energy Optimisation (AEO)	• Saves 5-15% energy in HVAC applications
Reliable	**Maximum uptime**
• Earth fault protection	• Protects the drive
• Over temperature protection	• Protects the motor and drive
• Short circuit protection	• Protects the drive
• Optimum heat dissipation	• Longer lifetime
• High quality electronics	• Low lifetime cost
• High quality capacitors	• Tolerates uneven mains supply
• All drives full load tested from factory	• High reliability
• Dust resistant	• Optimised productivity
• Tight enclosure	• Increased lifetime
• RoHS compliant	• Protects the environment
• Designed for WEEE	• Protects the environment

VLT®
THE REAL DRIVE

Coated PCB standard
For harsh environments.

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

PC software

- **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.

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 inputs	5
Logic	PNP or NPN
Voltage level	0 – 24 V
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.*

Analog input	
Analog inputs	2
Modes	1 current/1 voltage or current
Voltage level	0 – 10 V (scaleable)
Current level	0/4 – 20 mA (scaleable)
Analog 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	

M1 M2 M3 M4 M5

Cabinet sizes

(mounting flange included)

[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

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

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