

# VLT® HVAC Basic Drive



The VLT® HVAC Basic Drive is a quality Danfoss product focused mainly on basic HVAC requirements in fans and pumps. A HVAC dedicated drive presenting the best price / performance fit.

VLT® HVAC Basic Drive is designed and produced by Danfoss in its own factories.

and is the most compact drive in its class and with its specifications.

It uses the latest technological advancements in power electronics

It follows on from the success of the advanced VLT® HVAC Drive.

### The perfect match for:

- Basic HVAC installations
- Fan operation
- Pump operation

### Product range:

3 x 200 – 240 ..... 0.25 – 45 kW  
 3 x 380 – 480 V ..... 0.37 – 90 kW  
 3 x 525 – 600 V ..... 2.2 – 90 kW

### Available enclosure ratings:

IP 20  
 IP 21 / NEMA Type 1 kit

Feature	Benefit
<b>All built-in – low investment</b>	
• Flying Start	• Reduced mechanical wear on equipment
• Most common HVAC protocols for BMS controller connectivity are embedded	• Less extra gateway solutions needed
• Built-in PI controller	• No external PI controller needed
• Smart Logic Controller	• Often makes PLC unnecessary
• Integrated fan, pump functionality	• Saves external control and conversion equipment
• Fire Override Mode	• Enhanced safety
<b>Save energy – less operation cost</b>	
• Automatic Energy Optimizer function,	• Saves 5 – 15% energy
• Sleep mode	• Energy saving and extended lifetime
<b>Unequaled robustness – maximum uptime</b>	
• Available in IP20 / IP21 options / Type 1	• Enclosures to fit your needs
• Robust single enclosure	• Maintenance-free
• Unique cooling concept with no forced air flow over electronics	• Problem-free operation in harsh environments
• Max ambient temp. 50° C	• No external cooling
<b>User friendly – save commissioning and operating cost</b>	
• Easy access for tools	• Effective commissioning and operation
• Read outs in engineering units	• Alpha numeric display/improved HMI
• Start up wizard	• Drive set-up fast and easy
• Auto restart	• Saves time
• Bypass frequencies	• Less noise and vibrations/resonances
• Global HVAC support organisation	• Local service – globally
<b>Built-in DC coils – no harmonic concerns</b>	
• Category C1 filters	• Meets protection class C1, C2 and C3
• Integrated DC Choke	• Small power cables. Meets EN 61000-3-12
• Thermistor input	• Prevents overheat of motor

## Easy to configure

- Start up with a configuration wizard
- Easy to program parameters
- Alphanumeric display
- Hand – Off – Auto keys



- Status LCDs
- Easy to install
- Easy to wire up
- 7 languages or numeric programming

## Choice made simple

- Enclosures: IP 20 / IP 21
- Harmonic filters
- 25 m C3 as standard  
– Optional: C1/C2 filters
- Voltage : 200 / 400 / 600

## Specifications

Mains supply (L1, L2, L3)	
Supply voltage	200–240 V ±10%
Supply voltage	380–480 V ±10%
Supply voltage	525–600 V ±10%
Supply frequency	50/60 Hz
Displacement Power Factor (cos φ) near unity	(> 0.98)
Switching on input supply L1, L2, L3	1 time/minute max.
Output data (U, V, W)	
Output voltage	0–100% of supply voltage
Switching on output	Unlimited
Ramp times	1–3600 sec.
Open/Closed loop	0–400 Hz
Digital inputs	
Programmable digital inputs	4*
Logic	PNP or NPN
Voltage level	0–24 VDC
Analogue input	
Analogue inputs	2
Modes	Voltage or current
Voltage level	0 V to +10 V (scaleable)
Current level	0/4 to 20 mA (scaleable)
Analogue output (can be used as digital output)	
Programmable analogue outputs	2
Current range at analogue output	0/4–20 mA
Relay outputs	
Programmable relay outputs	2 (240 VAC, 2 A and 400 VAC, 2 A)
Fieldbus communication	
Standard built-in: FC Protocol N2 Metasys	FLN Apogee Modbus RTU BACnet mstp

## Dimensions:

Frame	IP Class	Power (kW/HP)		Height (mm/inch)		Width (mm/inch)	Depth (mm/inch)
		3 x 200–240 V	3 x 380–480 V		Incl. decoupling plate		
H1	IP 20	0.25–1.5 kW/ 0.33–2 Hp	0.37–1.5 kW/ 0.5–2 Hp	195/7.7	273/10.7	75/3	168/6.6
H2	IP 20	2.2 kW/ 3 Hp	2.2–4 kW/ 3–5.4 Hp	227/8.4	303/11.9	90/3.5	190/7.5
H3	IP 20	3.7 kW/ 5 Hp	5.5–5.7 kW/ 7.5–10 Hp	255/10	329/13	100/3.9	206/8.1
H4	IP 20	5.5–7.5 kW/ 7.5–10 Hp	11–15 kW/ 15–20 Hp	296/11.7	359/14.1	135/5.3	241/9.5
H5	IP 20	11 kW/ 15 Hp	18.5–22 kW/ 25–30 Hp	334/13.1	402/15.8	150/5.9	255/10
H6	IP 20		30–45 kW/ 40–60 Hp	518/20.4	595/23.4 635/25	239/9.4	242/9.5
H7	IP 20		55–75 kW/ 100–120 Hp	550/21.7	630/24.8 690/27.2	313/12.3	335/13.2
H8	IP 20		90 kW/ 120 hP	660/26	800/31.5	375/14.8	335/13.2