



# VLT® HVAC Basic Drive

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



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

It uses the latest technological advancements in power electronics and is the most compact drive in its class with its specifications.

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

**Product range:**

- 3 x 200 – 240 V ..... 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/UL Type 1 (separate option kit)
- IP 54

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 required
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 additional 5 – 15% energy
Sleep mode	Energy saving and extended lifetime
<b>Unequalled robustness – maximum uptime</b>	
IP 20/IP 21/Type 1/IP 54	Enclosures to fit your needs up to 90 kW
Robust single enclosure	Maintenance-free
Unique cooling concept with no forced air flow over electronics	Problem-free operation in harsh environments
Max ambient temp. up to 50° C	No external cooling
<b>User friendly – save commissioning and operating cost</b>	
Easy connectability	Effective commissioning and operation
Display in engineering units	Alpha numeric display/improved HMI
Start up wizard	Drive set-up fast and easy
Auto restart	Saves time and money
Bypass frequencies	Less noise and vibrations/resonances
Global HVAC support organization	Local service – globally
<b>Built-in DC coils and EMC filters – no harmonic concerns</b>	
Built-in EMC filter	Meets protection class C1, C2 or C3
Integrated DC Choke	Small power cables. Meets EN 61000-3-12
Thermistor input	Prevents motor overheating

# Perfect

**match for:**

- Basic HVAC installations
- Basic fan operation
- Basic pump operation

## 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 and numeric programming



## Choice made simple

- Enclosures: IP 20/Chassis or IP 21/Type 1 or IP 54
- Harmonic filters
- Minimum 25 m C3 as standard built-in  
– Optional: C1/C2 filters
- Voltage: 208/230/460/575

## 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
Analog input	
Analog inputs	2
Modes	Voltage or current
Voltage level	0 V to +10 V (scaleable)
Current level	0/4 to 20 mA (scaleable)
Analog output (can be used as digital output)	
Programmable analog outputs	2
Current range at analog 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: BACnet mstp FC Protocol	N2 Metasys FLN Apogee Modbus RTU

## 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	3 x 525–600 V			
H1	IP 20	0.25–1.5 kW/0.3–2 HP	0.37–1.5 kW/0.5–2 HP	-	195/7.7	273/10.7	75/2.9
H2	IP 20	2.2 kW/3 HP	2.2–4 kW/3–5.4 HP	-	227/8.9	303/11.9	90/3.5
H3	IP 20	3.7 kW/5 HP	5.5–7.5 kW/7.5–10 HP	-	255/10.0	329/13.0	100/3.9
H4	IP 20	5.5–7.5 kW/7.4–10 HP	11–15 kW/15–20 HP	-	296/11.7	359/14.1	135/5.3
H5	IP 20	11 kW/14.8 HP	18.5–22 kW/25–30 HP	-	334/13.1	402/15.8	150/5.9
H6	IP 20	15–18.5 kW/20–25 HP	30–45 kW/40–60 HP	22–30 kW/30–40 HP	518/20.4	595/23.4–635/25.0	239/9.4
H7	IP 20	22–30 kW/30–40 HP	55–75 kW/75–100 HP	45–55 kW/60–70 HP	550/21.7	630/24.8–690/27.2	313/12.3
H8	IP 20	37–45 kW/50–60 HP	90 kW/125 HP	75–90 kW/100–125 HP	660/26.0	800/31.5	375/14.8
H9	IP 20	-	-	2.2–7.5 kW/3–10 HP	372/14.6	374/14.7	130/5.1
H10	IP 20	-	-	11–15 kW/15–20 HP	475/18.7	419/16.5	165/6.5
I2	IP 54	-	0.75–4 kW/1–5.4 HP	-	332/13.1	-	115/4.5
I3	IP 54	-	5.5–7.5 kW/7.4–10 HP	-	368/14.5	-	135/5.3
I5	IP 54	-	11–18.5 kW/15–24 HP	-	480/18.9	-	242/9.5
I6	IP 54	-	22–37 kW/30–50 HP	-	650/25.6	-	242/9.5
I7	IP 54	-	45–55 kW/60–75 HP	-	680/26.8	-	308/12.1
I8	IP 54	-	75–90 kW/120–125 HP	-	770/30.3	-	370/14.6

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