



VACON 10

COMPACT AND FEATURE-RICH AC DRIVE

VACON
DRIVEN BY DRIVES

THE EASY AC DRIVE OF ALL TRADES

The Vacon 10 is a compact and feature-rich AC drive in the power range of 0.25 kW/ 0.33 HP – 5.5 kW/ 7.5 HP. Available for input voltages of 110-120 V (1-phase), 208-240 V (1-phase and 3-phase models) and 380-480 V (3-phase), the Vacon 10 is an ideal solution for pumps and fans, simple conveyors, and various door applications. Simply put: A general-purpose micro drive for basic applications.

The Vacon 10 is specially configured to meet the most common market needs, emphasizing only the important features, which makes the selection of the Vacon 10 as easy and smooth as possible. In case more flexibility or tailorability is required, Vacon also offers a customizable version of the Vacon 10.

Easy installation and commissioning

- Small physical size
- DIN rail and screw mountable
- Intelligent menu
 - Basic application macros (pumps, fans, conveyors & others)
 - Commissioning wizard
 - Full parameter commissioning

Versatile features

- Fully programmable I/O
- Conformal coated boards as standard
- Brake chopper as standard in 3-phase MI2 and MI3 frames
- PI controller as standard
- Integrated EMC filter for category level C2 available as an option

Extensive I/O

- 6 digital inputs
- 2 analog inputs
- 1 digital output
- 1 analog output
- 2 relay outputs
- RS-485/Modbus as standard

Environmentally friendly

- RoHS compliant
- Recyclable materials
- Energy saving
- Decreased mechanical stress
- Reduced noise levels



MAIN DIMENSIONS

	Width		Height		Depth	
	mm	in	mm	in	mm	in
MI1	66	2.6	157	6.2	98	3.9
MI2	90	3.5	195	9.9	102	4.0
MI3	100	3.9	262	10.3	109	4.3

SELECTION GUIDE – JUST 2 EASY STEPS

Selecting your Vacon 10 is easy and straightforward. First, just choose your supply voltage, then choose the nominal motor current. That's all!

STEP 1

STEP 2

THIS IS YOUR VACON 10

Choose your supply voltage	Motor voltage	Choose motor current (A)	↓	Do you need an EMC filter?	Power		Frame
					kW	HP	
110-120 VAC, 1-phase	208-230 VAC, 3-phase	1.7	VACON0010-1L-0001-1-D		0.25	0.33	MI2
		2.4	VACON0010-1L-0002-1-D		0.37	0.5	MI2
		2.8	VACON0010-1L-0003-1-D		0.55	0.75	MI2
		3.7	VACON0010-1L-0004-1-D		0.75	1	MI2
		4.8	VACON0010-1L-0005-1-D		1.1	1.5	MI3
208-240 VAC, 1-phase	208-230 VAC, 3-phase	1.7	VACON0010-1L-0001-2-D	add *EMC2*	0.25	0.33	MI1
		2.4	VACON0010-1L-0002-2-D		0.37	0.5	MI1
		2.8	VACON0010-1L-0003-2-D		0.55	0.75	MI1
		3.7	VACON0010-1L-0004-2-D		0.75	1	MI2
		4.8	VACON0010-1L-0005-2-D		1.1	1.5	MI2
		7	VACON0010-1L-0007-2-D		1.5	2	MI2
		9.6	VACON0010-1L-0009-2-D		2.2	3	MI3
208-240 VAC, 3-phase	208-230 VAC, 3-phase	1.7	VACON0010-3L-0001-2-D		0.25	0.33	MI1
		2.4	VACON0010-3L-0002-2-D		0.37	0.5	MI1
		2.8	VACON0010-3L-0003-2-D		0.55	0.75	MI1
		3.7	VACON0010-3L-0004-2-D		0.75	1	MI2
		4.8	VACON0010-3L-0005-2-D		1.1	1.5	MI2
		7	VACON0010-3L-0007-2-D		1.5	2	MI2
		11	VACON0010-3L-0011-2-D		2.2	3	MI3
380-480 VAC, 3-phase	380-480 VAC, 3-phase	1.3	VACON0010-3L-0001-4-D	add *EMC2*	0.37	0.5	MI1
		1.9	VACON0010-3L-0002-4-D		0.55	0.75	MI1
		2.4	VACON0010-3L-0003-4-D		0.75	1	MI1
		3.3	VACON0010-3L-0004-4-D		1.1	1.5	MI2
		4.3	VACON0010-3L-0005-4-D		1.5	2	MI2
		5.6	VACON0010-3L-0006-4-D		2.2	3	MI2
		7.6	VACON0010-3L-0008-4-D		3	--	MI3
		9	VACON0010-3L-0009-4-D		4	5	MI3
12	VACON0010-3L-0012-4-D	5.5	7.5	MI3			
575 VAC, 3-phase	575 VAC, 3-phase	1.7	VACON0010-3L-0002-7D		0.75	1	MI3
		2.7	VACON0010-3L-0003-7D		1.5	2	MI3
		3.0	VACON0010-3L-0004-7D		2.2	3	MI3
		6.1	VACON0010-3L-0006-7D		4	5	MI3
		9	VACON0010-3L-0009-7D		5.5	7.5	MI3

*) Minimum quantities apply. Consult factory.

OPTIONS

Option	Order code	Description
IP21 cover	ENC-IP21-MIx	x = Frame size 1, 2 or 3
NEMA Type 1 Kit	ENC-IN01-MIx	x = Frame size 1, 2 or 3
MCA Kit	VACON-ADP-MCAA-KIT	Micro communication adapter with PC cable
Brake resistor MI2 & MI3	BRR-0022-LD-5	Low duty
Brake resistor MI2 & MI3	BRR-0022-HD-5	High duty

TECHNICAL DATA

Mains connection	Input voltage U_{in}	115 V, -15 %...+10 % 1~ 230 V, -15 %...+10 % 1~ 230 V, -15 %...+10 % 3~ 460 V, -15 %...+10 % 3~
	Input frequency	45...66 Hz
	Connection to mains	Once per minute or less (normal case)
Motor connection	Output voltage	$0..U_{in}$ [2 x U_{in} , 115 V drives]
	Output current	Continuous rated current I_N at ambient temperature max. +50°C, overload 1.5 x I_N max. 1 min/10 min
	Starting current / torque	Current 2 x I_N for 2 secs in every 20 sec period Torque depends on motor
	Output frequency	0...320 Hz
	Frequency resolution	0.01 Hz
Control characteristics	Control method	Frequency Control U/f Open loop sensorless vector control
	Switching frequency	1...16 kHz; Factory default 6 kHz
	Frequency reference	Resolution 0.01 Hz
	Field weakening point	30...320 Hz
	Acceleration time	0.1...3000 sec
	Deceleration time	0.1...3000 sec
Ambient conditions	Braking torque	100 % x T_N with brake in 3-phase MI2 and MI3 frames 30 % x T_N without brake
	Ambient operating temperature	-10°C (no frost)...+50°C: rated loadability I_N
	Storage temperature	-40°C...+70°C
	Relative humidity	0...95 % RH, non-condensing, non-corrosive, no dripping water
	Air quality: - chemical vapours - particles	IEC 721-3-3, unit in operation, class 3C2 IEC 721-3-3, unit in operation, class 3S2
	Altitude	100 % load capacity (no derating) up to 1000 m 1 % derating for each 100 m above 1000 m; max. 2000 m
	Vibration EN60068-2-6	3...150 Hz Displacement amplitude 1 (peak) mm at 3...15.8 Hz Max acceleration amplitude 1 G at 15.8...150 Hz
	Shock IEC 68-2-27	UPS Drop Test (for applicable UPS weights) Storage and shipping: max 15 G, 11 ms (in package)
	Enclosure class	IP20
	EMC	Immunity
Emissions		230 V: EMC C2: with an internal RFI filter option 400 V: EMC C2: with an internal RFI filter option
Safety		61800-5-1, EN60204-1, CE, UL, cUL, IEC [see unit nameplate for more detailed approvals]
Protections	Overvoltage protection	230 V series: 437 VDC; 400 V series: 874 VDC trip level
	Undervoltage protection	230 V series: 183 VDC; 400 V series: 333 VDC trip level
	Ground fault protection	Ground fault is tested before every start. In case of ground fault in motor or motor cable, only the frequency converter is protected
	Unit overtemperature	Yes
	Motor overload	Yes
	Motor stall	Yes
	Motor underload	Yes
	Overcurrent protection	Yes, trip limit 4.0 x I_N instantaneously

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Vacon Partner

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