



**VACON 100 HVAC  
PREMIUM AC DRIVE  
FOR INDOOR CLIMATE CONTROL**

**VACON**  
DRIVEN BY DRIVES

# THE COOLEST DRIVE ON THE PLANET

The Vacon 100 HVAC is designed to meet and exceed even the stringent requirements of the building automation industry. Efficient installation, efficient and trouble-free operation, and efficient return on investment are guaranteed. New innovations make the Vacon 100 HVAC extremely easy to use as well as very flexible and capable. No HVAC task is too complex for the Vacon 100 HVAC. Installing and commissioning the Vacon 100 HVAC can be done by just about anyone.

## Vacon 100 HVAC

- Graphical keypad with nine monitoring values simultaneously visible.
- Long-life, high-efficiency thin film capacitors without hazardous electrolyte.
- By far, the smallest IP54 on the HVAC market.
- EN 61000-3-12 compliant for low current harmonics.
- Built-in RFI filters for interference-free operation.

## Ethernet communication

The Vacon 100 HVAC is the only AC drive on the market which incorporates Ethernet- and RS485-based communication protocols as standard.

Ethernet-based protocols:

- Modbus/TCP and BACnet/IP.

RS485-based protocols:

- Modbus RTU, BACnet MSTP and N2.

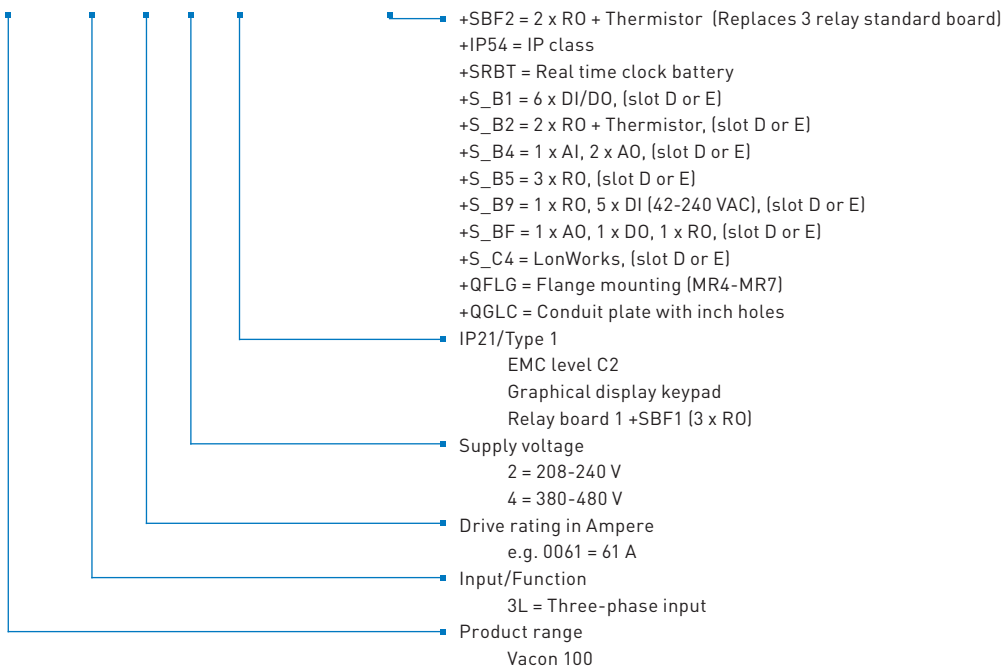


## Mains voltage 380—480 V, 50/60 Hz, 3~

AC drive type	Loadability Low (+40°C)		Motor shaft power 400 V supply	Frame size	Dimensions WxHxD (mm)	Weight (kg)
	Rated continuous current I <sub>L</sub> (A)	10% overload current (A) 1 min/10 min	10% overload +40°C (kW)			
VACON0100-3L-0003-4-HVAC	3.4	3.7	1.1	MR4	128x328x190	6
VACON0100-3L-0004-4-HVAC	4.8	5.3	1.5	MR4	128x328x190	6
VACON0100-3L-0005-4-HVAC	5.6	6.2	2.2	MR4	128x328x190	6
VACON0100-3L-0008-4-HVAC	8.0	8.8	3.0	MR4	128x328x190	6
VACON0100-3L-0009-4-HVAC	9.6	10.6	4.0	MR4	128x328x190	6
VACON0100-3L-0012-4-HVAC	12.0	13.2	5.5	MR4	128x328x190	6
VACON0100-3L-0016-4-HVAC	16.0	17.6	7.5	MR5	144x419x214	10
VACON0100-3L-0023-4-HVAC	23.0	25.3	11.0	MR5	144x419x214	10
VACON0100-3L-0031-4-HVAC	31.0	34.1	15.0	MR5	144x419x214	10
VACON0100-3L-0038-4-HVAC	38.0	41.8	18.5	MR6	195x557x229	20
VACON0100-3L-0046-4-HVAC	46.0	50.6	22.0	MR6	195x557x229	20
VACON0100-3L-0061-4-HVAC	61.0	67.1	30.0	MR6	195x557x229	20
VACON0100-3L-0072-4-HVAC	72	79.2	37	MR7	237x660x259	37.5
VACON0100-3L-0087-4-HVAC	87	95.7	45	MR7	237x660x259	37.5
VACON0100-3L-0105-4-HVAC	105	115.5	55	MR7	237x660x259	37.5

## VACON 100 HVAC TYPE DESIGNATION CODE

### VACON0100-3L-0061-4-HVAC +OPTION CODES



# TECHNICAL DATA

## General

Communication	RS485	Standard: Modbus RTU, BACnet, N2
	Ethernet	Standard: Modbus/TCP, BACnet/IP
Software features	Energy-saving functions	Real-time clock for timed functions Energy monitor for kWh monitoring Sleep function to minimize downtime energy
	Protections	Overload and underload protections e.g. broken fan and dry pump Motor thermal protection Missing phase detection Automatic reset to avoid interruption of the process
Process control	2 x PID	For process control
	Multipump	For replacing the pump controller
	Flying start	For tripless catching of spinning fan
	Fire mode	For uninterrupted operation of exhaust fans in case of fire
	Motor potentiometer function	For easy manual speed adjustment of the motor
Human interfaces	Keypad	Graphical display with built-in manual and wizards Vacon Live for easy commissioning Vacon Savings for energy calculations Vacon Select for dimensioning the drive and the motor
	PC tools	

## I/O connections

Basic I/O board		
Terminal		Signal
1	+10 V <sub>ref</sub>	Reference output
2	AI1+	Analog input, voltage or current
3	AI1-	Analog input common (current)
4	AI2+	Analog input, voltage or current
5	AI2-	Analog input common (current)
6	24 V <sub>out</sub>	24 V aux. voltage
7	GND	I/O ground
8	DI1	Digital input 1
9	DI2	Digital input 2
10	DI3	Digital input 3
11	CM	Common A for DI1-DI6
12	24 V <sub>out</sub>	24 V aux. voltage
13	GND	I/O ground
14	DI4	Digital input 4
15	DI5	Digital input 5
16	DI6	Digital input 6
17	CM	Common A for DI1-DI6
18	AO1+	Analog signal (+output)
19	AO-/GND	Analog output common
30	+24 V <sub>in</sub>	24 V auxiliary input voltage
A	RS485	Differential receiver/transmitter
B	RS485	Differential receiver/transmitter

Standard relay board (3 x RO) can be replaced by SBF2 (2 x RO + Thermistor).

## Loose options

Loose options	
VACON-PAN-HMGR-MC02-HVAC	Graphical keypad
VACON-PAN-HMDR-MC02	Door panel kit
VACON-PAN-HMHH-MC02	Hand-held panel kit
ENC-QFLG-MR0_	Flange mounting kit (MR4-MR7)
VACON-ENC-IP54-MR0_-HVAC	IP54 kit (MR4-MR6)
VACON-ENC-IN12-MR0_-HVAC	NEMA12 kit (MR4-MR6)
OPT-BT-MC02-5	Package of 5 pcs of batteries for real-time clock
OPT-BT-MC02-20	Package of 20 pcs of batteries for real-time clock
CAB-USB/RS485	PC cable for software tools, new communication cable

## Option boards

Option boards	
OPT-F1-V	3 x Relay output
OPT-F2-V	2 x Relay output + Thermistor
OPT-B1-V	6 x DI/DO, each digital input can be individually programmed to also act as digital output
OPT-B2-V	2 x Relay output + Thermistor
OPT-B4-V	1 x AI, 2 x AO (isolated)
OPT-B5-V	3 x Relay output
OPT-B9-V	1 x RO, 5 x DI (42-240 VAC)
OPT-C4-V	LonWorks

www.vacon.com

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