

VACON 100 HVAC DATA SHEET

The Vacon 100 HVAC is an AC drive in the power range of 1.1–30 kW and for supply voltages of 380–480 V, dedicated to heating, ventilation and air conditioning. The Vacon 100 HVAC is suitable for pump, fan and compressor applications.

Features

- Enclosure classes IP21 and IP54
- EMC harmonics: EN 61000-3-12 compliant
- EMC radio frequencies: EN 61800-3 Category C2 built in.
Complies with radiated and conducted emissions
- RoHS compliant, no electrolytic capacitors,
no lead in the circuit boards
- Intelligent cooling arrangement.
Control and power airflow separated

Mains voltage 380–480 V, 50–60 Hz, 3~

AC drive type		Loadability			Motor shaft power
		Low			400 V supply
		Rated continuous current I_L (A)	10% overload current (A) 1 min/10 min	Max current I_s 2 s every 20 s	10% overload 40°C (kW)
MR4	0003	3.4	3.7	5.2	1.1
	0004	4.8	5.3	6.8	1.5
	0005	5.6	6.2	8.6	2.2
	0008	8.0	8.8	11.2	3.0
	0009	9.6	10.6	16.0	4.0
	0012	12.0	13.2	19.2	5.5
MR5	0016	16.0	17.6	24.0	7.5
	0023	23.0	25.3	32.0	11.0
	0031	31.0	34.1	46.0	15.0
MR6	0038	38.0	41.8	62.0	18.5
	0046	46.0	50.6	76.0	22.0
	0061	61.0	67.1	92.0	30.0



VACON 100 HVAC 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 * PID	For process control
	Multipump Flying start	For replacing the pump controller For tripless catching of spinning fan
Human interfaces	Keypad	Graphical display with built-in manual and wizards
	PC tools	Vacon Live for easy commissioning Vacon Savings for energy calculations Vacon Select for dimensioning the drive and the motor

I/O connections

Basic I/O board

Terminal	Signal
1	+10 V _{ref} Reference output
2	AI1+ Analogue input, voltage or current
3	AI1- Analogue input common (current)
4	AI2+ Analogue input, voltage or current
5	AI2- Analogue input common (current)
6	24 V _{out} 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 _{out} 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	A01+ Analogue signal (+output)
19	A0-/GND Analogue output common
30	+24 V _{in} 24 V auxiliary input voltage
A	RS485 Differential receiver/transmitter
B	RS485 Differential receiver/transmitter

Relay board 1

Terminal	Signal
21	R01/1 NC
22	R01/2 CM
23	R01/3 NO
24	R02/1 NC
25	R02/2 CM
26	R02/3 NO
32	R03/1 CM
33	R03/2 NO

Ethernet connection

Protocols: Modbus/TCP, BACnet/IP

Dimensions

Type	Width (mm)	Height (mm)	Depth (mm)	Weight (kg)
MR4	128	328	190	6
MR5	144	419	214	10
MR6	195	557	229	20

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