

Product designation				Variable speed drives
Product type designation				VLB3
General characteristics				
Rated power supply voltage				Three phase 400...480VAC 50/60Hz
Rated output voltage	VAC			Three-phase 0... 480VAC 0-599Hz
Rated output current	A			1.3 (heavy load)
Rated output power	kW			0.4 (Heavy load)
Rated output power	HP			0.5 (heavy load)
EMC filter				Built-in EMC suppressor cat. C1/C2
Communication port				Built-in RS485, Modbus RTU protocol
Technical features				
Input type				Three phase
Rated mains voltage	VAC			400...480
Operating mains voltage range	VAC			340...528
Rated mains frequency	Hz			50/60
Operating mains frequency range	Hz			45...65
Rated mains current without mains choke				1.8
Rated mains current with mains choke				1.4
Output type				three-phase
Output voltage range	VAC			0...480
Output frequency range	Hz			0...599
Current overload	%/s			150% for 60s; 200% for 3s
Apparent output power				0.9 (heavy load)
Power loss				4kHz: 20W (heavy load)
Brake chopper				Yes
Switching frequency				2...16kHz
Max motor cable length				
	Shielded			
		Without EMC category	m	15
		Category C1	m	3
		Category C2	m	15
		Category C3	m	15
	Unshielded			
		Without EMC category	m	30

Functions

Motor control modes	V/f linear, quadratic torque, sensorless vector control, ECO mode, servo control with encoder feedback, multipoint V/f curve, V/f closed loop control with encoder feedback, torque setpoint, sensorless control for synchronous motors up to 22kW
Speed reference signals	External potentiometer 0...10kΩ Voltage signals: 0...10VDC or -10...+10VDC Current signals: 0/4...20mA Buttons on front keyboard Door-mount installation kit 15 preset speeds via digital inputs Motor potentiometer Fieldbus
3-wire control	Yes
S-shape curves	Yes
Slip compensation	Yes
Flying restart	Yes
Access to DC bus	Yes
DC braking	Yes
DC injection at start	Yes
PID control	Yes, with sleep and rinse function
Sequencer (programmable frequency/time cycles)	Yes
Preset speeds	Yes
Motorpotentiometer	Yes
Different parameter configuration sets	Yes
Parameters changeover function	Yes
Favorite parameters menu	Yes
Autotuning	No
Safe torque Off (STO) safety function	Optional
PTC probe input	Yes

Protections	Overcurrent Output short circuit and earth/ground leakage Overvoltage Undervoltage Phase loss Motor heat overload (i2t) Overspeed Speed reverse
Special funct.	Multi-pump PID control (1 main pump frequency regulated + 2 auxiliary pumps activated in direct mode in case of necessity)
Input and Output	
Number of digital input	Nr. 5
Digital input type	Selectable PNP or NPN logic
Number of digital output	Nr. 2
Digital output arrangement	1 relay output with changeover contact (C/O-SPDT) + 1 digital output
Output contacts ratings	Relay output: 3A 250VAC Digital output: 100mA max 30VDC
Number of analog input	Nr. 2
Analog input type	Configurable 0/2...10VDC, -10...+10VDC, 0...5VDC, 0/4...20mA
Number of analog output	Nr. 1
Analog output type	configurable as 0...10VDC, 0...5VDC, 2...10VDC, 0/4...20mA
Ambient conditions	
Temperature	
Operating temperature	
min	°C -10
max	°C +55
Current derating	2.5%/°C over 45°C
Storage temperature	
min	°C -25
max	°C +60
Relative humidity	% 5...95% (with no condensing)

Max altitude	m	4000m (over 1000m derate the rated current by 5%/1000m)
Maximum Pollution degree		2
Overvoltage category		III up to 2000m altitude (II above 2000m)
Housing		
Installation position		Vertical
IP degree of protection		IP20
Dimensions (W x H x D)	mm	60 x 214 x 130
Weight	Kg	0.85
Dimensions		
Wiring diagrams		
Certifications and compliance		
Compliance		CSA 22.2 n°274
		EN 61800-5-1
		UL61800-5-1
Certificates		CSA
		cULus
		EAC
		RCM
ETIM classification		
ETIM 8.0		EC001857 - Frequency converter =< 1 kV