Product designation		Variable speed drives
Product type designation		VLB3
General characteristics		
Rated power supply voltage		400…480VAC 50/60Hz
Rated output voltage	VAC	Three-phase 0…480VAC 0-599Hz
Rated output current	A	1.3
Rated output power	kW	0.4
Rated output power	HP	0.5 (heavy load)
EMC filter		Built-in EMC suppressor cat. C1/C2
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

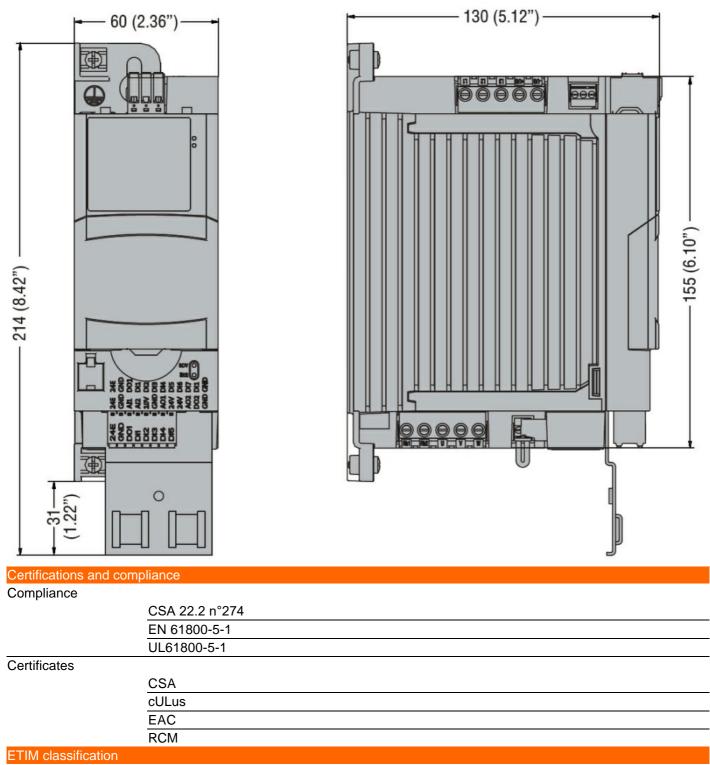|	
Motor control modes	V/f linear, quadratic torque, sensorless vector control, ECO mode, servo control with encoder feedback, multipoint V/f curve, V/f closed loop control with encoder feedback, torque setpoint, sensorless control for synchronous motors up to 22kW
Speed reference signals	External potentiometer 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			switching frequency 2 or 4kHz: 2.5%/°C over 45°C switching frequency 8 or 16kHz: 2.5%/°C over 40°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	0.8
Dimensions			

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