

VARIABLE SPEED DRIVE, VLB3... TYPE, THREE-PHASE SUPPLY 400-480VAC 50/60HZ. EMC SUPPRESSOR BUILT-IN, CAT. C2, 5.5KW



Product designation		Variable speed drives
Product type designation		VLB3
General characteristics		
Rated power supply voltage		400480VAC 50/60Hz
Rated output voltage	VAC	Three-phase 0 480VAC 0-599Hz
Rated output current	А	13
Rated output power	kW	5.5
Rated output power	НР	7.5 (Heavy load) / 10 (Standard load)
EMC filter		Built-in EMC suppressor cat. C2
Communication port		RS485, Modbus- RTU
Technical features		
Input type		Three-phase
Rated mains voltage	VAC	400480
Operating mains voltage range	VAC	340528
Rated mains frequency	Hz	50/60
Operating mains frequency range	Hz	4565
Rated mains current without mains choke		17.2 (heavy load) / 18.3 (standard load)
Rated mains current with mains choke		12.4 (heavy load) / 14.5 (standard load)
Output type		Three-phase
Output voltage range	VAC	0480
Output frequency range	Hz	0599
Current overload	%/s	150% for 60s; 200% for 3s
Apparent output power		8.7 (heavy load) / 10.5 (standard load)
Power loss		4kHz: 145W (heavy load) / 173 (standard load)
Brake chopper		Yes
Switching frequency		216kHz
Max motor cable length		
Shielded		

Without EMC category

100





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Category C2	Category C	l m	3
Category C3 m 35			
Functions Functions Vif linear, quadratic torque, sensorless vector control, ECO mode, servo control with encoder feedback, multipoint Vif curve, Vif closer (edback), multipoint Vif encoder feedback, torque setpoint, sensorless control to vector feedback, torque setpoint, sensorless control to vector feedback, torque setpoint, sensorless control for synchronous motors up to 22kW External potentiometer 016kQ Voltage signals: 0 10VDC or -10 +10VDC or -10 +10VDC current signals Speed reference signals			35
Functions Vi linear, quadratic torque, sensorless vector control, ECD mode, servo control with encoder feedback, servo control with encoder feedback, unultipoint Vif. Live, Vif Closed loop control with encoder feedback, torque setpoint, sensorless control for synchronous motors up to 22kW External potentiometer 010kQ Voltage signals: 0 10VDC or -10 11VDC or -10 11VD	Unshielded		
Wif linear, quadratic torque, sensorifess vector control, ECO mode, servo control, ECO mode, servo control with encoder feedback, multippint V/I curve, V/I closed loop control with encoder feedback, control with encoder feedback, torque setepoint, sensorifess control for synchronous motors up to 22kW External potentioneter 0,10kQ Voltage signals: 0 10VDC or -10 +10VDC current signals: 0.4 110VDC current signals: 0.4 20mA Buttons on front keyboard Door-mount installation kit 15 presst speeds via digital inputs Motor potentioneter Fieldbus 3-wire control Yes S-hape curves Yes Sip compensation Yes Sip compensation Yes Compensation Y		/ m	200
quadratic torque, sensorless vector control, ECO mode, servo control per control per control with encoder feedback, multipoint Vif curve, Vif closed loop control with encoder feedback, multipoint Vif curve, Vif closed loop control with encoder feedback, torque setpoint, sensorless control for synchronous motors up to 22kW External potentiometer 010kD Voltage signals: 0 10VDC current signals: 0 10VDC current signals: 0 10VDC current signals: 0 20mA Buttons on front keyboard Door-mount installation kit 15 preset speeds via digital inputs with digital inputs and installation in the seed of the	Functions		
External potentiometer 010k\(\Omega\) Voltage signals: 0 10VDC or -10 +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 Slip compensation Yes Flying restart Yes Access to DC bus Yes DC braking Yes DC braking Yes PID control Yes PID control Yes PID control Yes, with sleep and rinse function Sequencer (programmable frequency/time cycles) Yes Preset speeds Motorpotentiometer Yes Motorpotentiometer Yes Different parameter configuration sets	Motor control modes		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
S-shape curvesYesSlip compensationYesFlying restartYesAccess to DC busYesDC brakingYesDC injection at startYesPID controlYes, with sleep and rinse functionSequencer (programmable frequency/time cycles)YesPreset speedsYesMotorpotentiometerYesDifferent parameter configuration setsYes	Speed reference signals		External potentiometer 010kΩ 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
Slip compensationYesFlying restartYesAccess to DC busYesDC brakingYesDC injection at startYesPID controlYes, with sleep and rinse functionSequencer (programmable frequency/time cycles)YesPreset speedsYesMotorpotentiometerYesDifferent parameter configuration setsYes	3-wire control		Yes
Slip compensationYesFlying restartYesAccess to DC busYesDC brakingYesDC injection at startYesPID controlYes, with sleep and rinse functionSequencer (programmable frequency/time cycles)YesPreset speedsYesMotorpotentiometerYesDifferent parameter configuration setsYes	S-shape curves		Yes
Flying restart Access to DC bus DC braking DC injection at start PID control Sequencer (programmable frequency/time cycles) Preset speeds Motorpotentiometer Different parameter configuration sets Yes Yes Yes Yes Yes Yes Yes			Yes
Access to DC bus DC braking Yes DC injection at start PID control Sequencer (programmable frequency/time cycles) Preset speeds Motorpotentiometer Different parameter configuration sets Yes Yes Yes Yes Yes Yes Yes			Yes
DC injection at start PID control Sequencer (programmable frequency/time cycles) Preset speeds Motorpotentiometer Different parameter configuration sets Yes Yes Yes Yes Yes Yes Yes			Yes
DC injection at start PID control Sequencer (programmable frequency/time cycles) Preset speeds Motorpotentiometer Different parameter configuration sets Yes Yes Yes Yes Yes Yes	DC braking		Yes
Sequencer (programmable frequency/time cycles) Preset speeds Motorpotentiometer Different parameter configuration sets and rinse function Yes Yes Yes			Yes
Sequencer (programmable frequency/time cycles)YesPreset speedsYesMotorpotentiometerYesDifferent parameter configuration setsYes	<u> </u>		Yes, with sleep
Preset speeds Motorpotentiometer Different parameter configuration sets Yes Yes	Sequencer (programmable frequency/time cycles)		and rinse function
Motorpotentiometer Yes Different parameter configuration sets Yes			
Different parameter configuration sets Yes	Preset speeds		Yes
			Yes Yes
Parameters changeover function Yes	Motorpotentiometer		Yes Yes Yes
Favorite parameters menu Yes	Motorpotentiometer		Yes Yes Yes





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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		Nle	E
Number of digital input		Nr.	5 Selectable PNP
Digital input type			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 0/210VDC, -10+10VDC, 05VDC, 0/4 20mA
Number of analog output		Nr.	1
Analog output type			configurable as 010VDC, 0 5VDC, 2 10VDC, 0/4 20mA
Ambient conditions			
Temperature Operating temperature	min max	°C	-10 +55



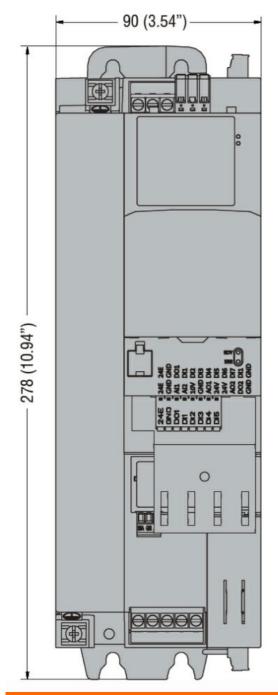


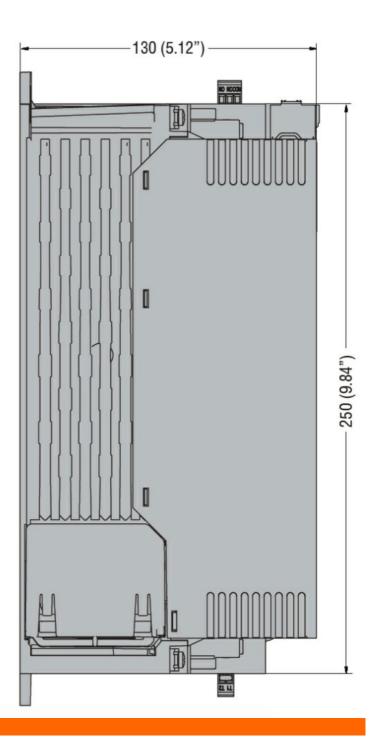
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	Current derating		switching frequency 2 or 4kHz: 2.5%/°C over 45°C switching frequency 8 or 16kHz: 2.5%/°C over 40°C
Storage temperature			
	min	°C	-25
	max	°C	+60
Relative humidity		%	595% (with no condensing)
Max altitude		m	4000m (over 1000m derate 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	90 x 278 x 130
Weight		Kg	2.45
Dimensions			

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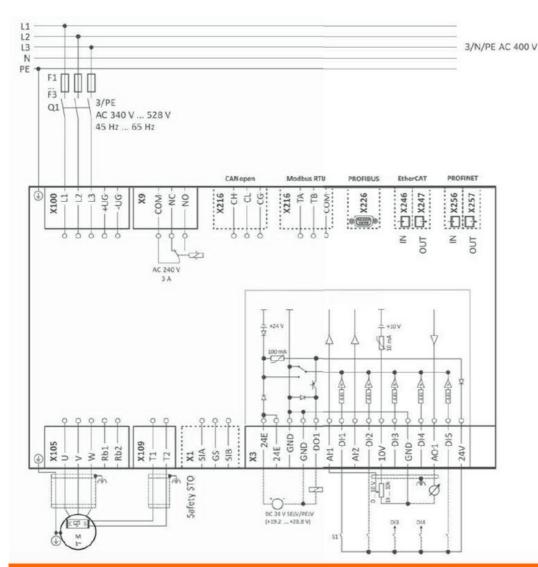




Wiring diagrams

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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