VLB30110A480

VARIABLE SPEED DRIVE, VLB3... TYPE, THREE-PHASE SUPPLY 400-480VAC 50/60HZ. EMC SUPPRESSOR BUILT-IN, CAT. C2, 11KW

General characteristics		
Rated power supply voltage		400…480VAC 50/60Hz
Rated output voltage	VAC	Three-phase 0…480VAC 0-599Hz
Rated output current	A	23.5
Rated output power	kW	11
Rated output power	HP	15 (Heavy load) / 20 (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	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		28.4 (heavy load)
Rated mains current with mains choke		22.3 (heavy load) / 27.1 (standard load)
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		16 (heavy load) / 19 (standard load)
Power loss		4kHz: 260W (heavy load) / 309 (standard load)
Brake chopper		Yes
Switching frequency		2…16kHz
Max motor cable length		
Shielded		
Without EMC category	m	100
Category C1	m	3
Category C2	m	20
Category C3	m	50
Unshielded		

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	Without EMC category	m	200

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

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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

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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			%	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	120 x 305 x 130
Weight			Kg	3.95
Dimensions				

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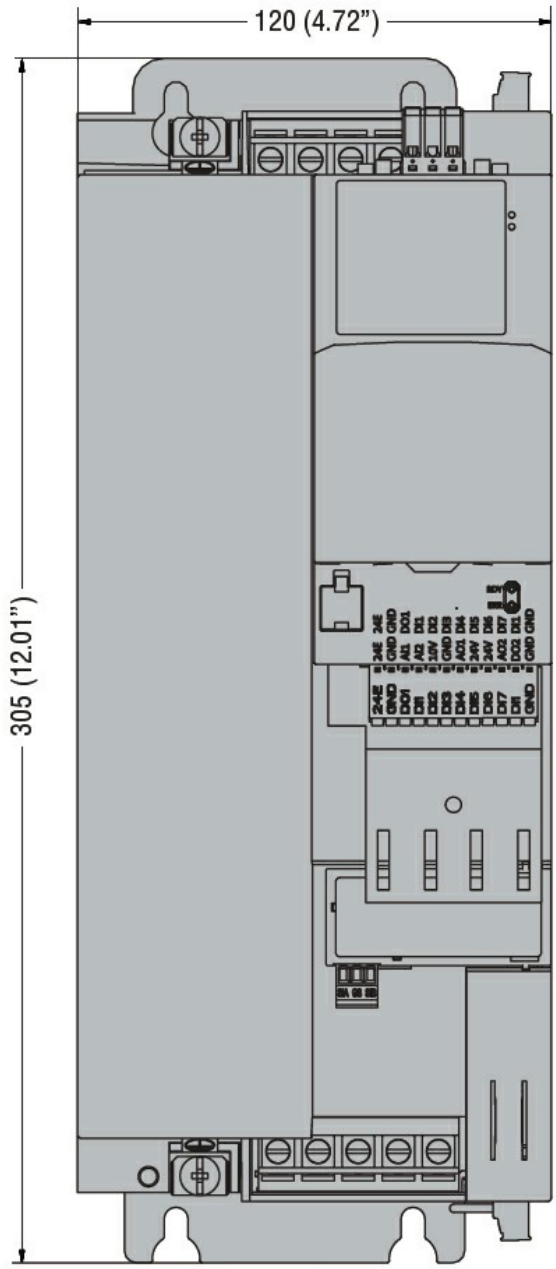

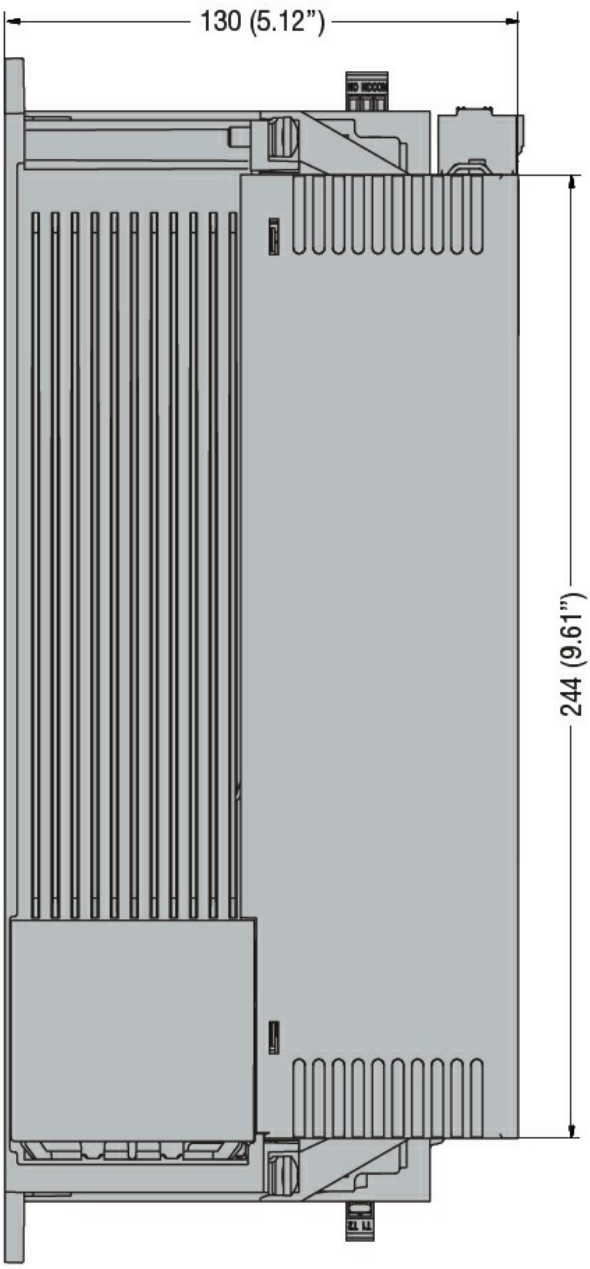

Wiring diagrams

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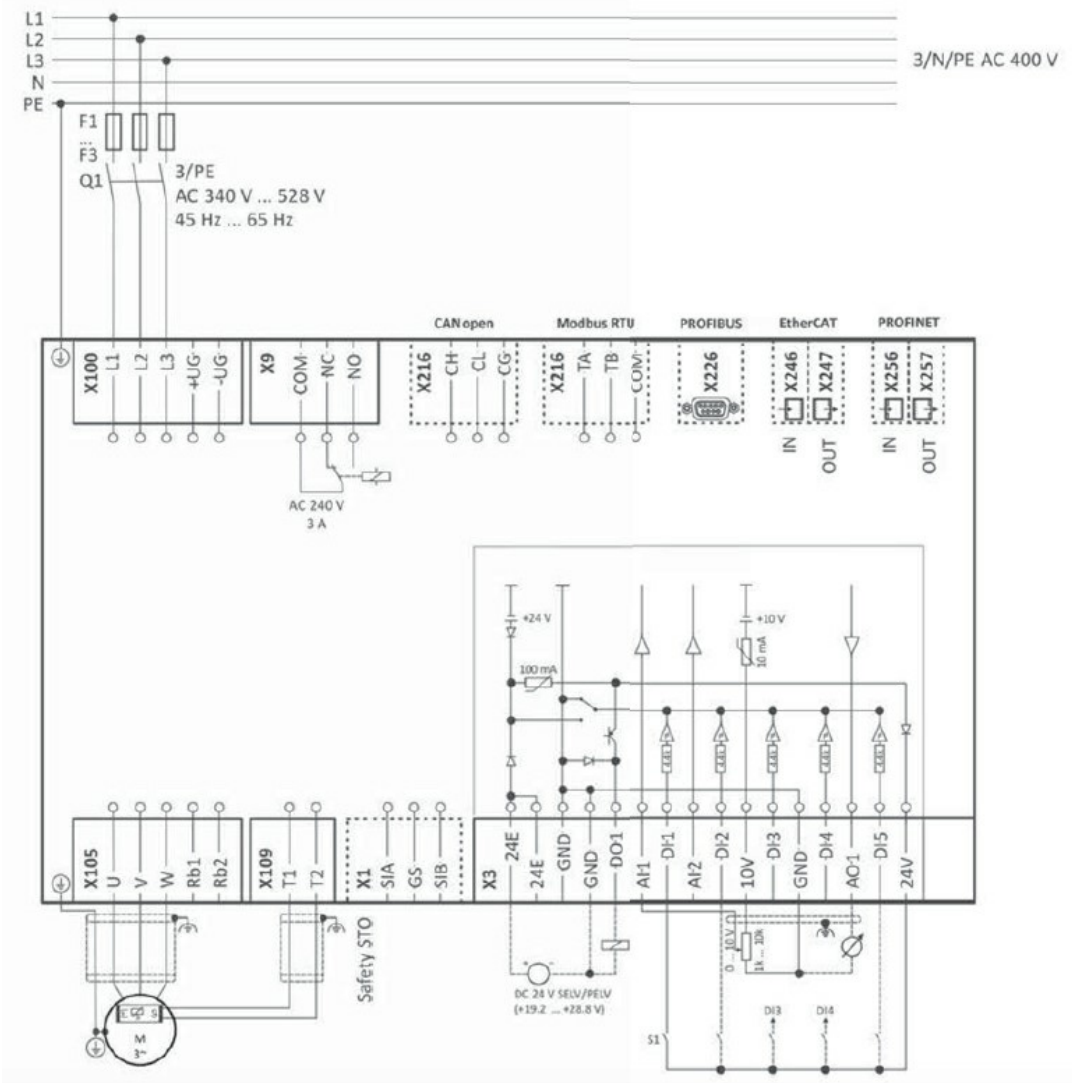

Certifications and compliance

Compliance

EN 61800-5-1
UL61800-5-1

Certificates

cULus
EAC
RCM

ETIM classification

ETIM 8.0	EC001857 - Frequency converter =< 1 kV

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