



General characteristics

Rated power supply voltage		400...480VAC 50/60Hz
Rated output voltage	VAC	Three-phase 0... 480VAC 0-599Hz
Rated output current	A	9.5
Rated output power	kW	4
Rated output power	HP	5 (Heavy load) / 7.5 (Standard load)
EMC filter		Built-in EMC suppressor cat. C2

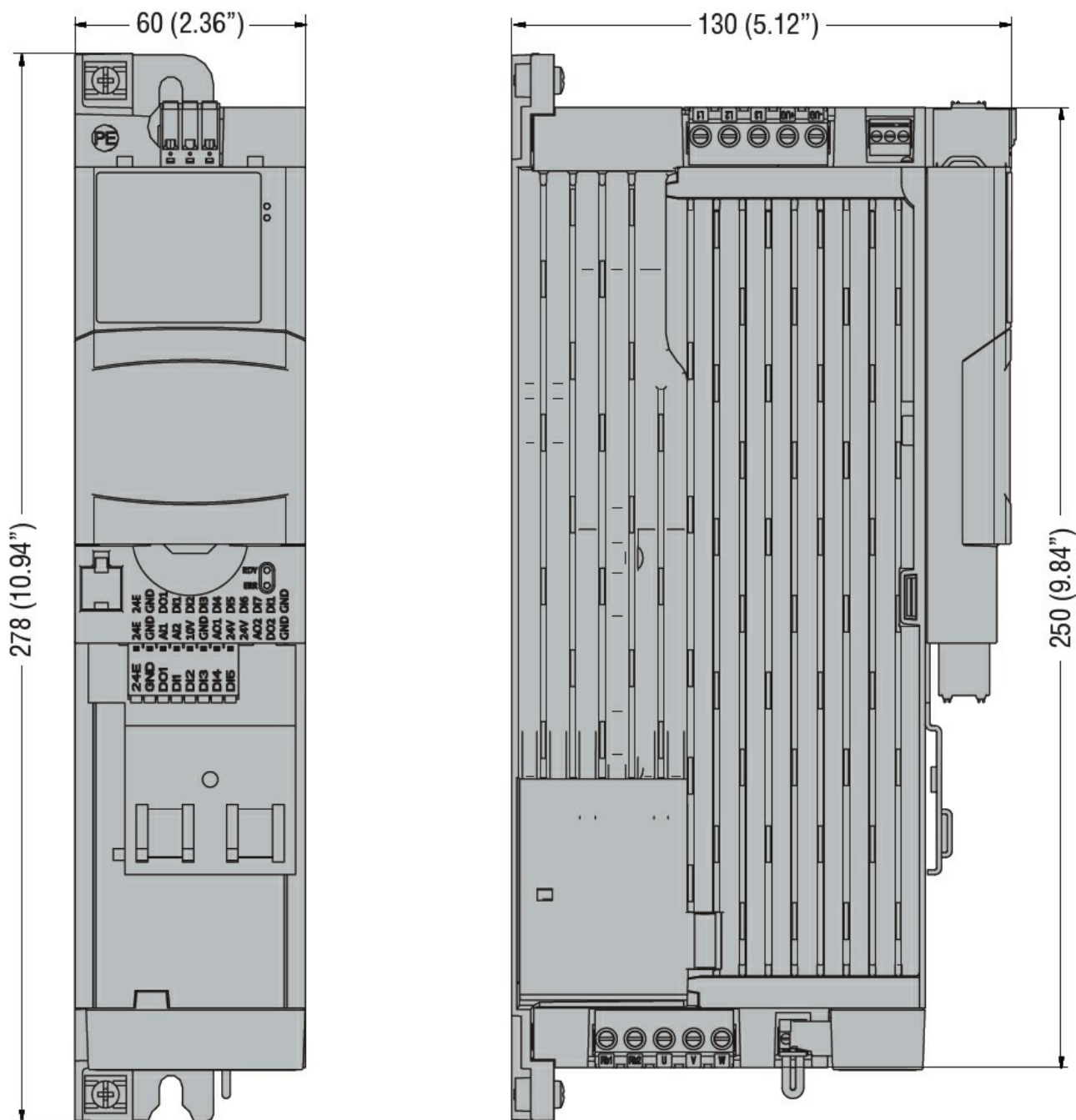
Technical features

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		12.5 (heavy load) / 14 (standard load)
Rated mains current with mains choke		9 (heavy load) / 11 (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		6.4 (heavy load) / 8 (standard load)
Power loss		4kHz: 110W (heavy load) / 133 (standard load)
Brake chopper		Yes
Switching frequency		2...16kHz
Max motor cable length		
Shielded		
	Without EMC category	m
	Category C1	m
	Category C2	m
		50m / 100m (40°C max, switching frequency 4kHz max)
		3
		20

	Category C3	m	35
Unshielded			
	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		
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
		max	°C
			-25
			+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	90 x 278 x 130
Weight		Kg	2.3
Dimensions			



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