



General characteristics

Rated power supply voltage		400...480VAC 50/60Hz
Rated output voltage	VAC	Three-phase 0... 480VAC 0-599Hz
Rated output current	A	32
Rated output power	kW	15
Rated output power	HP	20 (Heavy load) / 25 (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		38.7 (heavy load) / 48 (standard load)
Rated mains current with mains choke		28.8 (heavy load) / 36 (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		22 (heavy load) / 26 (standard load)
Power loss		4kHz: 360W (heavy load) / 430 (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	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

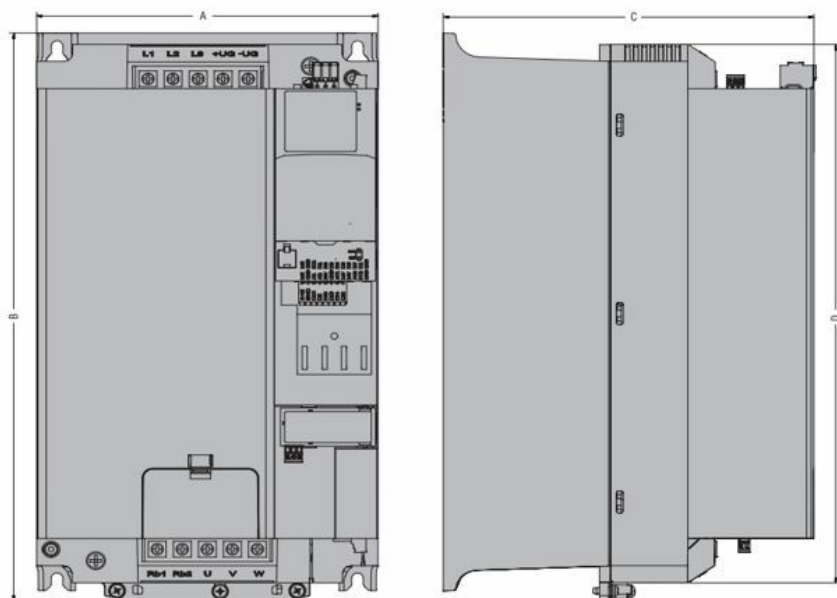
External potentiometer 0...10kΩ
Voltage signals: 0...10VDC or -10...+10VDC
Current signals: 0/4...20mA
Buttons on front keyboard
Door-mount installation kit
15 preset speeds via digital inputs
Motor potentiometer
Fieldbus

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
		max	°C
			-10
			+55

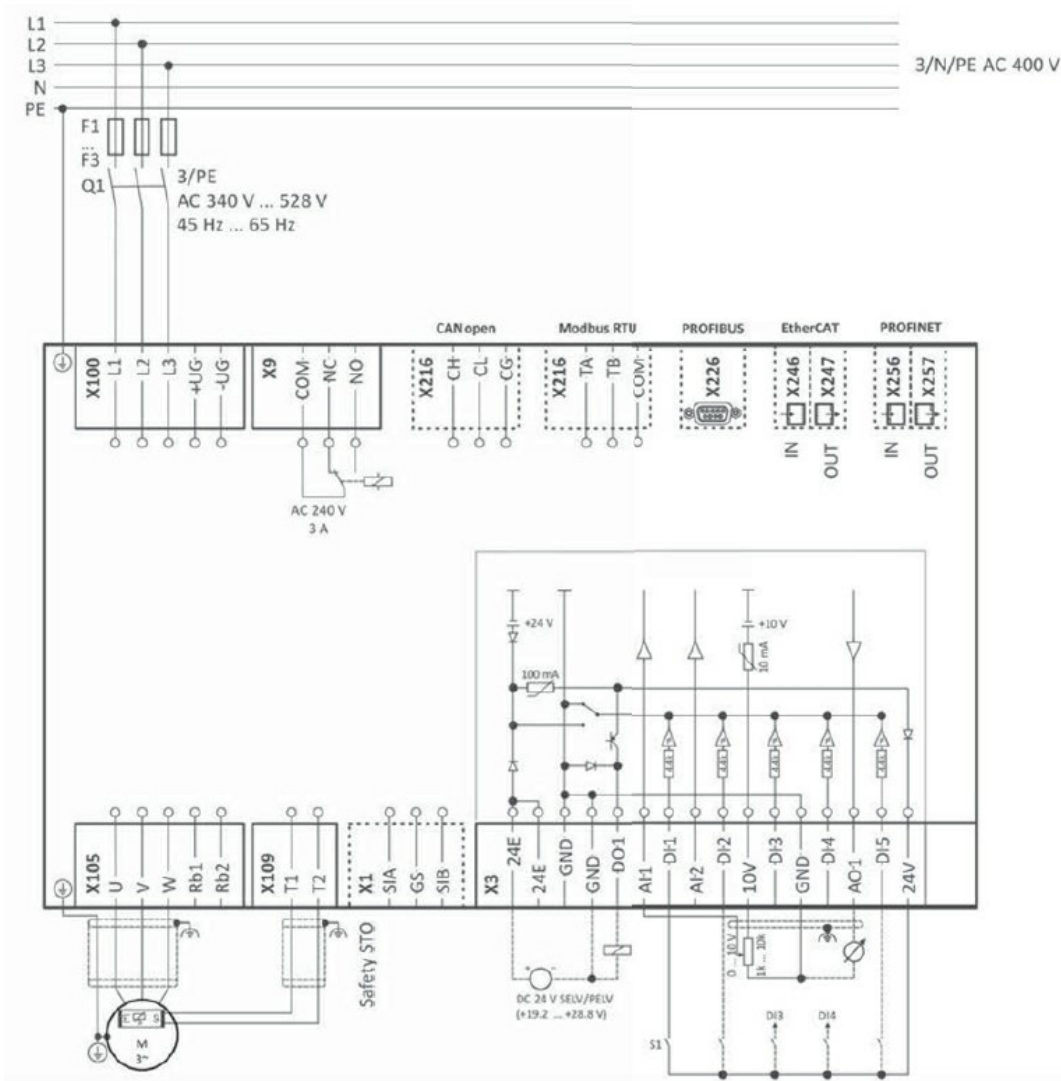
	Current derating	Switching frequency 2 or 4kHz: 2.5%/°C over 45°C switching frequency 8 or 16kHz: 2.5%/°C over 40°C	
Storage temperature	min	°C	-25
	max	°C	+60
Relative humidity		%	5...95% (with no condensing)
Max altitude		m	4000m (over 1000m derate the rated current by 5%/1000m)
Maximum Pollution degree			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	Batch <=D 204.5 x 366 x 222 Batch >=E 180 x 384 x 165
Weight		Kg	10.65

Dimensions



Batch number	A	B	C	D
letter D or lower	204,5	366	222	347
letter E or greater	180	384	165	342

Wiring diagrams



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