



Product designation	Variable speed drives
Product type designation	VLB1

**General characteristics**

Rated power supply voltage		200...240VAC 50/60Hz
Rated output current	A	9.6
Rated output power	kW	2.2
EMC filter		Built-in EMC suppressor cat. C1/C2

**Technical features**

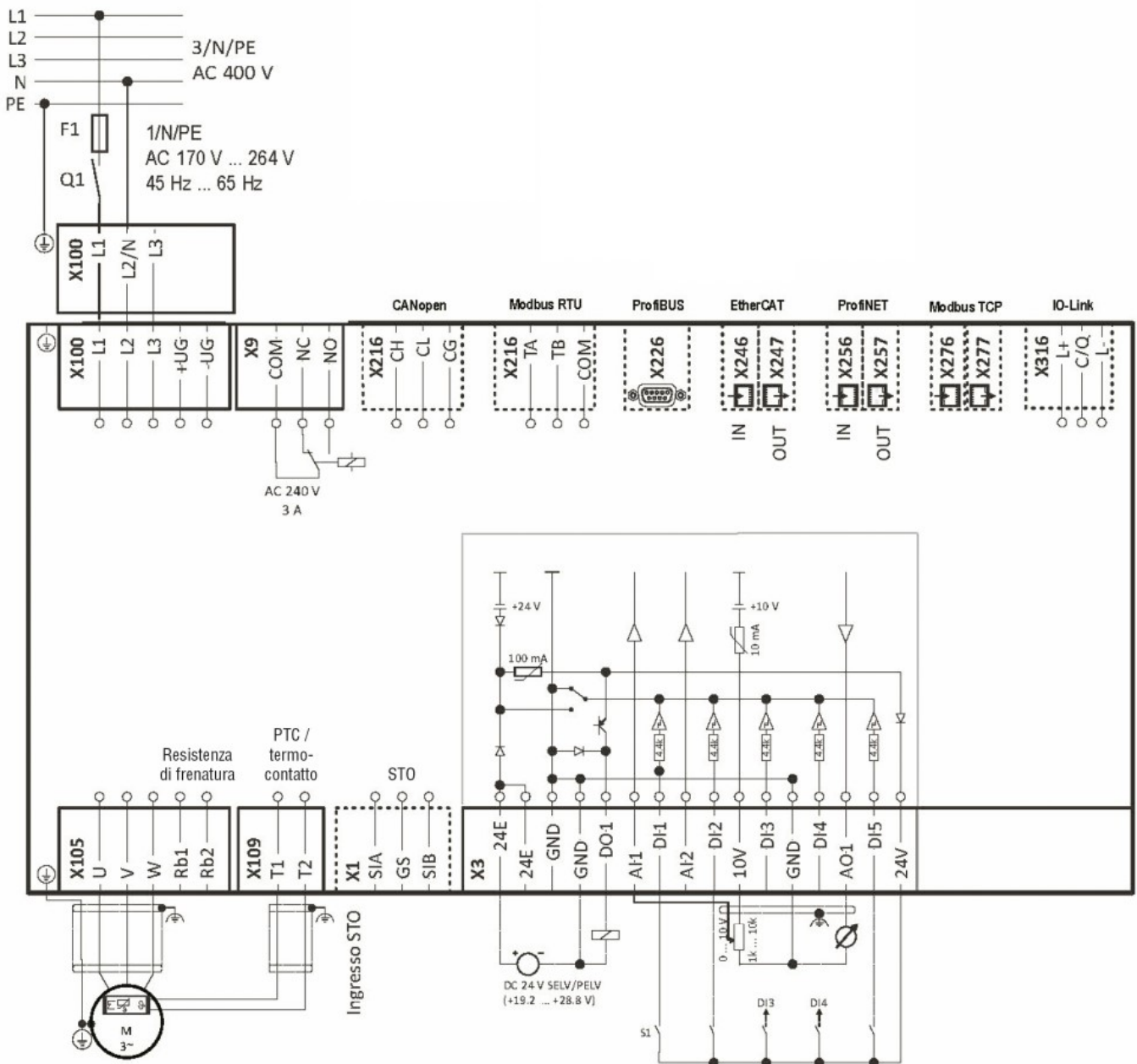
Input type		Single-phase
Rated mains voltage	VAC	200...240
Operating mains voltage range	VAC	170...264
Rated mains frequency	Hz	50/60
Operating mains frequency range	Hz	45...65
Rated mains current without mains choke		22.5
Rated mains current with mains choke		16.9
Output type		Three-phase
Output voltage range	VAC	0...240
Output frequency range	Hz	0...599
Current overload	%/s	150% for 60s; 200% for 3s
Apparent output power		3.6
Power loss		4kHz: 60W
Brake chopper		Yes
Switching frequency		2...16kHz
Max motor cable length		
Shielded		
Without EMC category	m	50
Category C1	m	3
Category C2	m	20
Category C3	m	35
Unshielded		
Without EMC category	m	100

**Functions**

Motor control modes	V/f linear, V/f quadratic, V/f multipoint, sensorless vector control, ECO mode, servo control with encoder feedback, torque setpoint, sensorless control for synchronous motors
3-wire control	Yes
S-shape curves	Yes
Slip compensation	Yes
Flying restart	Yes
Access to DC bus	-
DC braking	Yes
DC injection at start	Yes
PID control	Yes
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	Yes
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)
<b>Input and Output</b>	
Number of digital input	Nr. 5
Digital input type	Selectable PNP or NPN logic
Number of digital output	Nr. 1

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
<b>Ambient conditions</b>				
Temperature				
	Operating temperature			
		min	°C	-10
		max	°C	+60 (with derating over +45°C)
	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
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)
<b>Housing</b>				
Installation position				Vertical
IP degree of protection				IP20
Dimensions (W x H x D)		mm		60 x 278 x 130
Weight		Kg		1.35
<b>Dimensions</b>				





### Certifications and compliance

#### Compliance

CSA 22.2 No. 274

EN/BS 61800-5-1

UL 61800-5-1

#### Certificates

cULus

RCM

### ETIM classification

ETIM 8.0

EC001857 -  
Frequency  
converter =< 1 kV