

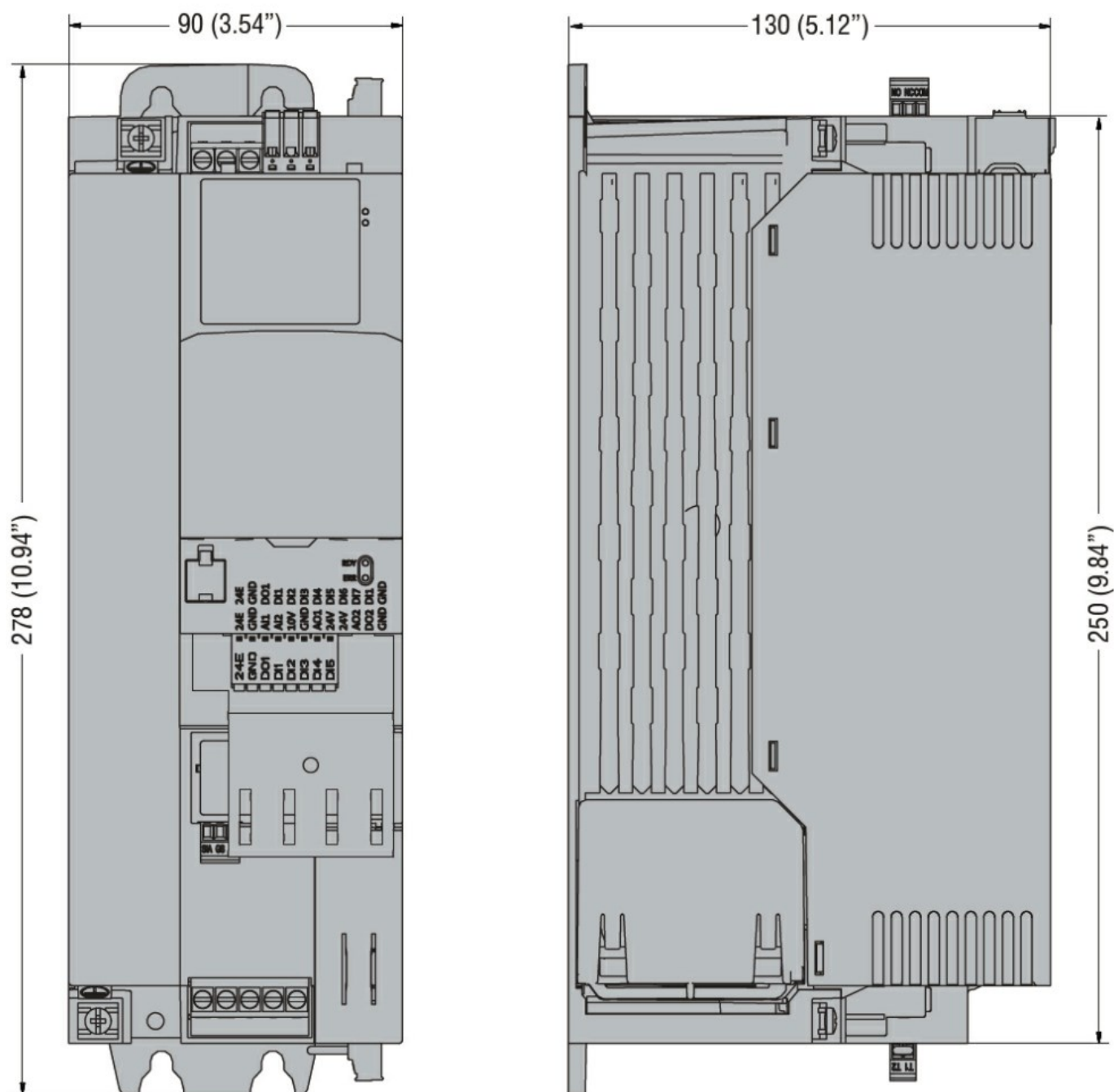


|   |  |  |   |
|---|--|--|---|
| Product designation                     |  | Variable speed drives                                  |   |
| Product type designation                |  | VLB3   |   |
| General characteristics                 |  |  |   |
| Rated power supply voltage              |  | 400...480VAC<br>50/60Hz                                |   |
| Rated output voltage                    |  | VAC  | Three-phase 0...<br>480VAC 0-599Hz          |
| Rated output current                    |  | A  | 13  |
| Rated output power                      |  | kW   | 5.5   |
| Rated output power                      |  | HP   | 7.5 (Heavy load) /<br>10 (Standard<br>load) |
| EMC filter                              |  | Built-in EMC<br>suppressor cat.<br>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 |  | 17.2 (heavy load)<br>/ 18.3 (standard<br>load)         |   |
| Rated mains current with mains choke    |  | 12.4 (heavy load)<br>/ 14.5 (standard<br>load)         |   |
| Output type                             |  | Three-phase  |   |
| Output voltage range                    |  | VAC  | 0...480                                     |
| Output frequency range                  |  | Hz   | 0...599                                     |
| Current overload                        |  | %/s  | 150% for 60s;<br>200% for 3s                |
| Apparent output power                   |  | 8.7 (heavy load) /<br>10.5 (standard<br>load)          |   |
| Power loss                              |  | 4kHz: 145W<br>(heavy load) /<br>173 (standard<br>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  |
| <b>Functions</b>                               |                      |   |  |
| Motor control modes                            |                      |   | V/f linear,<br>quadratic torque,<br>sensorless<br>vector control,<br>ECO mode,<br>servo control with<br>encoder<br>feedback,<br>multipoint V/f<br>curve, V/f closed<br>loop control with<br>encoder<br>feedback, torque<br>setpoint,<br>sensorless         |
| Speed reference signals                        |                      |   | External<br>potentiometer<br>0...10kΩ Voltage<br>signals: 0...<br>10VDC or -10...<br>+10VDC Current<br>signals: 0/4...<br>20mA Buttons on<br>front keyboard<br>Door-mount<br>installation kit 15<br>preset speeds<br>via digital inputs<br>Motor potentiom |
| 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<br>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<br>Output short circuit and earth/ground leakage<br>Overvoltage<br>Undervoltage<br>Phase loss<br>Motor heat overload (i2t)<br>Overspeed<br>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<br>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<br>frequency 2 or<br>4kHz: 2.5%/°C<br>over 45°C<br>switching<br>frequency 8 or<br>16kHz: 2.5%/°C<br>over 40°C |  |
| Storage temperature      |  |                  |   |  |
|                          |  | min              | °C  | -25  |
|                          |  | max              | °C  | +60  |
| Relative humidity        |  |                  | %   | 5...95% (with no<br>condensing)                                  |
| Max altitude             |  |                  | m   | 4000m (over<br>1000m derate<br>the rated current<br>by 5%/1000m) |
| Maximum Pollution degree |  |                  |   | 2  |
| Overvoltage category     |  |                  |   | III up to 2000m<br>altitude (II above<br>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

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