



Variable speed drives
VLB3

Product designation

Product type designation

General characteristics

| | | |
|----------------------------|-----|-------------------------------------------|
| Rated power supply voltage | | Three phase 400...480VAC 50/60Hz |
| Rated output voltage | VAC | Three-phase 0... 480VAC 0-599Hz |
| Rated output current | A | 1.3 (heavy load) |
| Rated output power | kW | 0.4 (Heavy load) |
| EMC filter | | Built-in EMC suppressor cat. C1/C2 |
| Communication port | | Built-in RS485, Modbus RTU protocol |

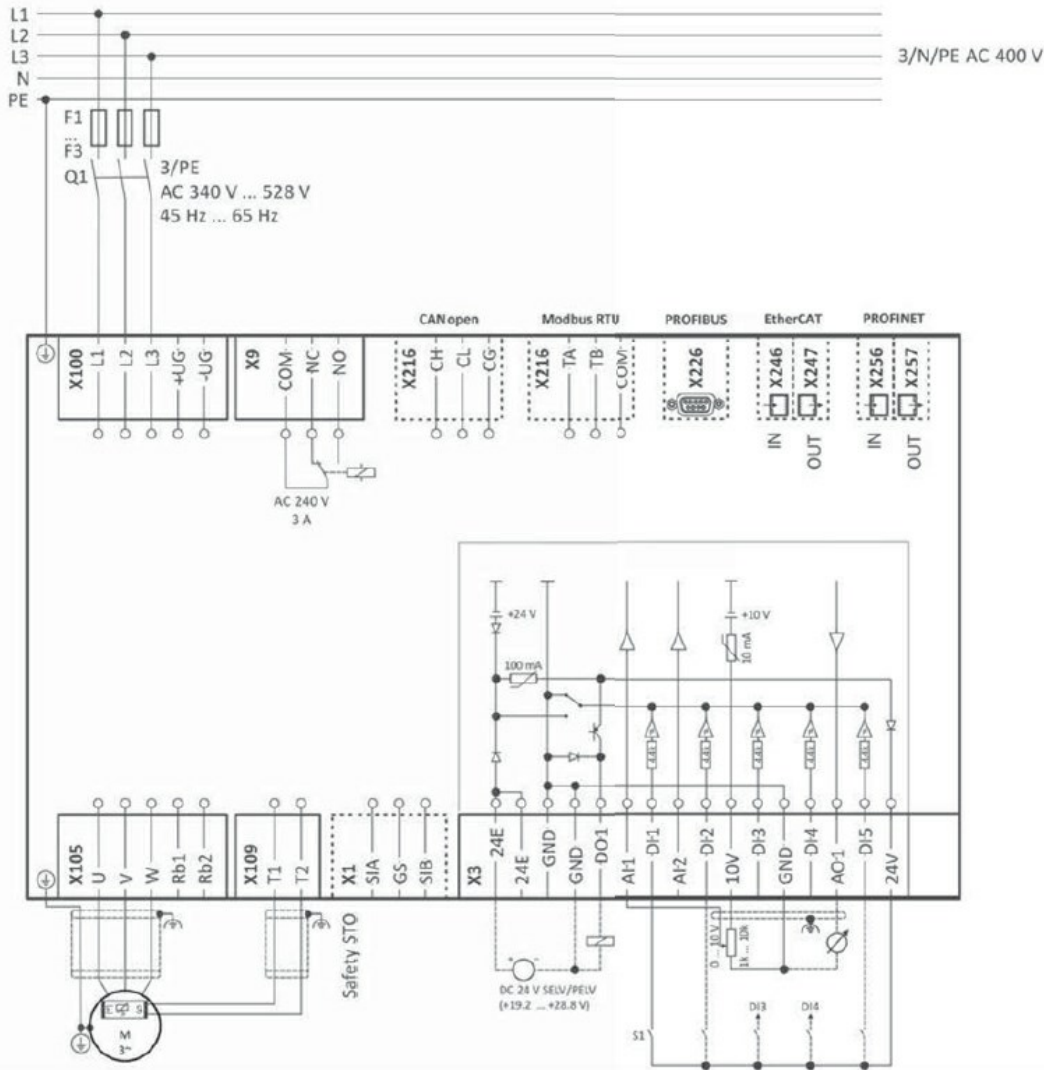
Technical features

| | | |
|-----------------------------------------|------------|------------------------------|
| 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 | | 1.8 |
| Rated mains current with mains choke | | 1.4 |
| 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 | | 0.9 (heavy load) |
| Power loss | | 4kHz: 20W (heavy load) |
| Brake chopper | | Yes |
| Switching frequency | | 2...16kHz |
| Max motor cable length | | |
| | Shielded | |
| | | Without EMC category m 15 |
| | | Category C1 m 3 |
| | | Category C2 m 15 |
| | | Category C3 m 15 |
| | Unshielded | |
| | | Without EMC category m 30 |

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 | n° 5 |
| Digital input type | Selectable PNP or NPN logic |
| Number of digital output | n° 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 | n° 2 |
| Analog input type | Configurable 0/2...10VDC, -10...+10VDC, 0...5VDC, 0/4...20mA |
| Number of analog output | n° 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 | 2.5%/°C over 45°C |
| Storage temperature | |
| min | °C -25 |
| max | °C +60 |
| Relative humidity | % 5...95% (with no condensing) |



Certifications and compliance

Compliance

CSA 22.2 n°274
EN 61800-5-1
UL61800-5-1

Certificates

CSA
cULus
EAC
RCM