



- Versions with single-phase input up to 2.2kW / 3HP and three-phase input up to 110kW / 150HP
- Special function for pump and fan control using PID algorithm
- EMC suppressor included in all versions
- Selectable motor control mode: V/f, vector, energy saving
- Selectable digital and analog input and output functions
- Integrated functions for motor protection.

Variable speed drives

VLA1 series (single-phase type)	6 - 3
VT1 series (single-phase ultra-compact type with RS485)	6 - 4
VLB3 series (three-phase type)	6 - 5

Accessories

Three-phase inductances	6 - 7
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Other accessories	6 - 7

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VLA1... SERIES

- Single-phase 200...240VAC supply
- Three-phase motor power 0.25...2.2kW / 0.33...3HP ratings at 240VAC
- Compliant with standard IEC/EN/BS 61800-3 cat.C2 without external filters
- Optional USB module for parameter programming.
- "Book style" housing.



Page 6-4

VT1... SERIES

- Single-phase 200...240VAC supply
- Three-phase motor power 0.2...2.2kW / 0.25...3HP ratings at 240VAC
- Compliant with standard IEC/EN/BS 61800-3 cat.C2 without external filters
- Built-in RS485 port, Modbus-RTU protocol and BACnet.
- Ultra-compact.



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VLB3... SERIES

- Three-phase 400...480VAC supply
- Three-phase motor power 0.4...110kW / 0.5...150HP for heavy load, up to 132kW / 175HP for standard load, ratings at 400VAC
- Compliant with standard IEC/EN/BS 61800-3 cat.C1 or cat.C2 without external filters
- Integrated dynamic braking circuit
- Optional STO (Safe Torque Off) module
- Optional three-phase motor inductances
- Optional braking resistors
- Communication protocols available: Modbus-RTU, CANopen, ProfiBUS, ProfiNET and Ethercat
- Optional USB and Wi-Fi modules for parameter programming.
- "Book style" housing.

Description

				
		VLA1 1-phase	VT1 1-phase ultra-compact with RS485	VLB3 3-phase
Three-phase motor power (kW)	standard load	—	—	5.5...132 (400V)
	heavy load	0.25...2.2 (240V)	0.2...2.2 (240V)	0.4...110 (400V)
Method of control				
Constant torque V/f (linear)		●	●	●
Quadratic torque (for pumps and fans)		●	●	●
Sensorless vector control		●	●	●
Servo control with encoder feedback		—	—	●
Energy saving mode (ECO)		—	—	●
Multipoint V/f curve		—	●	●
V/f closed loop control with encoder feedback		—	—	●
Torque setpoint		●	—	●
Sensorless control for synchronous motors		—	—	● (up to 22kW)
Maximum output frequency		599Hz	599Hz	599Hz
Current overload		150% for 60s	150% for 60s	heavy load: 150% for 60s standard load: 120% for 60s
RS485 communication port		—	n° 1	n° 1
Supported communication protocols		—	Modbus-RTU, BACnet	Modbus-RTU, ProfinET, CANopen, Ethercat, Profibus
Digital inputs		5	5	5
Digital outputs		2	1	2
Analog inputs		2	2	2
Analog outputs		1	1	1
Sequencer (frequency/time cycles)		●	●	●
Onboard potentiometer		—	●	—
PID control		●	●	●
PID SLEEP function		●	●	●
PID WAKE-UP function		●	●	●
Jog		●	●	●
3-wire motor control		●	●	●
DC braking		●	●	●
Preset frequencies		●	●	●
Pumps and fans functions		●	●	●
Flying restart		●	—	●
Motor PTC thermistor input		—	●	●
S.T.O. (Safe Torque Off) per EN/BS ISO 13849-1		—	—	Optional

VLA1 series



VLA1...

Accessories for VLA1



VLAXC01



VLAXC02



VLAXP01

Order code	Output current	3-phase motor power at 240VAC			Qty per pkg	Weight
	[A]	[kW]	[HP]	n°		[kg]

Single phase supply 200...240VAC 50/60Hz.
Three-phase motor output 240VAC max.
Built-in EMC suppressor, cat. C2.

VLA102A240	1.7	0.25	0.33	1	0.750
VLA104A240	2.4	0.4	0.5	1	0.750
VLA107A240	4.2	0.75	1	1	0.950
VLA115A240	7	1.5	2	1	1.350
VLA122A240	9.6	2.2	3	1	1.350



Order code	Description	Qty per pkg	Weight
		n°	[kg]
VLAXC01	Display and keypad	1	0.050
VLAXC02	USB communication module	1	0.050
VLAXP01	Door-mount installation kit for the keypad VLAXC01. IP65, Type 4X. Connecting cable included, 3m long	1	0.340

General characteristics

VLA1... is an ultra-compact drive (book style housing) with high performance. It integrates different motor control modes, like V/f linear and quadratic and sensorless vector control. VLA1... is extremely versatile and can be used in several applications such as conveyor belts, machine tools, control of automatic doors, packaging machines and in particular to manage pumps and fans thanks to specific integrated functions like the PID control and flying restart. Simple to install and configure.
The user interface, which comprises of a built-in keypad and display, allows to access the setting parameters easily, thanks to the use of extended texts describing the functions and codes. Using the optional USB communication module, the programming, monitoring and diagnostic can be performed using a PC with software VLBXSW, freely downloadable from the website www.LovatoElectric.com, download section.

SPEED REFERENCE SIGNALS

- Reference signals for speed adjustment are obtained by:
- External potentiometer 1...10kΩ
 - Voltage signal 0...10VDC or current signal 0/4...20mA
 - Buttons on front keypad
 - Door-mount installation kit
 - 15 preset speeds via digital inputs
 - Motor potentiometer.

PROGRAMMABLE INPUTS AND OUTPUTS

- Selectable pNp or nPn logic
- 5 digital inputs
- 1 digital output
- 1 changeover relay output
- 2 analog inputs: 1 configurable as voltage input 0...10VDC or current input 0/4...20mA, 1 voltage input 0...10VDC
- 1 analog output configurable as voltage output 0...10VDC or current output 0/4...20mA.

PROTECTIONS

- Overcurrent
- Output short circuit and earth/ground leakage
- Overvoltage and undervoltage
- Phase loss
- Motor heat overload (I²t)
- Overspeed
- Speed reverse.

FUNCTIONS

- Speed or torque control
- V/f linear or quadratic curves
- Sensorless vector control
- Flying restart
- DC braking and DC injection at start
- Integrated PID with SLEEP and WAKE-UP thresholds
- Multi-pump PID control (1 main pump frequency regulated + 2 auxiliary pumps activated in on-off mode in case of necessity)
- Programmable frequency/time cycles
- Different parameter configurations
- User menu (favorite parameters)
- Programming and monitoring software VLBXSW, freely downloadable from the website www.LovatoElectric.com.

Operational characteristics

- Input voltage: 200...240VAC single-phase
- Rated operational current I_e: 1.7...9.6 A
- Mains frequency: 50/60Hz
- Output frequency: 0...599Hz
- Switching frequency: 2...16kHz
- Current overload: 150% for 60s; 200% for 3s
- IEC degree of protection: IP20
- Ambient conditions:
 - Operating temperature: -10...+55°C (45°C without derating)
 - Maximum altitude: 2000m (without derating)
 - Relative humidity: 5...95% (with no condensing)
- Side-by-side installation
- Built-in EMC suppressor (EN/BS 61800-3), cat. C2
- IE2 efficiency level (EN/BS 50598-2).

Certifications and compliance

Certifications: cULus, EAC, RCM.
Compliant with standards: EN/BS 61800-5-1, UL 61800-5-1, CSA 22.2 No. 274.

6 Variable speed drives

Single phase

VT1... series (ultra-compact with RS485)



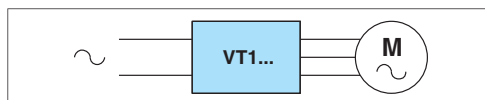
VT1...

new

Order code	Output current	3-phase motor power at 240V			Qty per pkg	Weight
	[A]	[kW]	[HP]	n°		[kg]

Single-phase supply 200...240VAC 50/60Hz.
Three-phase motor output 240VAC max.
Built-in RS485 communication port.
Built-in EMC suppressor, cat. C2.

VT102A240	1.8	0.2	0.25	1	1.0
VT104A240	2.6	0.4	0.5	1	1.0
VT107A240	4.3	0.75	1	1	1.0
VT115A240	7.5	1.5	2	1	2.0
VT122A240	10.5	2.2	3	1	2.0



Accessories for VT1



VT1XC01

new

Order code	Description	Qty per pkg	Weight
		n°	[kg]
VT1XC01	Cable RS485/USB for the connection VT1-PC ❶, 1.8m length	1	0,080
VT1XC02	Remote keypad (Ethernet connection cable ❷ not included), IP20, IP65 on front	1	0,122

❶ Software for programming and monitoring VT1XSW freely downloadable from the website www.LovatoElectric.com, download section.

❷ Use a standard Ethernet cable (CAT.5 or higher) max. 5m length.



VT1XC02

General characteristics

VT1 is an ultra-compact variable speed drive with single phase input and built-in RS485 communication port. Simple and versatile, it can be used in several applications such as control of pumps and fans, conditioning systems, packaging machines, conveyor belts, control of automatic doors, etc. The extremely compact dimensions make it suitable for the installation in panels or machinery with limited space. The integrated RS485 communication port allows the remote control and monitoring of the drive from a supervision system or a controller such as a PLC or HMI. It supports the communication protocols Modbus-RTU, Modbus-ASCII and BACnet.

VT1 is extremely simple to install and configure. It can be programmed from the frontal keypad with digital display. Alternatively, it is possible to program the parameters from a PC with software VT1XSW and dedicated USB connection cable VT1XC01.

The different integrated motor control modes, like the linear or quadratic V/f control, multipoint curve and sensorless vector control, make it perfectly suitable for several type of loads and applications.

SPEED REFERENCE SIGNALS

Reference signals for speed adjustment are obtained by:

- Front jog dial control (potentiometer)
- External potentiometer 1...10kΩ
- Voltage signal 0...10V or current signal 0/4...20mA
- 8 preset speeds via digital inputs
- Optional remote keypad **VT1XC02**
- RS485 serial signals.

PROGRAMMABLE INPUTS AND OUTPUTS

- 5 multifunction digital inputs
- 1 voltage analog input 0...10VDC
- 1 current analog input 0/4...20mA
- 1 relay output with NO contact
- 1 voltage analog output 0...10VDC.

PROTECTIONS

- Motor and drive overload
- Overvoltage and undervoltage
- Phase loss
- Overtemperature
- Overspeed.

FUNCTIONS

- Speed control
- V/f linear or squared curves
- V/f customizable multipoint curve
- Sensorless (open loop) vector control
- Preset speeds
- Built-in PID with sleep and wake up thresholds
- Sequencer (programmable frequency/time cycles)
- DC braking and DC injection at start
- Multi-pump PID for the control of up to 4 VT1... drives in master-slave configuration
- Software for programming and monitoring VT1XSW, freely downloadable from the website www.LovatoElectric.com, download section.

Operational characteristics

- Input voltage: 200...240VAC single-phase
- Output voltage: 0...240VAC three-phase
- Rated operational current I_e: 1.8...10.5A
- Mains frequency: 50/60Hz
- Output frequency: 0...599Hz
- Switching frequency: 1...16kHz
- Current overload: 150% for 60s
- IEC degree of protection: IP20
- Ambient conditions:
 - Operating temperature:
 - -10...+40°C (50°C with derating of 40% of the output current) for sizes 0,2...0,75kW
 - -10...+50°C (without derating) for sizes 1,5 and 2,2kW with built-in fan
 - Maximum altitude: 1000m (without derating), 3000m (with derating of 2% of the rated current every 100m)
 - Relative humidity <95% (without condensation)
- Built-in EMC suppressor (EN/BS 61800-3), cat. C2.

Certifications and compliance

Certifications: cULus, EAC, RCM (excluded **VT1XC01** and **VT1XC02**).

Compliant with standards: EN/BS 61800-5-1, UL 508C, CSA 22.2 No. 274.

VLB3 series



VLB3...



VLB3...XX



The drive efficiency is 25% higher than the reference value for the IE1 class.

① Complete drive: power unit + logic unit with Modbus-RTU + control unit with keypad and display.

② To be completed with logic unit VLBXL... and control unit VLBXC...

③ Operation up to 45°C without power derating.

④ Heavy load: 150% overload for 60s

⑤ Standard load: 120% overload for 60s

⑥ Functioning for standard load not available for this size. Refer to the ratings declared for heavy load.

Order code	Output current ^⑥	3-phase motor power at 400VAC with heavy load ^④	Qty per pkg.	Weight
	[A]	[kW] [HP]	n°	[kg]

COMPLETE DRIVES^①

Three-phase supply 400...480VAC 50/60Hz.

Three-phase motor output max 480VAC.

Built-in EMC suppressors.

VLB30004A480	1.3	0.4	0.5	1	0.850
VLB30007A480	2.4	0.75	1	1	1.100
VLB30015A480	3.9	1.5	2	1	1.380
VLB30022A480	5.6	2.2	3	1	1.380
VLB30040A480	9.5	4	5	1	2.450
VLB30055A480	13	5.5	7.5	1	2.450
VLB30075A480	16.5	7.5	10	1	3.950
VLB30110A480	23.5	11	15	1	3.950
VLB30150A480	32	15	20	1	10.650
VLB30185A480	40	18.5	25	1	10.650
VLB30220A480	47	22	30	1	10.650
VLB30300A480	61	30	40	1	17.500

POWER UNITS^②

Three-phase supply 400...480VAC 50/60Hz.

Three-phase motor output max 480VAC.

Built-in EMC suppressors.

VLB30004A480XX	1.3	0.4	0.5	1	0.800
VLB30007A480XX	2.4	0.75	1	1	1.000
VLB30015A480XX	3.9	1.5	2	1	1.350
VLB30022A480XX	5.6	2.2	3	1	1.350
VLB30040A480XX	9.5	4	5	1	2.300
VLB30055A480XX	13	5.5	7.5	1	2.300
VLB30075A480XX	16.5	7.5	10	1	3.700
VLB30110A480XX	23.5	11	15	1	3.700
VLB30150A480XX	32	15	20	1	10.300
VLB30185A480XX	40	18.5	25	1	10.300
VLB30220A480XX	47	22	30	1	10.300
VLB30300A480XX	61	30	40	1	17.200
VLB30370A480XX	76	37	50	1	17.200
VLB30450A480XX	89	45	60	1	17.200
VLB30550A480XX	110	55	75	1	24.000
VLB30750A480XX	150	75	100	1	24.000
VLB30900A480XX	180	90	120	1	35.600
VLB31100A480XX	212	110	150	1	35.600

Operational characteristics for standard load^⑤

Order code	le ^③	3-phase motor power at 400VAC with standard load
Complete drives ^①	Power units ^②	[A] [kW] [HP]
VLB30004A480	VLB30004A480XX	⑥ ⑥ ⑥
VLB30007A480	VLB30007A480XX	⑥ ⑥ ⑥
VLB30015A480	VLB30015A480XX	⑥ ⑥ ⑥
VLB30022A480	VLB30022A480XX	⑥ ⑥ ⑥
VLB30040A480	VLB30040A480XX	11.9 5.5 7.5
VLB30055A480	VLB30055A480XX	15.6 7.5 10
VLB30075A480	VLB30075A480XX	23 11 15
VLB30110A480	VLB30110A480XX	28.2 15 20
VLB30150A480	VLB30150A480XX	38.4 18.5 25
VLB30185A480	VLB30185A480XX	48 22 30
VLB30220A480	VLB30220A480XX	56.4 30 40
VLB30300A480	VLB30300A480XX	73.2 37 50
—	VLB30370A480XX	91.2 45 60
—	VLB30450A480XX	107 55 75
—	VLB30550A480XX	132 75 100
—	VLB30750A480XX	180 90 120
—	VLB30900A480XX	216 110 150
—	VLB31100A480XX	254 132 175

General characteristics

VLB3... is a compact drive (book style housing) with three-phase supply input. It is ideal for general applications and, in particular, to control and manage pumps and fans, thanks to several specific built-in functions (S Curve, PID, torque quadratic V/f control). It does not require any space for side ventilation, allowing several drives to be installed side-by-side. The user interface, which comprises of a built-in keyboard and display, allows easy access to the setting of parameters, thanks to the use of extended texts describing the functions and codes. Using the USB or Wi-Fi connection accessories, the programming, monitoring and diagnostics can be performed using a PC with software VLBXSW, freely downloadable from the website www.LovatoElectric.com. The RS485 communication port with built-in Modbus-RTU (integrated in the complete drives VLB3... A480) and EMC filter complete the hardware supply. The logic unit can be replaced with one of the VLBXL... codes, obtaining a communication port with different protocol.

SPEED REFERENCE SIGNALS

- External potentiometer: 1...10kΩ
- Voltage signals -10...10VDC (two-pole), 0...10VDC or current signals 0/4...20mA
- Buttons on front keyboard
- Remote control panel
- 15 preset speeds via digital inputs
- Motor potentiometer
- Setting via communication protocol.

PROGRAMMABLE INPUTS AND OUTPUTS

- Selectable pNp or nPn logic
- 5 digital inputs
- 1 digital output, 1 changeover relay output
- 2 analog inputs configurable as voltage inputs (0/2...10VDC, -10...+10VDC, 0...5VDC) or current inputs 0/4...20mA
- 1 analog output configurable as voltage output 0...10VDC or current output 0/4...20mA.

PROTECTIONS

- Overcurrent
- Output short circuit and earth/ground leakage
- Overvoltage and undervoltage
- Phase loss
- Motor heat overload (I²t)
- Motor PTC heat protection
- Drive, motor and braking resistor overload
- Overspeed
- Speed reverse.

FUNCTIONS

- Speed or torque control
- V/f linear or quadratic curves
- Open or closed loop vector control
- Energy-saving ECO control
- S curves
- Flying restart
- Access to DC bus
- DC braking and DC injection at start
- Built-in PID with SLEEP and WAKE-UP thresholds
- Multi-pump PID control (1 main pump frequency regulated + 2 auxiliary pumps activated in on-off mode in case of necessity)
- Programmable frequency/time cycles
- Ideal for asynchronous or synchronous motors (up to 22kW)
- Different parameter configurations
- User menu (favorite parameters)
- Safe Torque Off (STO) input accessory class SIL 3 (EN/BS 62061 / EN/BS 61800-5-2)
- Programming and monitoring software VLBXSW freely, downloadable from the website www.LovatoElectric.com.

Operational characteristics

- Input voltage: 400...480VAC three-phase
- Rated operational current: 1.3...212A
- Mains frequency: 45...65Hz
- Output frequency: 0...599Hz
- Switching frequency: 2...16kHz
- Current overload: 150% for 60s; 200% for 3s
- IEC degree of protection: IP20
- Ambient conditions
 - Operating temperature: -10...+55°C (45°C without derating)
 - Maximum altitude: 4000m (with power derating)
 - Relative humidity: 5...95% (with no condensing)
- Side-by-side installation
- Built-in EMC suppressor (EN/BS 61800-3) motor cable length: up to 3m for cat. C1 (for sizes 0.4 and 0.75kW); up to 20m for cat. C2
- IE2 efficiency level (EN/BS 50598-2).

Certifications and compliance

Certifications obtained: cULus, EAC, RCM.
Compliant with standards: EN/BS 61800-5-1, UL 61800-5-1, CSA 22.2 No. 274.

Accessories for VLB3



VLBXC00



VLBXC01



VLBXC02



VLBXC03



VLBXSM



VLBXL...



EXCRDU1



VLBXP01

Order code	Description	Qty per pkg.	Wt
		n°	[kg]
VLBXC00	Blanking cover	4	0.128
VLBXC01	Keypad and display	1	0.080
VLBXC02	USB communication module	1	0.080
VLBXC03	Wi-Fi communication module	1	0.080
VLBXSM	Safe Torque Off (STO) module	1	0.080
VLBXL01	Logic unit with CANopen	1	0.209
VLBXL02	Logic unit with ProfiBUS	1	0.209
VLBXL03	Logic unit with ProfiNET	1	0.209
VLBXL04	Logic unit with Ethercat	1	0.209
VLBXL06	Logic unit with Modbus-RTU	1	0.209
VLBXP01	Door-mount installation kit for the keypad VLBXC01, IP65, Type 4X, connecting cable included 3m long	1	0.340
EXCRDU1	Remote display unit, LCD graphic touch screen, RS485 port integrated, for monitoring and control of up to 32 drives, IP65 and 4X, cable included 3m long	1	0.360

General characteristics

CONTROL UNITS VLBXC...

The variable speed drives VLB3... series can be programmed with the control unit VLBXC01 (keypad and display) or alternatively from a PC with the software VLBXSW (freely downloadable from the website www.LovatoElectric.com) by using the communication modules VLBXC02 (USB) and VLBXC03 (Wi-Fi).

SAFE TORQUE OFF (STO) MODULE VLBXSM

The VLBXSM module allows to increase and optimize the safety functions of the drive providing two inputs dedicated to the function Safe Torque Off (STO) with performance level ISO 13849-1 (EN/BS 954-1), safety class SIL 3 (EN/BS 62061 / EN/BS 61800-5-2).

LOGIC UNITS VLBXL...

Thanks to their modular structure, on the VLB3... series variable speed drives it is possible to replace the logic unit with Modbus-RTU protocol (integrated as standard on the complete drives VLB3...A480) with one of the logic units VLBXL..., available in the versions with the most common fieldbus, obtaining a drive with a different communication port, which allows its integration inside control systems.

DOOR-MOUNT INSTALLATION KIT VLBXP01

With the kit VLBXP01 it is possible to mount the keypad and display VLBXC01 (provided as standard on the complete drives VLB3...A480 or purchased as an optional accessory for the power units VLB3...A480XX) on the panel door. The door-mounting kit has an IP65 and Type 4X degree of protection and it is provided with an Ethernet connection cable 3 meters long.

REMOTE DISPLAY UNIT EXCRDU1

The remote display unit EXCRDU1 allows the command and monitoring of up to 32 variable speed drives VLB3... series, connected in RS485 (Modbus-RTU protocol).

It provides the following functions:

- Command of the start and stop of the motor
- Adjustment of the speed of the motor
- Inversion of the sense of rotation of the motor
- Monitoring of the main electrical measures of the system
- Control of the status of the drive and presence of alarms
- PID control and monitoring of the status.

Technical characteristics:

- Auxiliary supply 100...240VAC / 110...250VDC
- Graphic LCD display with touch screen, 128x112 pixel
- Opto-isolated RS485 port, Modbus-RTU protocol
- Flush mount housing, compatible with DIN 96x96mm and ANSI 4"
- Compatible with VLB3 drives equipped with Modbus-RTU logic unit
- Cable for RS485 connection included, 3 meters long
- Degree of protection on front IP65 and 4X.

Certifications and compliance

Certifications obtained: cULus, EAC and RCM (only for VLBXC..., VLBXSM and VLBXL...).

Compliant with standards: EN/BS 61800-5-1, UL 61800-5-1, CSA 22.2 No. 274.

Three-phase mains chokes



VLBXL...

Order code	I _e	Inductance	Power	Qty per pkg.	Weight
	[A]	[mH]	[kW]	n°	[kg]
Three phase mains chokes for VLB3... variable speed drives.					
VLBXL590	50	0.59	22...30	1	8.350
VLBXL370	80	0.37	37	1	12.500
VLBXL330	90	0.33	45	1	16.000
VLBXL300	100	0.30	55	1	19.000
VLBXL190	160	0.19	75	1	26.000
VLBXL140	200	0.14	90...110	1	32.000

General characteristics

VLBXL... three-phase mains chokes are applied to the input of VLB3... drives from 22kW to 110kW to reduce the harmonic content upstream, with consequent reduction of the input current absorbed by the drives.

For the correct choice, select the inductance with current rating equal to or greater than the rated current of the drive they will be used with.

Operational characteristics

- Current: 50...200A.
- Operating temperature: -10...+55°C (40°C without derating)

Compliance

Compliant with standards: IEC/EN/BS 61558-1.

Three-phase motor chokes



VLXM...

new

Order code	I _e	Inductance	Power	Qty per pkg.	Weight
	[A]	[mH]	[kW]	n°	[kg]
Three phase motor chokes for VLA1... - VT1... - VLB3... variable speed drives.					
VLXM012	12.5	1	0.2...4	1	3.000
VLXM025	25	0.6	5.5...11	1	6.000
VLXM050	50	0.2	15...22	1	8.000
VLXM100	100	0.15	30...45	1	16.000
VLXM150	150	0.08	55...75	1	18.000
VLXM300	300	0.04	90...110	1	29.000

General characteristics

Three phase motor chokes VLXM... can be installed to the drive output, to reduce the voltage peaks generated by the drive towards the motor, or when several parallel motors are simultaneously controlled by the drives.

For the correct choice, select the inductance with I_e current rating equal to or greater than the rated current of the drive they will be used with.

Operational characteristics

- Rated grid voltage: 400VAC
- Operating range: 170...530VAC
- Rated frequency: 50/60Hz
- Winding material: Aluminium
- Rated current I_e: 12.5...300A type code according
- Rated power: 150...3390VA type code according
- Saturation current: 1.5 * I_e
- THD: about 40%
- Ambient temperature max: 40°C
- Maximum altitude: 1000m
- Insulation class: F
- Working class: F
- Test voltage: 3kV/1 sec
- Protection degree: IP00.

Compliance

Compliant with standards: IEC/EN/BS 61558.

Braking resistors



VLBXR...

Order code	Output	Resistance	Power	Qty per pkg.	Wt
	[W]	[Ω]	[kW]	n°	[kg]
Resistors for VLB3... variable speed drives.					
VLBXR390	100	390	0.4...0.75	1	0.260
VLBXR180	200	180	1.5...2.2	1	0.630
VLBXR047	200	47	4...5.5	1	0.500
VLBXR027	200	27	7.5...11	1	0.500
VLBXR018	800	18	15	1	4.200
VLBXR015	800	15	18.5...22	1	4.200
VLBXR007	1900	7.5	30...75	1	9.500

General characteristics

Braking resistors can be connected to VLB3 drives in order to absorb the power generated during the motor stop phase.

Certifications and compliance

Certifications obtained: EAC.

Compliant with standards: IEC/EN/BS 60204-1, IEC/EN/BS 60664-1.

Other accessories



LPCPA001

Order code	Description	Qty per pkg.	Wt
		n°	[kg]
Potentiometer.			
LPCPA001	1k Ohm potentiometer 1 turn, complete with operating knob ① IP66, IP67 and IP69K on front	10	0.040

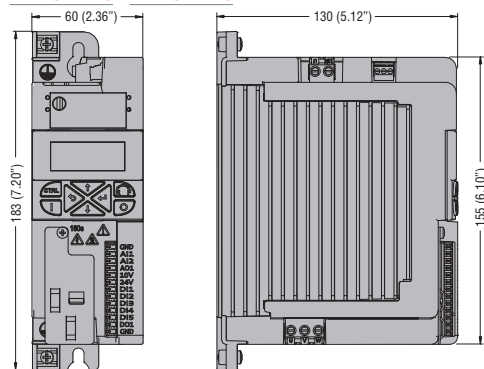
① For more information consult page 7-34.

6 Variable speed drives

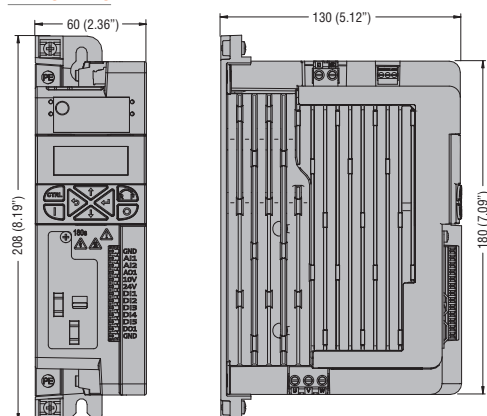
Dimensions [mm (in)]

SINGLE-PHASE VARIABLE SPEED DRIVES

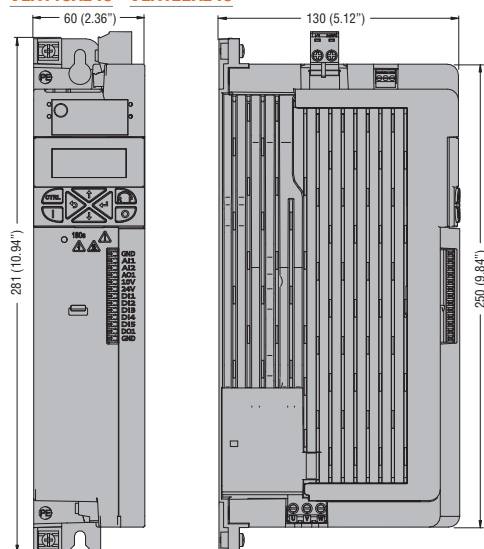
VLA102A240 - VLA104A240



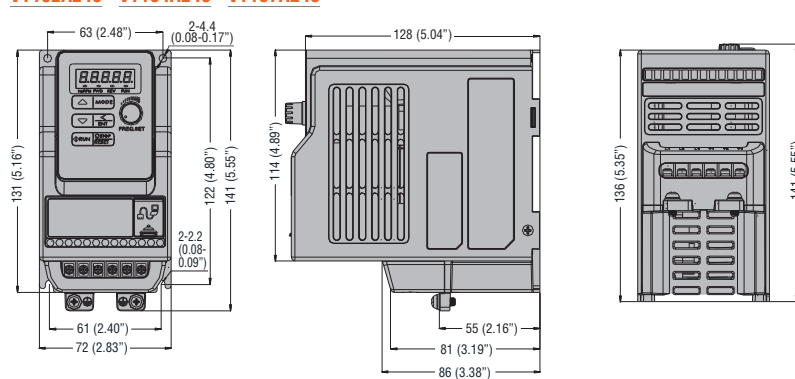
VLA107A240



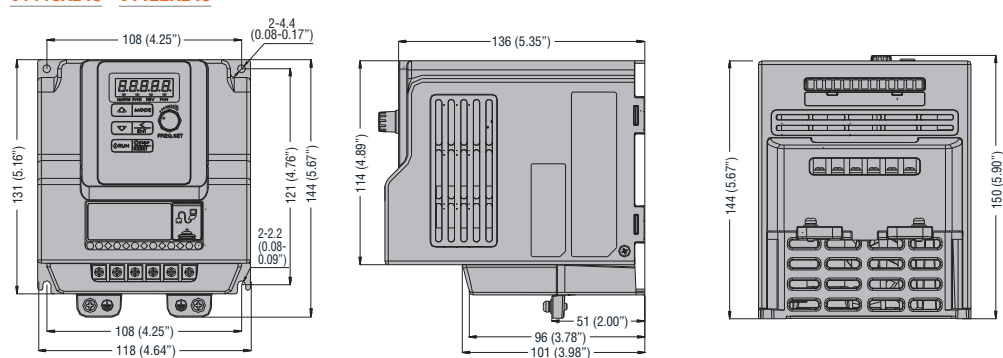
VLA115A240 - VLA122A240



VT102A240 - VT104A240 - VT107A240



VT115A240 - VT122A240

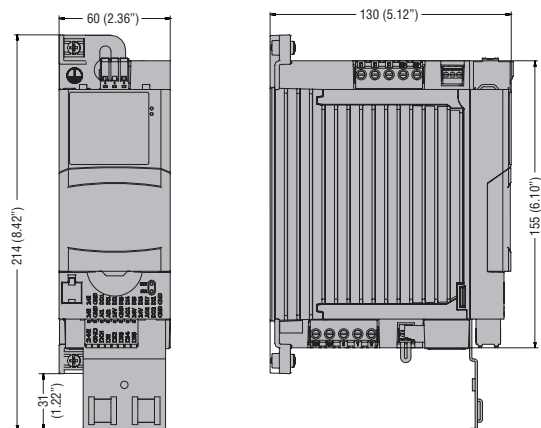


6 Variable speed drives

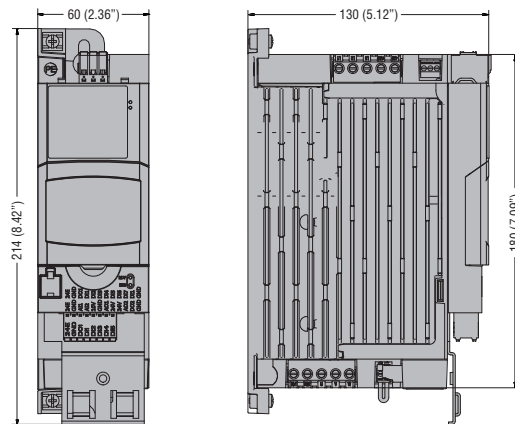
Dimensions [mm (in)]

THREE-PHASE VARIABLE SPEED DRIVES

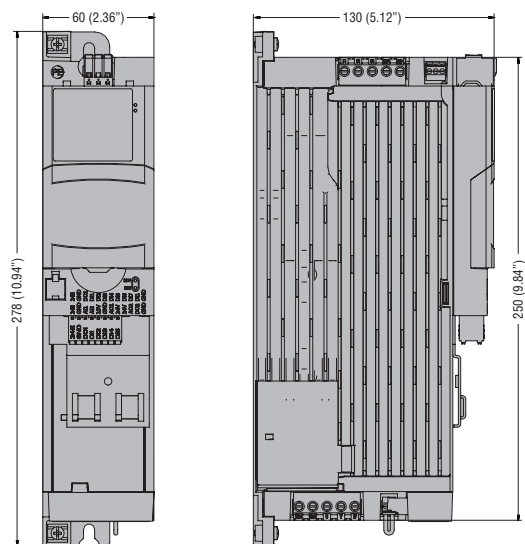
VLB30004A480



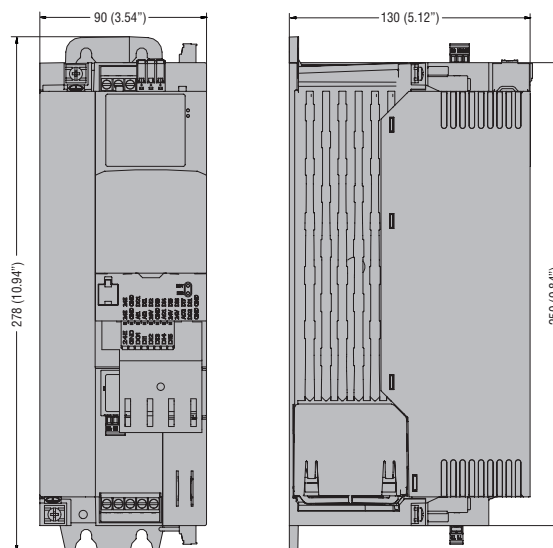
VLB30007A480



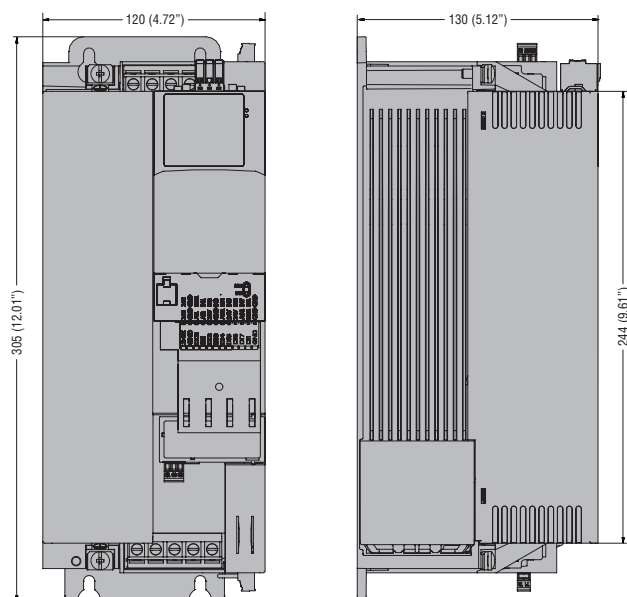
VLB30015A480 - VLB30022A480 - VLB30040A480



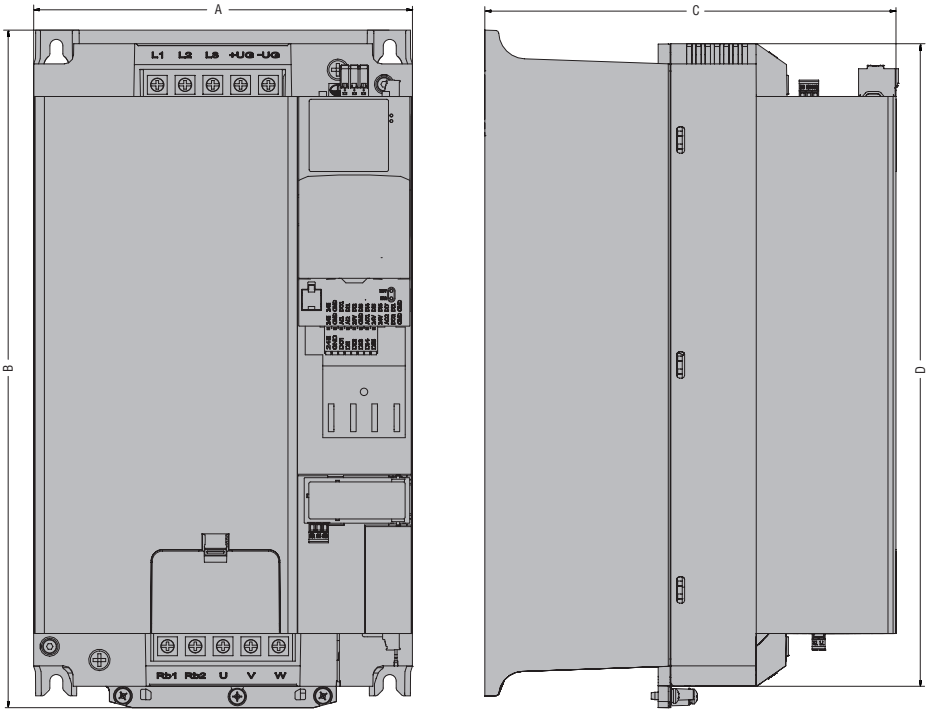
VLB30055A480



VLB30075A480 - VLB30110A480



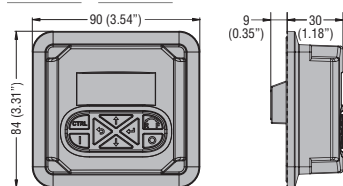
VLB30150A480...VLB31100A480



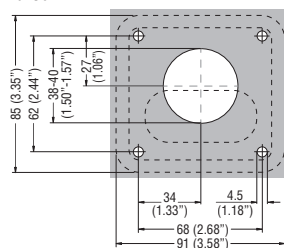
TYPE	A	B	C	D
VLB30150A480	204.5 (8.05")	366 (14.41")	222 (8.74")	347 (13.66")
VLB30185A480	204.5 (8.05")	366 (14.41")	222 (8.74")	347 (13.66")
VLB30220A480	204.5 (8.05")	366 (14.41")	222 (8.74")	347 (13.66")
VLB30300A480	250 (9.84")	520 (20.47")	230 (9.05")	450 (17.72")
VLB30370A480	250 (9.84")	520 (20.47")	230 (9.05")	450 (17.72")
VLB30450A480	250 (9.84")	520 (20.47")	230 (9.05")	450 (17.72")
VLB30550A480	250 (9.84")	623 (24.53")	265 (10.43")	536 (21.10")
VLB30750A480	250 (9.84")	623 (24.53")	265 (10.43")	536 (21.10")
VLB30900A480	258 (10.16")	775 (30.51")	304 (11.97")	685 (26.97")
VLB31100A480	258 (10.16")	775 (30.51")	304 (11.97")	685 (26.97")

Remote keypads

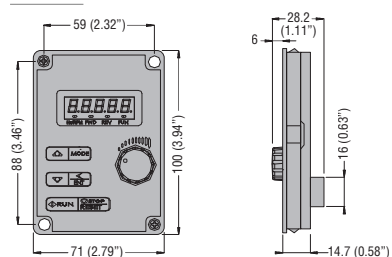
VLAXP01 - VL8XP01



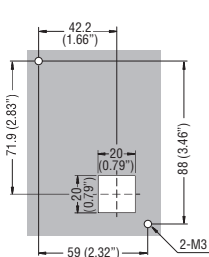
Cutout



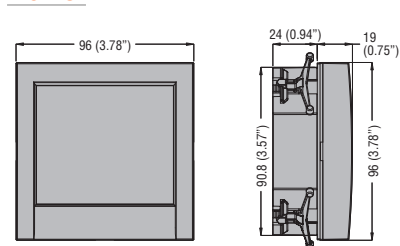
VT1XC02



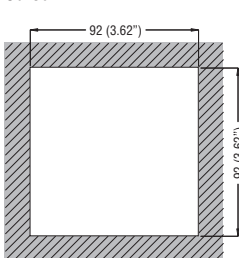
Cutout



EXCRDU1



Cutout



AXIS & Stuifmeel B.V.
Coenecoop 1
2741 PG WADDINXVEEN

+31(0)182-647070
info@axis-stuifmeel.nl
www.axis-stuifmeel.nl

NOTE: for inductances, motor chokes and resistors refer to www.LovatoElectric.com.