

VE/B - VE/RG **Variable speed drives**

LEROY-SOMER's VE/B-VE/RG drives

provide SPEED VARIATION for a DC motor, SIMPLY and ECONOMICALLY from a single-phase power supply.

CMS-type technology is used. These products conform to CE and UL standards (USA and Canada)

Their compact size and easy installation, without the need for programming, meet the requirements of most applications in the fractional power motor market.



VE/B

0.075 to 0.37 kW

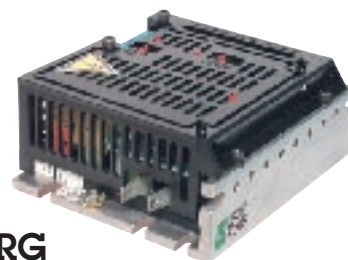
230 V



VE/RG

0.075 to 0.37 kW

**230 V (or 115V)
50/60 Hz - Single phase**



	VE/B	VE/RG
• Variable speed drive	1 quadrant	4 quadrants
• Single-phase 50/60 Hz power supply • standard • on request	230 V AC -	230 V AC 115 V AC
• Control logic run/stop input	Positive	Negative
• Adjustment range	1 to 30	1 to 50
• Index of protection • standard • on request	IP 20 or IP40 IP 00	IP 20 IP 00
• Maximum ambient temperature	0 to 40 °C	0 to 50 °C
• Associated DC motors	MFA and MS	MFA
• Power ratings of associated motors	0.075 to 0.37 kW	0.075 to 0.37 kW

VE/B - 1-quadrant drive

General characteristics

GENERAL

- 1-quadrant drive, 1 direction of rotation, comprising a mixed bridge (2 thyristors and 2 diodes)
- Speed range: ratio 1 to 30
- Speed regulation:
 - no-load and full-load input: 1% of rated speed
 - for a mains variation of $\pm 10\%$: 0.5% of rated speed
 - speed control linearity: 2%
- Permissible overload: 150% of rated current - Display of overload mode
- Compensation for motor resistive voltage drop (R.I.)
- Protection against transient mains overvoltages via surge suppressor

CONTROL

- Run/Stop input:
 - via run command with normally closed isolated volt-free contact
 - acceleration and deceleration on 2 adjustable ramps
- Reference input not galvanically isolated
 - for potentiometer 4.7 or 5 kOhms, (5 kOhms supplied)
 - analogue via voltage 0 - 10V DC
- Tachogenerator feedback possible:
 - for tachometer 7 V DC - 1000 min⁻¹
 - for tachometer or rectified alternator 50 V DC - 1000 min⁻¹ or 20 V DC - 1000 min⁻¹

SETTINGS

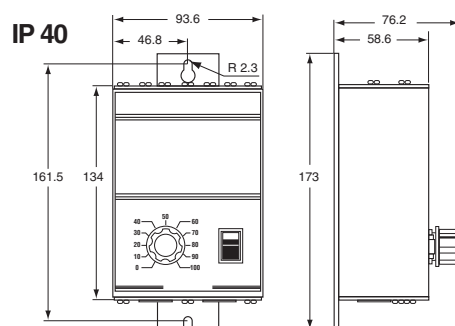
- Max. speed: 50 to 110% of rated speed
- Min speed: 0 to 30% of rated speed
- Ramps:
 - acceleration: 0.5 to 10 seconds
 - deceleration: 2 to 10 seconds
- RI compensation: 0 to 24 V DC

Options

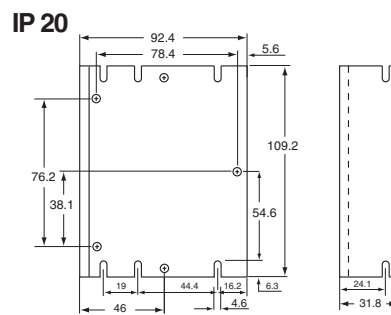
- Potentiometer + switch kit: sealed potentiometer + button + faceplate + 2-pole switch
- Galvanic isolation module, can be added to IP00 drive only, with possibility of 4-20 mA analogue input
- Terminal block + fuse board, can be added to IP00 drive only
- RFI filter - Class B, IP00, supplied separately
- Filtering ferrite, IP00, supplied separately
- Kit for mounting on DIN rail

Weight and Dimensions

Dimensions in millimetres



Weight in kg : 0.50



Weight in kg : 0.28

VE/RG - 4-quadrant drive

General characteristics

GENERAL

- 4-quadrant drive, comprising a full bridge with thyristors
- Speed range: ratio 1 to 50
- Possibility of voltage or torque control
- Speed regulation:
 - no-load and full-load input: 1% of rated speed
 - for a mains variation of $\pm 10\%$: 0.5% of rated speed
 - speed control linearity: 0.5% of rated speed
- Permissible overload: 150% of rated current - Display of overload mode
- Compensation for motor resistive voltage drop (R.I.)
- Protection against driving loads
- Protection against mains overvoltages via surge suppressor

CONTROL

- Run/stop input:
 - via run command with normally open isolated volt-free contact
 - freewheel stopping mode or regeneration
- Reference input not galvanically isolated
 - for potentiometer 4.7 or 10 kOhms, (5 kOhms supplied)
 - analogue via voltage $\pm 15/-15$ or $\pm 10/-10$ V DC (0 V = stop)
- Tachogenerator feedback possible:
 - for tacho 7 V DC - 1000 min⁻¹
 - for tacho or rectified alternator 50 V DC - 1000 min⁻¹

SETTINGS

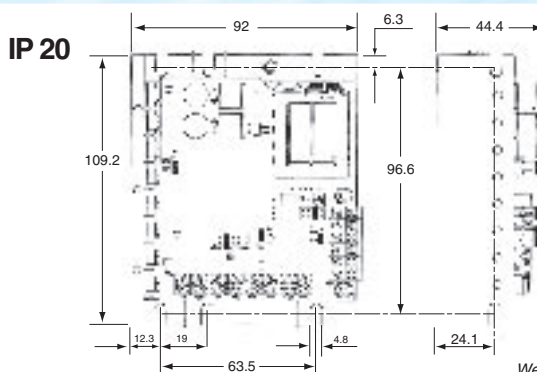
- Max. speed: 50 to 110% of rated speed
- Acceleration ramp from 0.1 to 15 seconds
- RI compensation: 0 to 24 V DC
- Reference deadband on stopping
- Dynamic response

Options

- Potentiometer + switch kit: sealed potentiometer + button + faceplate + 2-pole switch
- Galvanic isolation module can be added to drive
- Multi-reference module (4 adjustable references with independent directions) can be added to drive
- RFI filter - Class B, IP00, supplied separately
- Filtering ferrite, IP00, supplied separately
- Kit for mounting on DIN rail

Weight and Dimensions

Dimensions in millimetres



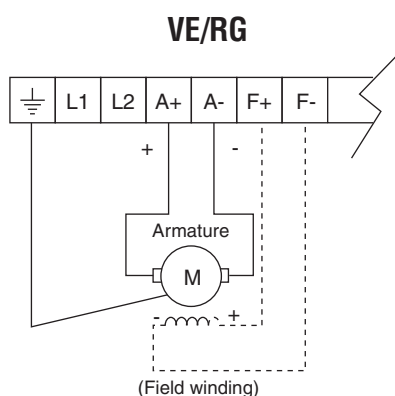
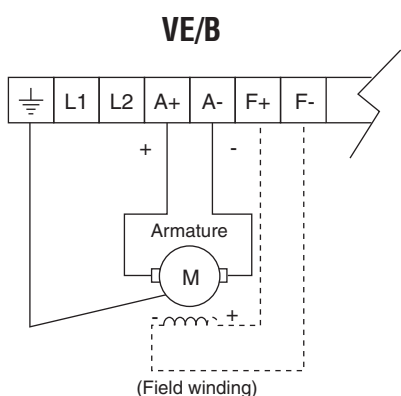
Weight in kg : 0.50

VE/B - VE/RG

Electrical characteristics

Type	Mains current (A)	Armature voltage (V DC)	Power (kW)	IN (A)	Limit current (A)
VE/B - VE/RG 7	1.1	0 to +/-180	0.075	0.75	1.0
VE/B - VE/RG 12	2.0	0 to +/-180	0.12	1.2	1.5
VE/B - VE/RG 18	2.4	0 to +/-180	0.18	1.5	2.1
VE/B - VE/RG 25	3.5	0 to +/-180	0.25	2.1	3.0
VE/B - VE/RG 37	4.3	0 to +/-180	0.37	2.9	3.6

Connections



VE/B and VE/RG drives are available ready to use. For most applications no adjustments are required.

However, base settings can be accessed on mini-potentiometers, using the screwdriver supplied with the device (please refer to the installation and maintenance manual).