

### Features:

- ❑ DC braking with one-way rectification
- ❑ controlled by microcontroller
- ❑ suitable for all asynchronous motors
- ❑ easy mounting, also for retrofitting into existing plants
- ❑ wear-resistant and maintenance-free
- ❑ special voltages up to 600V (25A-devices)
- ❑ special voltages up to 690V (devices from 40A)
- ❑ integrated braking contactor (devices up to 60A)
- ❑ for snap-mounting onto 35mm top-hat-rail (devices up to 25A)
- ❑ degree of protection IP 20 (VB 230/400 - 25)
- ❑ degree of protection IP 00 (VB 230/400 - 40 ... 600)



Braking Devices  
**VB 230-25 ... 600**  
**VB 400-25 ... 600**  
**CE**

### Function:

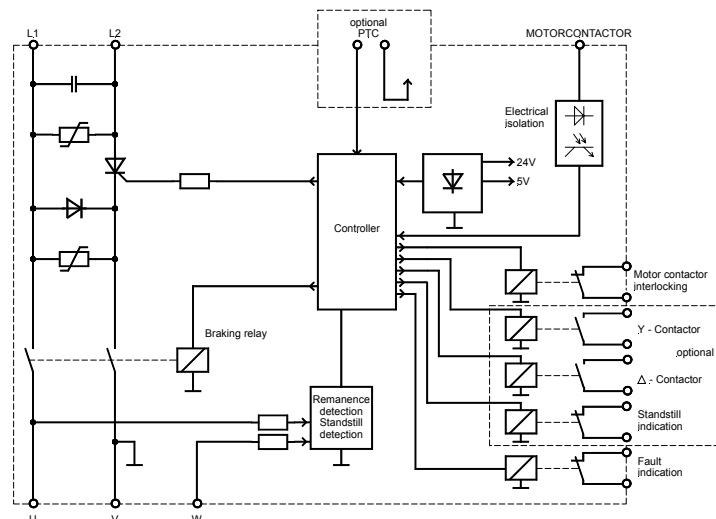
- ❑ control via motor contactor
- ❑ standstill detection
- ❑ braking current limited to rated device current
- ❑ remanence time optimization
- ❑ braking current infinitely adjustable
- ❑ potential-free output for motor contactor interlocking during braking
- ❑ potential-free output for fault signalling relay
- ❑ potential-free output for braking contactor (devices from 100A)

### Options:

- ❑ star-delta starting control (D)
- ❑ motor temperature monitoring (P)
- ❑ standstill signalling relay (S)
- ❑ wide-voltage-range-capable due to control voltage supply of 24VAC or 230VAC (B)

### Typical Applications:

sawing machines  
 centrifuges  
 wood working machines  
 textile machines  
 conveying systems

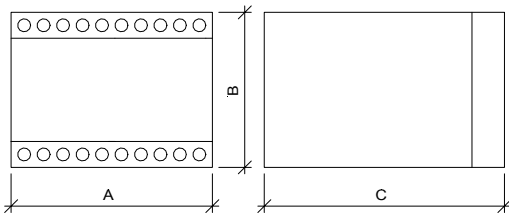


| Type designation VB ....                     | 230-25<br>400-25   | 230-40<br>400-40   | 230-60<br>400-60 | 230-100<br>400-100 | 230-200<br>400-200 | 230-300<br>400-300 | 230-400<br>400-400 | 230-600<br>400-600 |
|--|--|--------------------|------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Mains voltage                                | VB 230 ... 220/240V ±10% 50/60Hz other voltages<br>VB 400 ... 380/415V ±10% 50/60Hz upon request |                    |                  |                    |                    |                    |                    |                    |
| Power draw of the electronics                | 6 VA   |                    |                  |                    |                    |                    |                    |                    |
| max. Motor rating at 220/240V<br>at 380/415V | 3kW<br>5.5kW   | 5.5kW<br>7.5kW     | 7.5kW<br>15kW    | 15kW<br>22kW       | 30kW<br>55kW       | 45kW<br>90kW       | 60kW<br>110kW      | 95kW<br>160kW      |
| Rated device current                         | 25A  | 40A                | 60A              | 100A               | 200A               | 300A               | 400A               | 600A               |
| c.d.f. at max. braking current               | 8%   | 15%                | 15%              | 15%                | 15%                | 15%                | 15%                | 15%                |
| ext. semiconductor fuse „ high-speed“        | 25A  | 40A                | 60A              | 100A               | 200A               | 300A               | 400A               | 630A               |
| Braking voltage                              | 0 ... 130VDC at 220/240V<br>0 ... 220VDC at 380/415V   |                    |                  |                    |                    |                    |                    |                    |
| max. Braking time                            | 15sec. (other times upon request)  |                    |                  |                    |                    |                    |                    |                    |
| Contact rating of output relay               | 6A/250V~   |                    |                  |                    |                    |                    |                    |                    |
| Delay time for reduction of residual e.m.f.  | self-optimizing (100 ... 2500ms)   |                    |                  |                    |                    |                    |                    |                    |
| min. Cross-section area / connection cable   | 1.5mm <sup>2</sup>   | 2.5mm <sup>2</sup> | 4mm <sup>2</sup> | 10mm <sup>2</sup>  | 25mm <sup>2</sup>  | 50mm <sup>2</sup>  | 50mm <sup>2</sup>  | Screw<br>M10       |
| Ambient / Storage temperature                | 0°C ... 45°C / -25°C ... 75°C  |                    |                  |                    |                    |                    |                    |                    |
| Weight                                       | 0.8kg  |                    |                  |                    |                    |                    |                    |                    |
| Order number 230V                            | 21900.<br>23025  | 21900.<br>23040    | 21900.<br>23060  | 21900.<br>23100    | 21900.<br>23200    | 21900.<br>23300    | 21900.<br>23400    | 21900.<br>23600    |
| Order number 400V                            | 21900.<br>40025  | 21900.<br>40040    | 21900.<br>40060  | 21900.<br>40100    | 21900.<br>40200    | 21900.<br>40300    | 21900.<br>40400    | 21900.<br>40600    |

Devices from 40A up are available from autumn 2002.

Dimensions:

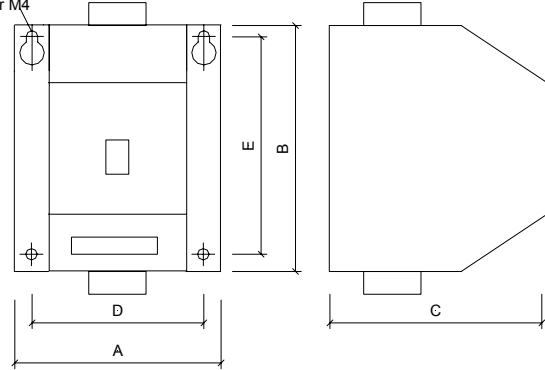
VB 230-25  
VB 400-25



|              | A   | B   | C   | D   | E   |
|--------------|-----|-----|-----|-----|-----|
| VB ... - 25  | 100 | 73  | 120 | -   | -   |
| VB ... - 40  | 110 | 240 | 175 | 80  | 225 |
| VB ... - 60  | 110 | 240 | 175 | 80  | 225 |
| VB ... - 100 | 110 | 240 | 175 | 80  | 225 |
| VB ... - 200 | 110 | 240 | 175 | 80  | 225 |
| VB ... - 300 | 310 | 250 | 160 | 280 | 225 |
| VB ... - 400 | 310 | 250 | 160 | 280 | 225 |
| VB ... - 600 | 310 | 250 | 160 | 280 | 225 |

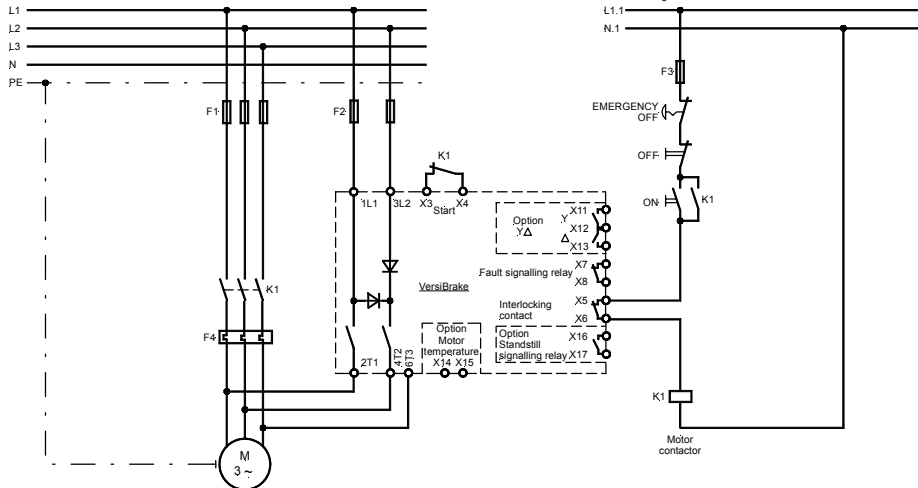
All dimensions in mm.

VB 230-40 ... 600  
VB 400-40 ... 600  
for M4

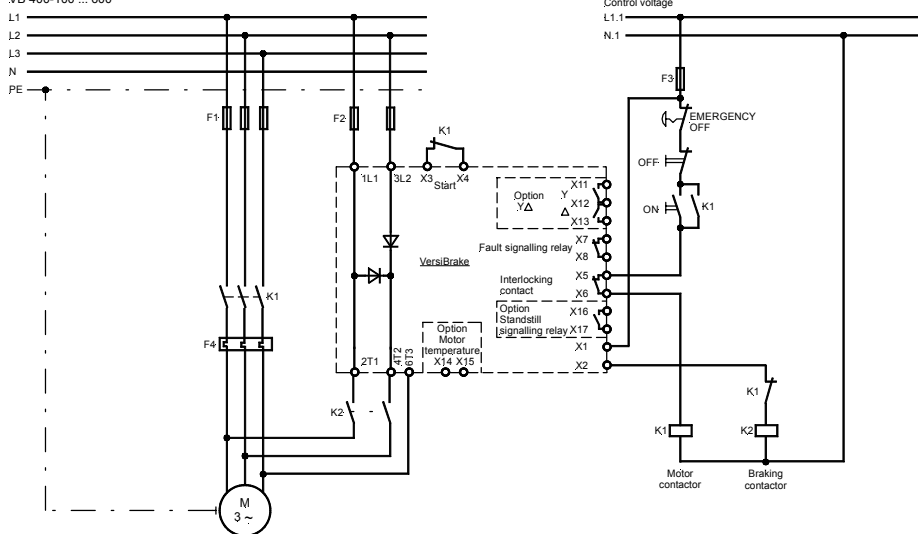


Connection Diagrams:

VB 230-25 ... 60  
VB 400-25 ... 60



VB 230-100 ... 600  
VB 400-100 ... 600



**EMC**  
The limit values for emitted interference according to the applicable device standards do not rule out the possibility that receivers and susceptible electronic devices within a radius of 10m are subjected to interference. If such interference, which is definitely attributable to the operation of the braking devices "BR", occurs, the emitted interference can be reduced by taking appropriate measures.  
Such measures are, e.g.:  
To connect reactors (3mH) or a suitable mains filter in series before the braking device, or to connect X-capacitors (0.15µF) in parallel to the supply voltage terminals.