Mini-VARIO and VARIO Manual Motor Control Switches
Product Descriptions

Applications
Mini-Vario and Vario rotary manual motor control switches from 12 to 175 A are suitable for on-load making and breaking of resistive or mixed resistive and inductive circuits where frequent operation is required. They can also be used for direct switching of motors in utilization categories AC-3 and DC-3 specific to motors. Vario manual motor control switches are suitable for isolator applications with fully visible indication (since the handle cannot be in the open position unless all the contacts are actually open and separated by the appropriate isolating distance) and it is possible to padlock the handles.

Switch Type
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<tr>
<th>Mini-VARIO for Standard Applications</th>
<th>VARIO for High Performance Applications</th>
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<tr>
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<td>10 A/12 A</td>
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<td>10 A/12 A</td>
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<td>63 A/80 A</td>
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<td>100 A/125 A</td>
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<td>AC-23 A at 400 Volts</td>
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<td>8.1 A</td>
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<td>Clip-on Mounting on DIN Rail</td>
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<td>Door Mounting</td>
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<td>Mounting at Back of Enclosure with</td>
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<td>Enclosure Catalog * Number</td>
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** Enclosures not UL listed

International Acceptance
UL Listed, CSA C, IEC Rated, CE Marked, and most other applicable international standards.

UL508, CSA 22.2 No. 14 - UL File # E164864 CCN NLRV, CSA File # LR81630 Class 3211 02.

Suitable for use in equipment or machinery as manual motor controllers and are horsepower and ampere rated.

IEC
Tested in accordance to IEC 947-3, IEC 529, and IEC 695-2-1.

CE
Compliance with the European Machine Directive IEC204.
## Specifications

### Switch Type

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<th>VN20</th>
<th>V01</th>
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<th>VVD0</th>
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<td>IP 20 conforming to IEC 529</td>
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<td>Flame Resistance</td>
<td>1760°F (960°C) conforming to IEC 695-2-1</td>
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<th>Shock Resistance 1/2 Sine Wave = 11ms</th>
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<th>30 g</th>
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### Intermittent Duty Class

<table>
<thead>
<tr>
<th>Characteristics in Normal Operating Conditions</th>
<th>AC-3</th>
<th>230/240 V</th>
<th>kW</th>
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### Short-circuit Characteristics

| Permissible ms Short Time Rating (Icw) | A/400 V/1s | 140 | 300 | 140 | 300 | 300 | 384 |
| Rated Making Capacity Under Short-circuit Condition (Icm) | kA/400 V | 0.5 | 1 | 0.5 | 1 | 1 | 1 |
| Rated Conditional Short-circuit Current (Ims) with a M/G G Fuses | kA/400 V | 6 | 10 | 6 | 10 | 10 | 10 |

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<th>Switch Type</th>
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<th>VVE2</th>
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<th>VVE3</th>
<th>V4</th>
<th>VVD4</th>
<th>VVE4</th>
<th>V5</th>
<th>V6</th>
<th>VZ7</th>
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## Mini-VARIO and VARIO Manual Motor Control Switches
### Specifications

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#### Electrical Characteristics, DC Operation

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#### Other Characteristics

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| Suitable for Isolation | Yes | Yes | Yes | Yes |

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| Tightening Torque        | lb-in (N-m)                 | 6.2 (0.7) | 18.6 (2.1) | 6.2 (0.7) | 18.6 (2.1) | 18.6 (2.1) | 18.6 (2.1) | 18.6 (2.1) | 18.6 (2.1) |

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# Mini-VARIO and VARIO Manual Motor Control Switches

## Specifications

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<td>110 V</td>
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<td>7</td>
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<td>A</td>
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<td>250 V</td>
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<td>1</td>
<td>1.2</td>
<td>1.5</td>
<td>1.6</td>
<td>1.8</td>
<td>–</td>
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<td></td>
<td>2 contacts</td>
<td>A</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>–</td>
<td></td>
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</tr>
<tr>
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<td>3 contacts</td>
<td>A</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td>12</td>
<td>14</td>
<td>–</td>
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### Other Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical Durability</td>
<td>Millions of Op. Cycles</td>
</tr>
<tr>
<td>Electrical Durability in Cat. AC-21</td>
<td>Millions of Op. Cycles</td>
</tr>
<tr>
<td>Electrical Durability in Cat. DC-1 to 5</td>
<td>Operating Cycles</td>
</tr>
<tr>
<td>Suitable for Isolation</td>
<td>Yes</td>
</tr>
<tr>
<td>Cabling</td>
<td>Flexible Cable + Cable End</td>
</tr>
<tr>
<td></td>
<td>Solid Cable</td>
</tr>
<tr>
<td>Tightening Torque</td>
<td>lb-in (N•m)</td>
</tr>
</tbody>
</table>
Mini-VARIO and VARIO Manual Motor Control Switches

Selection

— 3-pole rotary manual motor control switches, 12 and 20 A.
— Marking on operator.
— Padlockable operating handle (padlocks not supplied).

Complete Units
— Degree of protection IP 65, NEMA Type 1 and 12.

Main Manual Motor Control Switch for Door Mounting

<table>
<thead>
<tr>
<th>Operator Handle</th>
<th>Front Plate in (mm)</th>
<th>Mounting in (mm)</th>
<th>Rating (A)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red, padlockable with up to 3 padlocks</td>
<td>Yellow 2.38 x 2.38 (60 x 60)</td>
<td>∅ 0.88 (22.5)</td>
<td>10 12</td>
<td>VCDN12</td>
<td>0.39 (0.177)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16 20</td>
<td>VCDN20</td>
<td>0.39 (0.177)</td>
</tr>
</tbody>
</table>

Main Manual Motor Control Switches for Mounting at Back of an Enclosure ♦

<table>
<thead>
<tr>
<th>Operator Handle</th>
<th>Front Plate in (mm)</th>
<th>Mounting in (mm)</th>
<th>Rating (A)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red, padlockable with up to 3 padlocks</td>
<td>Yellow 2.38 x 2.38 (60 x 60)</td>
<td>∅ 0.88 (22.5)</td>
<td>10 12</td>
<td>VCCDN12</td>
<td>0.736 (0.334)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16 20</td>
<td>VCCDN20</td>
<td>0.736 (0.334)</td>
</tr>
</tbody>
</table>

Main Manual Motor Control Switches for Door Mounting

<table>
<thead>
<tr>
<th>Operator Handle</th>
<th>Front Plate in (mm)</th>
<th>Mounting in (mm)</th>
<th>Rating (A)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black, padlockable with up to 3 padlocks</td>
<td>Black 2.38 x 2.38 (60 x 60)</td>
<td>∅ 0.88 (22.5)</td>
<td>10 12</td>
<td>VBDN12</td>
<td>0.39 (0.177)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16 20</td>
<td>VBDN20</td>
<td>0.39 (0.177)</td>
</tr>
</tbody>
</table>

Enclosures
— Degree of protection IP 55, non-NEMA.
— Sealable enclosure.

Enclosed Main Manual Motor Control Switches ★

<table>
<thead>
<tr>
<th>Operator Handle</th>
<th>Front Plate in (mm)</th>
<th>Rating (A)</th>
<th>Power in AC23 at 400 V (kW)</th>
<th>No. Add-on Modules Possible</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red, padlockable with 1 padlock (∅ 8 shank) or 3 padlocks (∅ 6 shank)</td>
<td>Yellow 2.38 x 2.38 (60 x 60)</td>
<td>10 4 2</td>
<td></td>
<td></td>
<td>VCFN12GE ★</td>
<td>0.93 (0.422)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16 5.5 2</td>
<td></td>
<td></td>
<td>VCFN20GE ★</td>
<td>0.93 (0.422)</td>
</tr>
</tbody>
</table>

♦ Switches supplied with a shaft extension VZN17 and a door interlock plate KZ32 (see page 9).
★ Enclosure not UL listed
## Switch Bodies

<table>
<thead>
<tr>
<th>Description</th>
<th>Rating (A)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-Pole manual motor control switch</td>
<td>10, 12</td>
<td>VN12</td>
<td>0.242 (0.110)</td>
</tr>
<tr>
<td></td>
<td>16, 20</td>
<td>VN20</td>
<td>0.242 (0.110)</td>
</tr>
</tbody>
</table>

## Add-on Modules

<table>
<thead>
<tr>
<th>Description</th>
<th>Rating (A)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main pole module</td>
<td>10, 12</td>
<td>VZN12</td>
<td>0.04 (0.020)</td>
</tr>
<tr>
<td></td>
<td>16, 20</td>
<td>VZN20</td>
<td>0.04 (0.020)</td>
</tr>
<tr>
<td>Neutral pole module with early make and late break contacts</td>
<td>N/A, 12 and 20</td>
<td>VZN11</td>
<td>0.04 (0.020)</td>
</tr>
<tr>
<td>Grounding module</td>
<td>N/A, 12 and 20</td>
<td>VZN14</td>
<td>0.035 (0.016)</td>
</tr>
<tr>
<td>Auxiliary contact block module</td>
<td>1 N/O late make contact</td>
<td>VZN05</td>
<td>0.04 (0.020)</td>
</tr>
<tr>
<td></td>
<td>1 N/C early break contact</td>
<td>VZN06</td>
<td>0.04 (0.020)</td>
</tr>
<tr>
<td>Input terminal protection shrouds</td>
<td>For add-on pole modules</td>
<td>VZN26</td>
<td>0.008 (0.004)</td>
</tr>
<tr>
<td></td>
<td>For switch bodies (3-pole switch shroud)</td>
<td>VZN08</td>
<td>0.015 (0.007)</td>
</tr>
</tbody>
</table>

### Maximum Number of Add-on Modules that can be Fitted on a Switch Body

- VZN12 or VZN20 + VZ12 or VZN20 + VZN14
- VZN05 or VZN06 + VZN11 or VZN05 or VZN06
- VZN17, VZN30 + VZN14

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— Degree of protection IP 65, NEMA Type 1 and 12.
— Marking on operator.
— Padlockable operating handle (padlocks not supplied).
— Operator mounting by 1 ∅ 0.88 in (22.5 mm) hole.
— For other accessories and enclosures, see pages 18 and 17.

**Operators for Main Manual Motor Control Switches**

<table>
<thead>
<tr>
<th>Operator Handle</th>
<th>Front Plate in (mm)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red, padlockable with 1 padlock</td>
<td>Yellow 1.75 x 1.75</td>
<td>KCC1YZ</td>
<td>0.11 (0.05)</td>
</tr>
<tr>
<td></td>
<td>(45 x 45)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red, padlockable with up to 3 padlocks</td>
<td>Yellow 2.38 x 2.38</td>
<td>KCD1PZ</td>
<td>0.185 (0.084)</td>
</tr>
<tr>
<td></td>
<td>(60 x 60)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Operators for Main Manual Motor Control Switches**

<table>
<thead>
<tr>
<th>Operator Handle</th>
<th>Front Plate in (mm)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black, padlockable with up to 3 padlocks</td>
<td>Yellow 2.38 x 2.38</td>
<td>KAD1PZ</td>
<td>0.185 (0.084)</td>
</tr>
<tr>
<td></td>
<td>(60 x 60)</td>
<td></td>
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</table>

**Components for Door Interlocking**

**For Mounting at the Back of an Enclosure, in Addition to a Direct Operator**

<table>
<thead>
<tr>
<th>Description</th>
<th>Front Plate in (mm)</th>
<th>Distance enc. Back/Door in (mm)</th>
<th>Package Quantity</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaft extension</td>
<td>–</td>
<td>11.88 to 13.38 (300 to 340)</td>
<td>1</td>
<td>VZN17</td>
<td>0.22 (0.100)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15.75 to 17 (400 to 430)</td>
<td>1</td>
<td>VZN30</td>
<td>0.286 (0.130)</td>
</tr>
<tr>
<td>Door interlock plate</td>
<td>1.75 x 1.75 or 2.38 x 2.38 (45 x 45) or (60 x 60)</td>
<td>–</td>
<td>5</td>
<td>KZ32</td>
<td>0.375 (0.170)</td>
</tr>
<tr>
<td>Plate for door mounting</td>
<td>1.75 x 1.75 or 2.38 x 2.38 (45 x 45) or (60 x 60)</td>
<td>–</td>
<td>5</td>
<td>KZ63</td>
<td>0.451 (0.205)</td>
</tr>
</tbody>
</table>
### Main Manual Motor Control Switches for Door Mounting

<table>
<thead>
<tr>
<th>Operator Handle</th>
<th>Front Plate in (mm)</th>
<th>Mounting in (mm)</th>
<th>Rating (A)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>UL</td>
<td>IEC</td>
<td></td>
</tr>
<tr>
<td>Red, padlockable with up to 3 padlocks</td>
<td>Yellow 2.38 x 2.38 (60 x 60)</td>
<td>□ 0.88 (22.5)</td>
<td>10 12</td>
<td>VCD02</td>
<td>0.474 (0.215)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16 20</td>
<td>VCD01</td>
<td>0.474 (0.215)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 25</td>
<td>VCD0</td>
<td>0.474 (0.215)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 32</td>
<td>VCD1</td>
<td>0.474 (0.215)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25 40</td>
<td>VCD2</td>
<td>0.474 (0.215)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10 12</td>
<td>VCF02</td>
<td>0.55 (0.25)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16 20</td>
<td>VCF01</td>
<td>0.55 (0.25)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 25</td>
<td>VCF0</td>
<td>0.55 (0.25)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 32</td>
<td>VCF1</td>
<td>0.55 (0.25)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25 40</td>
<td>VCF2</td>
<td>0.55 (0.25)</td>
</tr>
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<td>45 63</td>
<td>VCF3</td>
<td>1.234 (0.560)</td>
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<td>63 80</td>
<td>VCF4</td>
<td>1.234 (0.560)</td>
</tr>
<tr>
<td>Red, Long, padlockable with up to 3 padlocks</td>
<td>Yellow 3.5 x 3.5 (90 x 90)</td>
<td>4 Screws</td>
<td>100 125</td>
<td>VCF5</td>
<td>2.644 (1.200)</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>115 175</td>
<td>VCF6</td>
<td>2.644 (1.200)</td>
</tr>
</tbody>
</table>

### Main Manual Motor Control Switches for Mounting at Back of an Enclosure

<table>
<thead>
<tr>
<th>Operator Handle</th>
<th>Front Plate in (mm)</th>
<th>Mounting in (mm)</th>
<th>Rating (A)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>UL</td>
<td>IEC</td>
<td></td>
</tr>
<tr>
<td>Red, padlockable with up to 3 padlocks</td>
<td>Yellow 2.38 x 2.38 (60 x 60)</td>
<td>□ 0.88 (22.5)</td>
<td>10 12</td>
<td>VCCD02</td>
<td>0.864 (0.392)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16 20</td>
<td>VCCD01</td>
<td>0.864 (0.392)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 25</td>
<td>VCCD0</td>
<td>0.864 (0.392)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 32</td>
<td>VCCD1</td>
<td>0.864 (0.392)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25 40</td>
<td>VCCD2</td>
<td>0.864 (0.392)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10 12</td>
<td>VCCF02</td>
<td>1.615 (0.527)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16 20</td>
<td>VCCF01</td>
<td>1.615 (0.527)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 25</td>
<td>VCCF0</td>
<td>1.615 (0.527)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 32</td>
<td>VCCF1</td>
<td>1.615 (0.527)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25 40</td>
<td>VCCF2</td>
<td>1.615 (0.527)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>45 63</td>
<td>VCCF3</td>
<td>0.969 (0.440)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>63 80</td>
<td>VCCF4</td>
<td>1.498 (0.680)</td>
</tr>
<tr>
<td>Red, Long, padlockable with up to 3 padlocks</td>
<td>Yellow 3.5 x 3.5 (90 x 90)</td>
<td>4 Screws</td>
<td>100 125</td>
<td>VCF5</td>
<td>2.909 (1.320)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>115 175</td>
<td>VCF6</td>
<td>2.909 (1.320)</td>
</tr>
</tbody>
</table>

* Unit Supplied with a shaft extension VZN17 and a door interlock plate KZ32 or KZ74, see page 9.
— 3-pole rotary manual motor control switches: 10 to 115 A (UL), 12 to 175 A (IEC).
— Marking on operator.
— Padlockable operating handle (padlocks not supplied).
— Degree of protection IP 65, NEMA Type 1 and 12.

### Main Manual Motor Control Switches for Door Mounting

<table>
<thead>
<tr>
<th>Operator Handle</th>
<th>Front Plate in (mm)</th>
<th>Mounting in (mm)</th>
<th>Rating (A)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>UL IEC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black, padlockable with up to 3 padlocks</td>
<td>2.38 x 2.38 (60 x 60)</td>
<td>0.88 (22.5)</td>
<td>10 12</td>
<td>VBD02</td>
<td>0.474 (0.215)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16 20</td>
<td>VBD01</td>
<td>0.474 (0.215)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 25</td>
<td>VBD0</td>
<td>0.474 (0.215)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 32</td>
<td>VBD1</td>
<td>0.474 (0.215)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25 40</td>
<td>VBD2</td>
<td>0.474 (0.215)</td>
</tr>
<tr>
<td>Black, Long, padlockable with up to 3 padlocks</td>
<td>3.5 x 3.5 (90 x 90)</td>
<td>4 Screws</td>
<td>10 12</td>
<td>VBF02</td>
<td>0.55 (0.250)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16 20</td>
<td>VBF01</td>
<td>0.55 (0.250)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 25</td>
<td>VBF0</td>
<td>0.55 (0.250)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 32</td>
<td>VBF1</td>
<td>0.55 (0.250)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25 40</td>
<td>VBF2</td>
<td>0.55 (0.250)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>45 63</td>
<td>VBF3</td>
<td>1.234 (0.560)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>63 80</td>
<td>VBF4</td>
<td>1.234 (0.560)</td>
</tr>
<tr>
<td>Red, padlockable with 1 padlock</td>
<td>1.75 x 1.75 (45 x 45)</td>
<td>Yellow</td>
<td>20 25</td>
<td>VVE0</td>
<td>0.55 (0.250)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 32</td>
<td>VVE1</td>
<td>0.55 (0.250)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25 40</td>
<td>VVE2</td>
<td>0.55 (0.250)</td>
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<td></td>
<td></td>
<td></td>
<td>45 63</td>
<td>VVE3</td>
<td>1.168 (0.530)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>63 80</td>
<td>VVE4</td>
<td>1.168 (0.530)</td>
</tr>
</tbody>
</table>

### Main Manual Motor Control Switches

For Mounting in an Enclosure or for Modular Distribution Boards

<table>
<thead>
<tr>
<th>Operator Handle</th>
<th>Front Plate in (mm)</th>
<th>Rating (A)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>UL IEC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red, padlockable with 1 padlock</td>
<td>1.75 x 1.75 (45 x 45)</td>
<td>Yellow</td>
<td>20 25</td>
<td>VVD0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20 32</td>
<td>VVD1</td>
<td>0.55 (0.250)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25 40</td>
<td>VVD2</td>
<td>0.55 (0.250)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45 63</td>
<td>VVD3</td>
<td>1.234 (0.560)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>63 80</td>
<td>VVD4</td>
<td>1.234 (0.560)</td>
</tr>
</tbody>
</table>

### Main Manual Motor Control Switches

For Mounting in an Enclosure or for Modular Distribution Boards

<table>
<thead>
<tr>
<th>Operator Handle</th>
<th>Front Plate in (mm)</th>
<th>Rating (A)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>UL IEC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black, not padlockable</td>
<td>1.75 x 1.75 (45 x 45)</td>
<td>Black</td>
<td>20 25</td>
<td>VDD0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20 32</td>
<td>VDD1</td>
<td>0.55 (0.250)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25 40</td>
<td>VDD2</td>
<td>0.55 (0.250)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45 63</td>
<td>VDD3</td>
<td>1.234 (0.560)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>63 80</td>
<td>VDD4</td>
<td>1.234 (0.560)</td>
</tr>
</tbody>
</table>
— 3-pole rotary manual motor control switches, 12 to 175 A.
— Marking on operator.
— Padlockable operating handle (padlocks not supplied).
— Degree of protection IP 65, NEMA Type, as noted

Non-Metallic Enclosures

The VARIO manual motor control switch is also offered as an enclosed switch, which is made of corrosion resistant material suitable for IP55 environments. The 3-pole version makes the VARIO manual motor control switch ideal for manual motor control applications. They are compact, easy to wire and connect, and come undrilled to allow variable cable entry positions.

Metallic Enclosures

The V1 and V2 come in metallic enclosures (NEMA T ype 1, 4, 4X, and 12). The NEMA Type 1 is supplied with conduit knockouts top and bottom. A VZ7 auxiliary contact can be factory installed in these metallic enclosures by adding Form X11 to the catalog number. A VZ20 auxiliary contact can be factory installed in these enclosures by adding Form X20 to the catalog number.

Enclosed 3-Pole Main Manual Motor Control Switches ★

<table>
<thead>
<tr>
<th>Operator Handle</th>
<th>Front Plate Dimensions in (mm)</th>
<th>Rating (A)</th>
<th>Horsepower Ratings (hp)</th>
<th>Power in AC 23 at 400 V (kW)</th>
<th>No. Add-on Modules Possible</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red, Long, padlockable with up to 3 padlocks</td>
<td>Yellow 3.5 x 3.5 (90 x 90)</td>
<td>10 4 2</td>
<td>VCF5GE</td>
<td>4.827 (2.190)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16 5 2</td>
<td>VCF6GE</td>
<td>4.827 (2.190)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20 7.5 2</td>
<td>VCF6GE</td>
<td>4.827 (2.190)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>25 11 2</td>
<td>VCF7GE</td>
<td>1.020 (0.500)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>32 15 2</td>
<td>VCF2GE</td>
<td>1.020 (0.500)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 22 3</td>
<td>VCF3GE</td>
<td>2.049 (0.930)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>63 30 3</td>
<td>VCF4GE</td>
<td>2.049 (0.930)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 37 4</td>
<td>VBF5GE</td>
<td>4.827 (2.190)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>140 45 4</td>
<td>VBF6GE</td>
<td>4.827 (2.190)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black, padlockable with up to 3 padlocks</td>
<td>Yellow 3.5 x 3.5 (90 x 90)</td>
<td>10 4 2</td>
<td>VBF0GE</td>
<td>1.020 (0.500)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>16 5 2</td>
<td>VBF0GE</td>
<td>1.020 (0.500)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20 7.5 2</td>
<td>VBF0GE</td>
<td>1.020 (0.500)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>25 11 2</td>
<td>VBF1GE</td>
<td>1.020 (0.500)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>32 15 2</td>
<td>VBF2GE</td>
<td>1.020 (0.500)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 22 3</td>
<td>VBF3GE</td>
<td>2.049 (0.930)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>63 30 3</td>
<td>VBF4GE</td>
<td>2.049 (0.930)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 37 4</td>
<td>VBF5GE</td>
<td>4.827 (2.190)</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>140 45 4</td>
<td>VBF6GE</td>
<td>4.827 (2.190)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black, padlockable with up to 3 padlocks</td>
<td>Yellow 3.5 x 3.5 (90 x 90)</td>
<td>10 4 2</td>
<td>VBF0GE</td>
<td>1.020 (0.500)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16 5 2</td>
<td>VBF0GE</td>
<td>1.020 (0.500)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20 7.5 2</td>
<td>VBF0GE</td>
<td>1.020 (0.500)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>25 11 2</td>
<td>VBF1GE</td>
<td>1.020 (0.500)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>32 15 2</td>
<td>VBF2GE</td>
<td>1.020 (0.500)</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>50 22 3</td>
<td>VBF3GE</td>
<td>2.049 (0.930)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>63 30 3</td>
<td>VBF4GE</td>
<td>2.049 (0.930)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 37 4</td>
<td>VBF5GE</td>
<td>4.827 (2.190)</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>140 45 4</td>
<td>VBF6GE</td>
<td>4.827 (2.190)</td>
<td></td>
<td></td>
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</tr>
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</table>

见图表13．

Enclosures not UL listed.
Switch Bodies

<table>
<thead>
<tr>
<th>Description</th>
<th>Rating (A)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UL</td>
<td>IEC</td>
<td></td>
</tr>
<tr>
<td>3-pole manual motor control switches</td>
<td>10</td>
<td>12</td>
<td>0.44 (0.200)</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>20</td>
<td>0.44 (0.200)</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>25</td>
<td>0.44 (0.200)</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>32</td>
<td>0.44 (0.200)</td>
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<td>25</td>
<td>40</td>
<td>0.44 (0.200)</td>
</tr>
<tr>
<td></td>
<td>45</td>
<td>63</td>
<td>1.102 (0.500)</td>
</tr>
<tr>
<td></td>
<td>63</td>
<td>80</td>
<td>1.102 (0.500)</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>125</td>
<td>1.983 (0.900)</td>
</tr>
<tr>
<td></td>
<td>115</td>
<td>175</td>
<td>1.983 (0.900)</td>
</tr>
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</table>

Add-on Modules

<table>
<thead>
<tr>
<th>Description</th>
<th>Rating (A)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UL</td>
<td>IEC</td>
<td></td>
</tr>
<tr>
<td>Main pole module</td>
<td>10</td>
<td>12</td>
<td>0.11 (0.050)</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>20</td>
<td>0.11 (0.050)</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>25</td>
<td>0.11 (0.050)</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>32</td>
<td>0.11 (0.050)</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>40</td>
<td>0.11 (0.050)</td>
</tr>
<tr>
<td></td>
<td>45</td>
<td>63</td>
<td>0.22 (0.100)</td>
</tr>
<tr>
<td></td>
<td>63</td>
<td>80</td>
<td>0.22 (0.100)</td>
</tr>
<tr>
<td>Neutral pole module with early make and late break contacts</td>
<td>N/A 12 to 40</td>
<td>VZ11</td>
<td>0.11 (0.050)</td>
</tr>
<tr>
<td></td>
<td>N/A 63 and 80</td>
<td>VZ12</td>
<td>0.22 (0.100)</td>
</tr>
<tr>
<td></td>
<td>N/A 125 and 175</td>
<td>VZ13</td>
<td>0.55 (0.250)</td>
</tr>
<tr>
<td>Grounding module</td>
<td>N/A 12 to 40</td>
<td>VZ14</td>
<td>0.11 (0.050)</td>
</tr>
<tr>
<td></td>
<td>N/A 63 and 80</td>
<td>VZ15</td>
<td>0.22 (0.100)</td>
</tr>
<tr>
<td></td>
<td>N/A 125 and 175</td>
<td>VZ16</td>
<td>0.55 (0.250)</td>
</tr>
<tr>
<td>Auxiliary contact block module with 2 auxiliary contacts</td>
<td>–</td>
<td>N/O + N/C</td>
<td>VZ7</td>
</tr>
<tr>
<td></td>
<td>–</td>
<td>N/C + N/O</td>
<td>VZ20</td>
</tr>
</tbody>
</table>

Maximum Number of Add-on Modules that can be Fitted on a Switch Body

1 Add-on Module on Each Side of the Switch Body.

2 Add-on Modules on Each Side of the Switch Body.

Note: The add-on modules mounted next to the switch body are main poles. Maximum of 3 main poles per switch body.

- Protection shrouds are available if required, see page 17.
- Late make N/O, early break N/C contacts.
Marking on operator.
Degree of protection IP 65, NEMA Type 1 and 12.

## Handles and Front Plates for Main Manual Motor Control Switches

<table>
<thead>
<tr>
<th>For Switch Body</th>
<th>Operator Handle</th>
<th>Front Plate Dimensions in (mm)</th>
<th>Mounting in (mm)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VN12, VN20 V02 to V2</td>
<td>Red, not padlockable</td>
<td>Yellow 1.75 x 1.75 (45 x 45)</td>
<td>⌀ 0.88 (22.5)</td>
<td>KCC1LZ</td>
<td>0.11 (0.050)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yellow 2.38 x 2.38 (60 x 60)</td>
<td>4 screws</td>
<td>KCE1LZ</td>
<td>0.088 (0.040)</td>
</tr>
<tr>
<td>V3 and V4</td>
<td>Red, long, not padlockable</td>
<td>Yellow 2.38 x 2.38 (60 x 60)</td>
<td>⌀ 0.88 (22.5)</td>
<td>KDD1PZ</td>
<td>0.181 (0.082)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 screws</td>
<td>KDF1PZ</td>
<td>0.165 (0.075)</td>
<td></td>
</tr>
<tr>
<td>V5 and V6</td>
<td>Red, long, not padlockable</td>
<td>Yellow 3.5 x 3.5 (90 x 90)</td>
<td>4 screws</td>
<td>KDF2PZ</td>
<td>0.154 (0.070)</td>
</tr>
</tbody>
</table>

## Handles and Front Plates for Manual Motor Control Switches

<table>
<thead>
<tr>
<th>For Switch Body</th>
<th>Operator Handle</th>
<th>Front Plate Dimensions in (mm)</th>
<th>Mounting in (mm)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VN12, VN20 V02 to V2</td>
<td>Black, not padlockable</td>
<td>Black 1.75 x 1.75 (45 x 45)</td>
<td>⌀ 0.88 (22.5)</td>
<td>KAC1BZ</td>
<td>0.11 (0.050)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Black 2.38 x 2.38 (60 x 60)</td>
<td>4 screws</td>
<td>KAE1BZ</td>
<td>0.088 (0.040)</td>
</tr>
<tr>
<td>V3 and V4</td>
<td>Black, not padlockable</td>
<td>Black 2.38 x 2.38 (60 x 60)</td>
<td>⌀ 0.88 (22.5)</td>
<td>KBD1PZ</td>
<td>0.121 (0.055)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 screws</td>
<td>KBF1PZ</td>
<td>0.099 (0.045)</td>
<td></td>
</tr>
<tr>
<td>V5 and V6</td>
<td>Black, not padlockable</td>
<td>Black 3.5 x 3.5 (90 x 90)</td>
<td>4 screws</td>
<td>KBF2PZ</td>
<td>0.154 (0.070)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>KBF3PZ</td>
<td>0.353 (0.160)</td>
</tr>
</tbody>
</table>

For door mounting of 63 and 80 A manual motor control switches, adaptor plate KZ106 must be ordered separately, see page 18.
— Marking on operator.
— Padlockable operating handle (padlocks not supplied).
— Degree of protection IP 65, NEMA Type 1 and 12.

### Handles and Front Plates for Main Manual Motor Control Switches

<table>
<thead>
<tr>
<th>For Switch Body</th>
<th>Operator Handle</th>
<th>Front Plate Dimensions in (mm)</th>
<th>Mounting in (mm)</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VN12, VN20 V02 to V2</td>
<td>Red, padlockable with 1 padlock</td>
<td>Yellow 1.75 x 1.75 (45 x 45)</td>
<td>∅ 0.88 (22.5)</td>
<td>KCC1YZ</td>
<td>0.11 (0.050)</td>
</tr>
<tr>
<td></td>
<td>Red, padlockable with up to 3 padlocks</td>
<td>Yellow 2.38 x 2.38 (60 x 60)</td>
<td>∅ 0.88 (22.5)</td>
<td>KCD1PZ</td>
<td>0.181 (0.082)</td>
</tr>
<tr>
<td></td>
<td>Yellow</td>
<td>∅ 0.88 (22.5)</td>
<td>KCF1PZ</td>
<td>0.165 (0.075)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Red, padlockable with up to 3 padlocks</td>
<td>Yellow 2.38 x 2.38 (60 x 60)</td>
<td>4 screws</td>
<td>0.154 (0.070)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Red, long, padlockable with up to 3 padlocks</td>
<td>Yellow 3.5 x 3.5 (90 x 90)</td>
<td>4 screws</td>
<td>0.353 (0.160)</td>
<td></td>
</tr>
</tbody>
</table>

For door mounting of 63 and 80 A manual motor control switches, adaptor plate KZ106 must be ordered separately, see 18.

### Input Terminal Protection Shrouds

<table>
<thead>
<tr>
<th>Description</th>
<th>For Use With</th>
<th>Catalog Number</th>
<th>Weight lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>For switch bodies (3-pole shroud)</td>
<td>V02 to V2</td>
<td>VZ8</td>
<td>0.033 (0.015)</td>
</tr>
<tr>
<td></td>
<td>V3 and V4</td>
<td>VZ9</td>
<td>0.044 (0.020)</td>
</tr>
<tr>
<td></td>
<td>V5 and V6</td>
<td>VZ10</td>
<td>0.132 (0.060)</td>
</tr>
<tr>
<td>For add-on pole modules (single-pole shroud)</td>
<td>VZ02 to V22, VZ11, VZ14</td>
<td>VZ26</td>
<td>0.011 (0.005)</td>
</tr>
<tr>
<td></td>
<td>VZ3, VZ4, VZ12, VZ15</td>
<td>VZ27</td>
<td>0.015 (0.007)</td>
</tr>
<tr>
<td></td>
<td>VZ13, VZ16</td>
<td>VZ28</td>
<td>0.044 (0.020)</td>
</tr>
<tr>
<td>For contact blocks with 2 auxiliary contacts</td>
<td>–</td>
<td>VZ29</td>
<td>0.011 (0.005)</td>
</tr>
</tbody>
</table>

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## Components for Door Interlocking

**For Mounting at the Back of an Enclosure, in Addition to a Direct Operator**

<table>
<thead>
<tr>
<th>Description</th>
<th>For Use With</th>
<th>Front Plate Dimensions in (mm)</th>
<th>Standard Package Quantity</th>
<th>Catalog Number</th>
<th>Weight (lbs (kg))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shaft extension</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VN12, VN20</td>
<td>V02 to V2</td>
<td>11.81 x 12.99 (300 to 330)</td>
<td>1</td>
<td>VZN17</td>
<td>0.22 (0.100)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15.75 x 16.93 (400 to 430)</td>
<td>1</td>
<td>VZN30</td>
<td>0.286 (0.130)</td>
</tr>
<tr>
<td>V02 to V2</td>
<td></td>
<td>11.81 x 12.99 (300 to 330)</td>
<td>1</td>
<td>VZ17</td>
<td>0.165 (0.075)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15.75 x 16.93 (400 to 430)</td>
<td>1</td>
<td>VZ30</td>
<td>0.275 (0.125)</td>
</tr>
<tr>
<td>V3 and V4</td>
<td></td>
<td>11.81 x 12.60 (300 to 320)</td>
<td>1</td>
<td>VZ18</td>
<td>0.375 (0.170)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15.75 x 16.54 (400 to 420)</td>
<td>1</td>
<td>VZ31</td>
<td>0.474 (0.215)</td>
</tr>
<tr>
<td>V5 and V6</td>
<td></td>
<td>11.81 x 13.78 (300 to 350)</td>
<td>1</td>
<td>VZ18</td>
<td>0.375 (0.170)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16.93 x 17.72 (430 to 450)</td>
<td>1</td>
<td>VZ31</td>
<td>0.474 (0.215)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>For Use With</th>
<th>Front Plate Dimensions in (mm)</th>
<th>Standard Package Quantity</th>
<th>Catalog Number</th>
<th>Weight (lbs (kg))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Door interlock plate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VN12, VN20</td>
<td>V02 to V2</td>
<td>–</td>
<td>5</td>
<td>KZ32</td>
<td>0.390 (0.177)</td>
</tr>
<tr>
<td>V3 to V6</td>
<td>–</td>
<td>5</td>
<td>KZ74</td>
<td>0.044 (0.020)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>For Use With</th>
<th>Front Plate Dimensions in (mm)</th>
<th>Standard Package Quantity</th>
<th>Catalog Number</th>
<th>Weight (lbs (kg))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plates for door mounting of handles with 4 screw mounting</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VN12, VN20</td>
<td>V02 to V2</td>
<td>1.75 x 1.75 (45 x 45) or 2.38 x 2.38 (60 x 60)</td>
<td>5</td>
<td>KZ83</td>
<td>0.452 (0.205)</td>
</tr>
<tr>
<td>V3 and V4</td>
<td></td>
<td>2.38 x 2.38 (60 x 60)</td>
<td>5</td>
<td>KZ81</td>
<td>0.022 (0.010)</td>
</tr>
<tr>
<td>V3 to V6</td>
<td></td>
<td>3.5 x 3.5 (90 x 90)</td>
<td>5</td>
<td>KZ81</td>
<td>0.022 (0.010)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>For Use With</th>
<th>Front Plate Dimensions in (mm)</th>
<th>Standard Package Quantity</th>
<th>Catalog Number</th>
<th>Weight (lbs (kg))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adaptor plate for manual motor control switches</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V3 and V4</td>
<td></td>
<td>3.5 x 3.5 (90 x 90)</td>
<td>5</td>
<td>KZ106</td>
<td>0.165 (0.075)</td>
</tr>
</tbody>
</table>

## Accessories for Operators

<table>
<thead>
<tr>
<th>Description</th>
<th>For Use With</th>
<th>Front Plate Dimensions in (mm)</th>
<th>Standard Package Quantity</th>
<th>Catalog Number</th>
<th>Weight (lbs (kg))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Legend bearer with silver colored blank legend plate</strong></td>
<td>Front plate</td>
<td>1.75 x 1.75 (45 x 45)</td>
<td>5</td>
<td>KZ13</td>
<td>0.132 (0.060)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.38 x 2.38 (60 x 60)</td>
<td>5</td>
<td>KZ15</td>
<td>0.143 (0.065)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.5 x 3.5 (90 x 90)</td>
<td>5</td>
<td>KZ103</td>
<td>0.154 (0.070)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>For Use With</th>
<th>Front Plate Dimensions in (mm)</th>
<th>Standard Package Quantity</th>
<th>Catalog Number</th>
<th>Weight (lbs (kg))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Legend bearer without legend plate</strong></td>
<td>Front plate</td>
<td>1.75 x 1.75 (45 x 45)</td>
<td>20</td>
<td>KZ14</td>
<td>0.132 (0.060)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.38 x 2.38 (60 x 60)</td>
<td>10</td>
<td>KZ16</td>
<td>0.143 (0.065)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.5 x 3.5 (90 x 90)</td>
<td>5</td>
<td>KZ101</td>
<td>0.154 (0.070)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>For Use With</th>
<th>Front Plate Dimensions in (mm)</th>
<th>Standard Package Quantity</th>
<th>Catalog Number</th>
<th>Weight (lbs (kg))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Silver colored blank legend plates for engraving by customer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KZ14</td>
<td>–</td>
<td>20</td>
<td>KZ76</td>
<td>0.044 (0.020)</td>
<td></td>
</tr>
<tr>
<td>KZ16</td>
<td>–</td>
<td>10</td>
<td>KZ77</td>
<td>0.022 (0.010)</td>
<td></td>
</tr>
<tr>
<td>KZ101</td>
<td>–</td>
<td>5</td>
<td>KZ100</td>
<td>0.011 (0.005)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>For Use With</th>
<th>Front Plate Dimensions in (mm)</th>
<th>Standard Package Quantity</th>
<th>Catalog Number</th>
<th>Weight (lbs (kg))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sealing kit</strong></td>
<td>VN12, VN20</td>
<td>1.75 x 1.75 (45 x 45)</td>
<td>5</td>
<td>KZ65</td>
<td>0.081 (0.037)</td>
</tr>
<tr>
<td>V02 to V2</td>
<td>2.38 x 2.38 (60 x 60)</td>
<td>5</td>
<td>KZ66</td>
<td>0.073 (0.033)</td>
<td></td>
</tr>
<tr>
<td>V3 and V4</td>
<td>2.38 x 2.38 (60 x 60)</td>
<td>5</td>
<td>KZ62</td>
<td>0.073 (0.033)</td>
<td></td>
</tr>
<tr>
<td>V3 to V6</td>
<td>3.5 x 3.5 (90 x 90)</td>
<td>5</td>
<td>KZ67</td>
<td>0.140 (0.064)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>For Use With</th>
<th>Front Plate Dimensions in (mm)</th>
<th>Standard Package Quantity</th>
<th>Catalog Number</th>
<th>Weight (lbs (kg))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tightening tool</strong></td>
<td>For operators with ∅ 22.5 mm (7/8 in) mounting</td>
<td>–</td>
<td>5</td>
<td>Z01</td>
<td>0.110 (0.050)</td>
</tr>
</tbody>
</table>
Mini-VARIO and VARIO Manual Motor Control Switches

Dimensions

Manual motor control switch bodies
VN12, VN20

Add-on modules
VZN12, VZN20

VZN11, VZN14, VZN05, VZN06

Manual motor control switch mounted on enclosure door
VN12, VN20

Single hole mounting

4 screw mounting

1.75 in x 1.75 in front plate
(45 mm x 45 mm)

2.38 in x 2.38 in front plate
(60 mm x 60 mm)

Single hole mounting

Dual Dimensions

Inches

mm

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Mini-VARIO and VARIO Manual Motor Control Switches

Dimensions

Manual motor control switch mounted at back of enclosure with shaft extension VZN17 or VZN30 (clip-on mounting on DIN rail) VN12, VN20

<table>
<thead>
<tr>
<th>Single hole mounting</th>
</tr>
</thead>
</table>
| 0.06 to 0.24  
1.5 to 6 |

<table>
<thead>
<tr>
<th>4 screw mounting</th>
</tr>
</thead>
</table>
| 0.06 to 0.24  
1.5 to 6 |

<table>
<thead>
<tr>
<th>Shaft Extension</th>
<th>Distance (e) Enc. Back/Door in (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VN12, VN20</td>
<td>VZN17</td>
</tr>
<tr>
<td></td>
<td>VZN30</td>
</tr>
</tbody>
</table>

Enclosures *
V•FN12GE, V•FN20GE

* Enclosures not UL listed.

Wiring Diagrams

Switch body  Main pole module  Neutral pole module  Auxiliary contact blocks
VN12, VN20  VZN12, VZN20  VZN11  VZN05  VZN06
Mini-VARIO and VARIO Manual Motor Control Switches

Dimensions

Switch bodies V0I, V0 to V2

Add-on modules VZ02 to VZ4

VZ11 to VZ16

VZ7, VZ20

<table>
<thead>
<tr>
<th></th>
<th>a</th>
<th>b</th>
<th>c</th>
</tr>
</thead>
<tbody>
<tr>
<td>VZ02 and VZ01, V0 to V22, VZ11, VZ14</td>
<td>0.63 (16)</td>
<td>2.9 (74)</td>
<td>1.38 (35)</td>
</tr>
<tr>
<td>VZ3, VZ4, VZ12, VZ15</td>
<td>0.79 (20)</td>
<td>3.27 (83)</td>
<td>1.81 (46)</td>
</tr>
<tr>
<td>VZ13, VZ16</td>
<td>1.18 (30)</td>
<td>4.92 (125)</td>
<td>2.48 (63)</td>
</tr>
</tbody>
</table>

V3 to V6

Manual motor control switch mounted on enclosure door

V0•, V0 to V2

Single hole mounting

4 screw mounting

V5 and V6

4 screw mounting

<table>
<thead>
<tr>
<th></th>
<th>in (mm)</th>
<th>in (mm)</th>
<th>in (mm)</th>
<th>in (mm)</th>
<th>in (mm)</th>
<th>in (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V0•, V0 to V2</td>
<td>2.36 (60)</td>
<td>3.27 (83)</td>
<td>2.56 (65)</td>
<td>1.89 (48)</td>
<td>1.89 (48)</td>
<td>0.22 (5.5)</td>
</tr>
<tr>
<td>V3, V4</td>
<td>3.54 (90)</td>
<td>4.92 (125)</td>
<td>3.54 (90)</td>
<td>2.68 (68)</td>
<td>2.68 (68)</td>
<td>0.22 (5.5)</td>
</tr>
</tbody>
</table>

Dual Dimensions inches

<table>
<thead>
<tr>
<th></th>
<th>in (mm)</th>
<th>in (mm)</th>
<th>in (mm)</th>
<th>in (mm)</th>
<th>in (mm)</th>
<th>in (mm)</th>
<th>in (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V0•, V0 to V2</td>
<td>2.36 (60)</td>
<td>4 x Ø 5.5</td>
<td>4 x Ø 0.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V3, V4</td>
<td>2.56 (65)</td>
<td>4 x Ø 5.5</td>
<td>4 x Ø 0.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V5, V6</td>
<td>3.54 (90)</td>
<td>4 x Ø 5.5</td>
<td>4 x Ø 0.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Manual motor control switch mounted at back of enclosure V0•, V0 to V2 with shaft extension VZ17 or VZ30 (Clip-on mounting on DIN rail possible for V0• to V2)

<table>
<thead>
<tr>
<th>Shaft Extension</th>
<th>Distance (e) Enc. Back/Door in (mm)</th>
<th>Ø in (mm)</th>
<th>G in (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V0 TO V2</td>
<td>V217 11.81 to 12.99 (300 to 330)</td>
<td>2 x 0.17 (4.2)</td>
<td>0.59 (15)</td>
</tr>
<tr>
<td></td>
<td>V230 15.75 to 16.93 (400 to 430)</td>
<td>2 x 0.17 (4.2)</td>
<td>0.59 (15)</td>
</tr>
<tr>
<td>V3 AND V4</td>
<td>V218 11.81 to 12.99 (300 to 330)</td>
<td>2 x 0.20 (5)</td>
<td>0.79 (20)</td>
</tr>
<tr>
<td></td>
<td>V231 15.75 to 16.93 (400 to 430)</td>
<td>2 x 0.20 (5)</td>
<td>0.79 (20)</td>
</tr>
</tbody>
</table>

Manual motor control switches for modular distribution boards VV•0 to VV•2

<table>
<thead>
<tr>
<th>Shaft Extension</th>
<th>Distance (e) Enc. Back/Door in (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VV•3 and VV•4</td>
<td>V218 11.81 to 12.99 (300 to 330)</td>
</tr>
<tr>
<td></td>
<td>V231 15.75 to 16.93 (400 to 430)</td>
</tr>
</tbody>
</table>

Enclosures V•F02GE to V•F4GE, V•FXGE1 to V•FXGE4

| Enclosures not UL listed.

<table>
<thead>
<tr>
<th>V•F02GE to V•F2GE, V•FXGE1</th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>c1</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.54 (90)</td>
<td>5.75 (146)</td>
<td>3.35 (85)</td>
<td>5.16 (131)</td>
<td>5.12 (130)</td>
<td></td>
</tr>
<tr>
<td>V•F3GE and V•F4GE, V•FXGE2, V•FXGE4</td>
<td>5.91 (150)</td>
<td>6.69 (170)</td>
<td>4.17 (106)</td>
<td>5.98 (152)</td>
<td>6.46 (164)</td>
</tr>
</tbody>
</table>
## Wiring Diagrams

### Switch body
- V02 and V01, V0 to V6

### Main pole module
- VZ02 and VZ01

### Neutral pole module
- VZ11 to VZ13

### Auxiliary contact blocks
- VZ7, VZ20

## Non-Metallic Enclosed Switch Dimensions

<table>
<thead>
<tr>
<th>Type</th>
<th>No. of Poles</th>
<th>a (in)</th>
<th>b (in)</th>
<th>c (in)</th>
<th>d (in)</th>
<th>e (in)</th>
<th>f (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC1GU - VC2GU</td>
<td>3</td>
<td>6.7</td>
<td>4.1</td>
<td>3.2</td>
<td>4.8</td>
<td>2.1</td>
<td>5.0</td>
</tr>
<tr>
<td>VC3GU - VC4GU</td>
<td>3</td>
<td>6.7</td>
<td>5.3</td>
<td>3.3</td>
<td>5.1</td>
<td>3.7</td>
<td>5.2</td>
</tr>
<tr>
<td>VC5GU - VC6GU</td>
<td>3</td>
<td>11.0</td>
<td>8.6</td>
<td>5.0</td>
<td>7.9</td>
<td>7.5</td>
<td>8.6</td>
</tr>
</tbody>
</table>

## Metallic Enclosed Switch Dimensions

### NEMA Type 4, 4x, 12
- V1W30, V2W30, V1A30, V2A30

### NEMA Type 1
- V1G30, V2G30

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