

CWM Series

CWM Series - IEC Standard Contactors

The CWM Series IEC Contactor was designed as a general purpose contactor taking into consideration the heavy demands and need for high reliability in modern industry. They are rated for inductive loads up to 800 AMPS @ 460V. CWM Contactors are compact in frame size allowing for optimization of valuable internal space within electrical enclosures. Reducing inventory is a “Snap” away with the CWM Series’ common accessories.

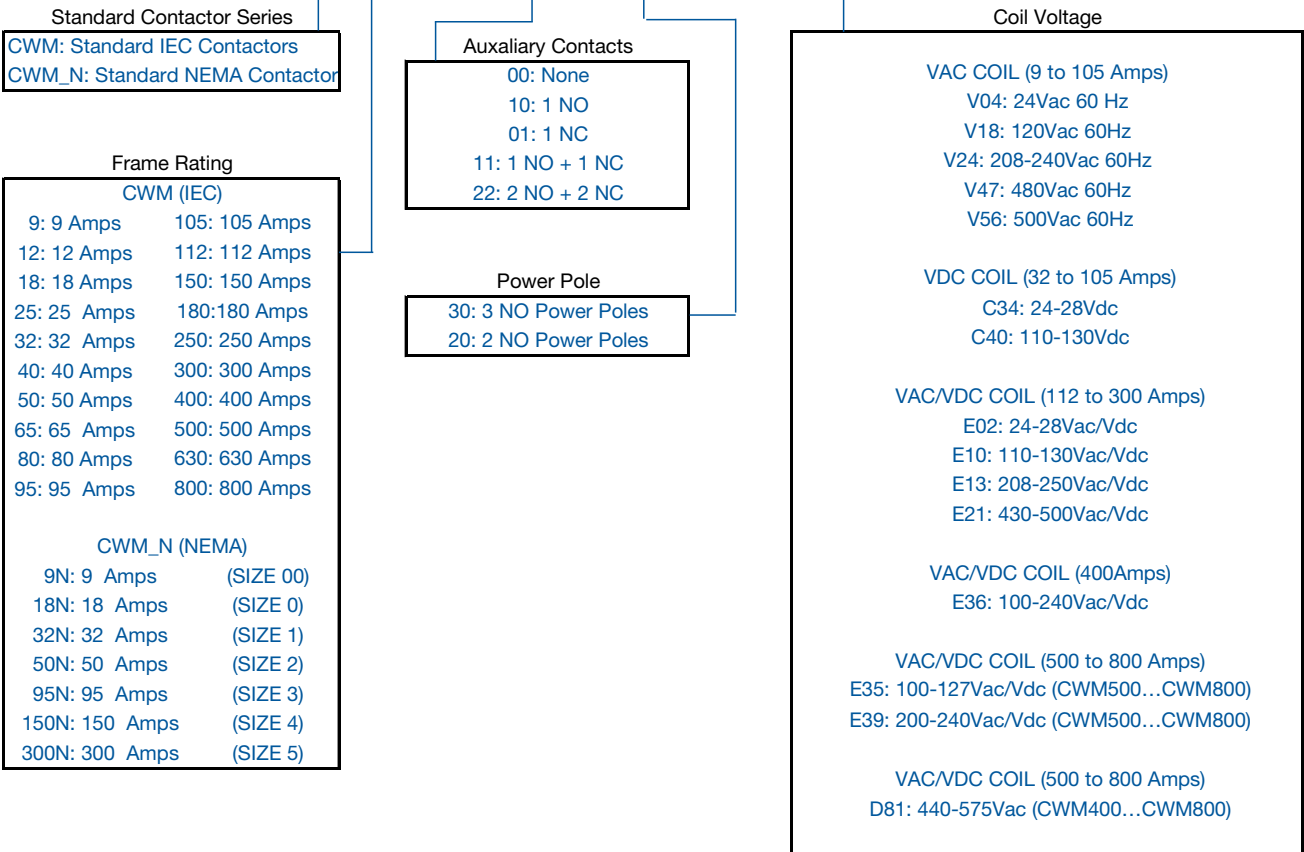


Standard Features

- Panel mountable or 35mm DIN Rail up to the CWM105 Series
- Front and Side Mounting Auxiliary Contacts
- Finger-Touch IP20 Protection
- Wide Coil Voltage Protection AC or DC
- Mirror Contacts for “Safety-Related” Applications
- Mechanically linked Auxiliary Contacts

CWM Catalog Number Sequence

CWM 18 - 10 30 V18

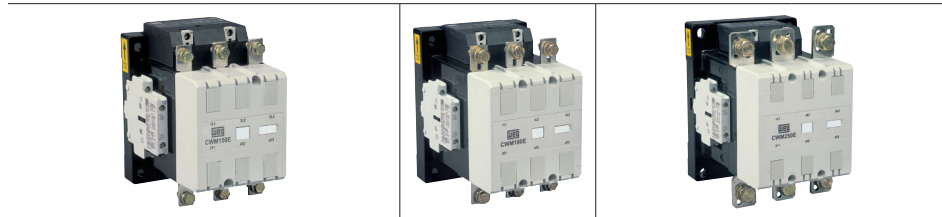






- General Information
- Circuit Protection
- Disconnect Switches
- Motor Protectors
- Contactors
- Overloads
- Enclosed Starters
- Relays
- Pushbuttons and Pilot Lights
- Terminal Blocks
- Power Factor Correction
- Appendix A
- Appendix B

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| General Information | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Circuit Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disconnect Switches | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Motor Protectors | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contactors | <table border="1"> <thead> <tr> <th>Catalog Number</th> <th></th> <th>CWM9</th> <th>CWM12</th> <th>CWM18</th> <th>CWM25</th> <th>CWM32</th> <th>CWM40</th> <th>CWM50</th> <th>CWM65</th> <th>CWM80</th> <th>CWM95</th> <th>CWM105</th> </tr> </thead> <tbody> <tr> <td colspan="14">Rated operational power Single-phase</td> </tr> <tr> <td>115Vac</td> <td>Hp</td> <td>1/2</td> <td>3/4</td> <td>1</td> <td>2</td> <td>3</td> <td>3</td> <td>3</td> <td>5</td> <td>7 1/2</td> <td>7 1/2</td> <td>10</td> </tr> <tr> <td>230Vac</td> <td>Hp</td> <td>1 1/2</td> <td>2</td> <td>3</td> <td>5</td> <td>5</td> <td>5</td> <td>7 1/2</td> <td>10</td> <td>15</td> <td>15</td> <td>20</td> </tr> <tr> <td colspan="14">Three-phase</td> </tr> <tr> <td>230Vac</td> <td>Hp</td> <td>3</td> <td>3</td> <td>5</td> <td>7 1/2</td> <td>10</td> <td>15</td> <td>15</td> <td>20</td> <td>25</td> <td>30</td> <td>40</td> </tr> <tr> <td>460Vac</td> <td>Hp</td> <td>5</td> <td>7 1/2</td> <td>10</td> <td>15</td> <td>20</td> <td>30</td> <td>40</td> <td>50</td> <td>50</td> <td>60</td> <td>75</td> </tr> <tr> <td>575Vac</td> <td>Hp</td> <td>7 1/2</td> <td>10</td> <td>15</td> <td>15</td> <td>25</td> <td>25</td> <td>40</td> <td>50</td> <td>60</td> <td>75</td> <td>75</td> </tr> <tr> <td colspan="2">General Purpose A Rating (AC-1)</td> <td>25</td> <td>25</td> <td>32</td> <td>45</td> <td>60</td> <td>60</td> <td>90</td> <td>110</td> <td>110</td> <td>140</td> <td>140</td> </tr> <tr> <td colspan="2">Inductive Motor Switching (AC-3)</td> <td>9</td> <td>12</td> <td>18</td> <td>25</td> <td>32</td> <td>40</td> <td>50</td> <td>65</td> <td>80</td> <td>95</td> <td>105</td> </tr> </tbody> </table> | | | | | | | | | | | | | Catalog Number | | CWM9 | CWM12 | CWM18 | CWM25 | CWM32 | CWM40 | CWM50 | CWM65 | CWM80 | CWM95 | CWM105 | Rated operational power Single-phase | | | | | | | | | | | | | | 115Vac | Hp | 1/2 | 3/4 | 1 | 2 | 3 | 3 | 3 | 5 | 7 1/2 | 7 1/2 | 10 | 230Vac | Hp | 1 1/2 | 2 | 3 | 5 | 5 | 5 | 7 1/2 | 10 | 15 | 15 | 20 | Three-phase | | | | | | | | | | | | | | 230Vac | Hp | 3 | 3 | 5 | 7 1/2 | 10 | 15 | 15 | 20 | 25 | 30 | 40 | 460Vac | Hp | 5 | 7 1/2 | 10 | 15 | 20 | 30 | 40 | 50 | 50 | 60 | 75 | 575Vac | Hp | 7 1/2 | 10 | 15 | 15 | 25 | 25 | 40 | 50 | 60 | 75 | 75 | General Purpose A Rating (AC-1) | | 25 | 25 | 32 | 45 | 60 | 60 | 90 | 110 | 110 | 140 | 140 | Inductive Motor Switching (AC-3) | | 9 | 12 | 18 | 25 | 32 | 40 | 50 | 65 | 80 | 95 | 105 |
| Catalog Number | | CWM9 | CWM12 | CWM18 | CWM25 | CWM32 | CWM40 | CWM50 | CWM65 | CWM80 | CWM95 | CWM105 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated operational power Single-phase | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 115Vac | Hp | 1/2 | 3/4 | 1 | 2 | 3 | 3 | 3 | 5 | 7 1/2 | 7 1/2 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 230Vac | Hp | 1 1/2 | 2 | 3 | 5 | 5 | 5 | 7 1/2 | 10 | 15 | 15 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Three-phase | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 230Vac | Hp | 3 | 3 | 5 | 7 1/2 | 10 | 15 | 15 | 20 | 25 | 30 | 40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 460Vac | Hp | 5 | 7 1/2 | 10 | 15 | 20 | 30 | 40 | 50 | 50 | 60 | 75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 575Vac | Hp | 7 1/2 | 10 | 15 | 15 | 25 | 25 | 40 | 50 | 60 | 75 | 75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| General Purpose A Rating (AC-1) | | 25 | 25 | 32 | 45 | 60 | 60 | 90 | 110 | 110 | 140 | 140 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inductive Motor Switching (AC-3) | | 9 | 12 | 18 | 25 | 32 | 40 | 50 | 65 | 80 | 95 | 105 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Overloads | <table border="1"> <thead> <tr> <th>Overload relays</th> <th>RW27-1D</th> <th></th> <th></th> <th></th> <th>RW67-1D</th> <th></th> <th>RW67-2D</th> <th></th> <th>RW117-1D</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>0.28...0.4 0.4...0.63 0.56...0.8 0.8...1.2 1.2...1.8 1.8...2.8 2.8...4 4...6.3</td> <td></td> <td>5.6...8 7...10 8...12.5 10...15 11...17 15...23 22...32</td> <td></td> <td>25...40 32...50</td> <td></td> <td>40...57 50...63 57...70 63...80</td> <td></td> <td>63...80 75...97 90...112</td> </tr> </tbody> </table> | | | | | | | | | | | | | Overload relays | RW27-1D | | | | RW67-1D | | RW67-2D | | RW117-1D | | | 0.28...0.4 0.4...0.63 0.56...0.8 0.8...1.2 1.2...1.8 1.8...2.8 2.8...4 4...6.3 | | 5.6...8 7...10 8...12.5 10...15 11...17 15...23 22...32 | | 25...40 32...50 | | 40...57 50...63 57...70 63...80 | | 63...80 75...97 90...112 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Overload relays | RW27-1D | | | | RW67-1D | | RW67-2D | | RW117-1D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Enclosed Starters | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Relays | <table border="1"> <thead> <tr> <th>Auxillary contact blocks</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>BCXMF10 (1NO) BCXMF01 (1NC)</td> <td></td> </tr> <tr> <td></td> <td></td> <td>BCXML 11 (1NO+1NC) BCXML 20 (2NO) BCXMR 11 (1NO+1NC) BCXMR 20 (2NO)</td> <td></td> </tr> </tbody> </table> | | | | | | | | | | | | | Auxillary contact blocks | | | | | | BCXMF10 (1NO) BCXMF01 (1NC) | | | | BCXML 11 (1NO+1NC) BCXML 20 (2NO) BCXMR 11 (1NO+1NC) BCXMR 20 (2NO) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Auxillary contact blocks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | BCXMF10 (1NO) BCXMF01 (1NC) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Pushbuttons and Pilot Lights | <table border="1"> <thead> <tr> <th>Mechanical interlock</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>BLIM9-105 BLIM.02 9-105 (2NC)</td> </tr> </tbody> </table> | | | | | | | | | | | | | Mechanical interlock | | | | | BLIM9-105 BLIM.02 9-105 (2NC) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mechanical interlock | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Terminal Blocks | <table border="1"> <thead> <tr> <th>Electronic Relays</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>Timing Relays - RTW Series (Please refer to Electronic Relays Section)</td> </tr> </tbody> </table> | | | | | | | | | | | | | Electronic Relays | | | | | Timing Relays - RTW Series (Please refer to Electronic Relays Section) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Electronic Relays | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Power Factor Correction | <table border="1"> <thead> <tr> <th>Surge Suppressor</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>RC block: BAMRC4 D53 24-48 V 50/60Hz BAMRC5 D55 50-127 V 50/60Hz BAMRC6 D63 130-250 V 50/60Hz</td> </tr> <tr> <td></td> <td></td> <td>RC block: BAMRC7 D53 24-48 V 50/60Hz BAMRC8 D55 50-127 V 50/60Hz BAMRC9 D63 130-250 V 50/60Hz</td> </tr> <tr> <td></td> <td></td> <td>Varistor block: BAMV1 D68 270-380 V 50/60Hz BAMV2 D73 400-510 V 50/60Hz</td> </tr> </tbody> </table> | | | | | | | | | | | | | Surge Suppressor | | | | | RC block: BAMRC4 D53 24-48 V 50/60Hz BAMRC5 D55 50-127 V 50/60Hz BAMRC6 D63 130-250 V 50/60Hz | | | RC block: BAMRC7 D53 24-48 V 50/60Hz BAMRC8 D55 50-127 V 50/60Hz BAMRC9 D63 130-250 V 50/60Hz | | | Varistor block: BAMV1 D68 270-380 V 50/60Hz BAMV2 D73 400-510 V 50/60Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Surge Suppressor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | RC block: BAMRC4 D53 24-48 V 50/60Hz BAMRC5 D55 50-127 V 50/60Hz BAMRC6 D63 130-250 V 50/60Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | RC block: BAMRC7 D53 24-48 V 50/60Hz BAMRC8 D55 50-127 V 50/60Hz BAMRC9 D63 130-250 V 50/60Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Varistor block: BAMV1 D68 270-380 V 50/60Hz BAMV2 D73 400-510 V 50/60Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Appendix B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

CWM Series - IEC Standard Contactors



| Catalog Number | 3 Poles | CWM112 | CWM150 | CWM180 | CWM250 | CWM300 |
|---------------------------------|---------|--|--------|---|--------|--------|
| Rated operational power | | | | | | |
| Single-phase | | | | | | |
| 115Vac | Hp | - | - | - | - | - |
| 230Vac | Hp | - | - | - | - | - |
| Three-phase | | | | | | |
| 230Vac | Hp | 50 | 60 | 75 | 100 | 125 |
| 460Vac | Hp | 100 | 125 | 150 | 200 | 250 |
| 575Vac | Hp | 100 | 150 | 200 | 250 | 350 |
| General Purpose Rating | A | 180 | 225 | 225 | 350 | 410 |
| Inductive/Motor Switching (AC3) | | 112 | 150 | 180 | 250 | 300 |
| Overload relays | A | RW117-2D  75...97 90...112 | | RW317-1D  100...150 140...215 200...310 275...420 | | |
| | | Auxiliary contact blocks  BCXML11 (1NO+1NC) BCXML20 (2NO) BCXMRL11 (1NO+1NC) BCXMRL20 (2NO) | | | | |
| Mechanical interlock | |  BLIM112-300 | | | | |
| Surge suppressor | | built-in with electronic module | | | | |

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| | |  |  | |
| | Catalog Number | CWM400 | CWM630 | CWM800 |
| | Rated Optional Power | | | |
| | Single-phase | | | |
| | 220/230Vac | Hp | - | - |
| | 380Vac | Hp | - | - |
| | Three-phase | | | |
| | 230Vac | Hp | 150 | 250 |
| | 460Vac | Hp | 300 | 500 |
| | 575Vac | Hp | 300 | 500 |
| | General Purpose Rating | A | 450 | 660 |
| | Inductive/Motor Switching AC-3 | | 400 | 630 |
| | Overload relays | A |  RW407-1D | 400...600 560...840 |
| | Auxiliary contact blocks |  | BCXML11 CWM800 (1NO+1NC) BCXMRL11 CWM800 (1NO+1NC) | |
| | Mechanical interlock |  BLIM CWM400 |  BLIM CWM800 | |
| | Surge suppressor | (Built-in with electronic module) | | |

3 pole contactors with AC coil



| Maximum UL Horsepower | | | | | | Auxiliary Contacts | | Current Rating Amps | Catalog Number ¹ | List Price | Multiplier |
|-----------------------|-------|-------------|-------|-------|-------|--------------------|------|---------------------|-----------------------------|------------|------------|
| Single Phase | | Three Phase | | | | N.O. | N.C. | | | | |
| 115V | 230V | 200V | 230V | 460V | 575V | | | | | | |
| 1/2 | 1 1/2 | 3 | 3 | 5 | 7 1/2 | 1 | 0 | 9 | CWM9-10-30* | \$72 | Z1 |
| | | | | | | 0 | 1 | | CWM9-01-30* | | |
| 3/4 | 2 | 3 | 3 | 7 1/2 | 10 | 1 | 0 | 12 | CWM12-10-30* | \$89 | |
| | | | | | | 0 | 1 | | CWM12-01-30* | | |
| 1 | 3 | 5 | 5 | 10 | 15 | 1 | 0 | 18 | CWM18-10-30* | \$103 | |
| | | | | | | 0 | 1 | | CWM18-01-30* | | |
| 2 | 5 | 7 1/2 | 7 1/2 | 15 | 15 | 0 | 0 | 25 | CWM25-00-30* | \$118 | |
| 3 | 5 | 10 | 10 | 20 | 25 | 0 | 0 | 32 | CWM32-00-30* | \$140 | |
| 3 | 7 1/2 | 10 | 15 | 30 | 25 | 0 | 0 | 40 | CWM40-00-30* | \$164 | |
| 3 | 10 | 15 | 15 | 40 | 40 | 0 | 0 | 50 | CWM50-00-30* | \$225 | |
| 5 | 10 | 20 | 20 | 50 | 50 | 0 | 0 | 65 | CWM65-00-30* | \$255 | |
| 7 1/2 | 15 | 20 | 25 | 50 | 60 | 0 | 0 | 80 | CWM80-00-30* | \$270 | |
| 7 1/2 | 15 | 25 | 30 | 60 | 75 | 0 | 0 | 95 | CWM95-00-30* | \$365 | |
| 10 | 20 | 30 | 40 | 75 | 75 | 0 | 0 | 105 | CWM105-00-30* | \$393 | |

Note:

1) For other auxiliary contact configurations, please refer to page 163.

To complete the selection

- Replace “**” with desired coil voltage from Coil Voltage Code Table

| * AC COIL VOLTAGE CODE SELECTION FOR CONTACTORS CWM9...CWM105 | | | | | | |
|---|-------------------|------------|------------|------------|------------|------------|
| 60 Hz | 24V ¹⁾ | 48V | 120V | 208-240V | 480V | 600V |
| CODE | V04 | V10 | V18 | V24 | V47 | V56 |
| 50 Hz | - | 42V | 110V | - | 400-415V | 500V |

- Other coil voltages available upon request

The Flexible Line from 5 to 75HP

The 5 to 75HP @ 460V range is differentiated by five frame sizes and only 4 varying widths, with the choice of either screw or DIN rail mounting. WEG offers one of the most compact 75HP @ 460V contactors in the market.

Coil Technology

WEG Contactor AC coils have 4 terminals up to 30HP @ 460V, which allows an easy connection no matter the complexity of the application and wiring. From 32A up to 105A the contactors are equipped with an electronic circuit that provides an unmatched space saving solution, making the 50A through 105A contactors depth the same size.

CWM Series - IEC Standard Contactors

3 pole contactors with DC coil



| Maximum UL Horsepower | | | | | | Auxiliary Contacts | | Current Rating Amps | Catalog Number | List Price | Multiplier |
|-----------------------|-------|-------------|------|------|------|--------------------|------|---------------------|----------------|------------|------------|
| Single Phase | | Three Phase | | | | N.O. | N.C. | | | | |
| 115V | 230V | 200V | 230V | 460V | 575V | | | | | | |
| 3 | 5 | 10 | 10 | 20 | 25 | 0 | 0 | 32 | CWM32-00-30+ | \$220 | Z1 |
| 3 | 7 1/2 | 10 | 15 | 30 | 25 | 0 | 0 | 40 | CWM40-00-30+ | \$282 | |
| 3 | 10 | 15 | 15 | 40 | 40 | 0 | 0 | 50 | CWM50-00-30+ | \$310 | |
| 5 | 10 | 20 | 20 | 50 | 50 | 0 | 0 | 65 | CWM65-00-30+ | \$350 | |
| 7 1/2 | 15 | 20 | 25 | 50 | 60 | 0 | 0 | 80 | CWM80-00-30+ | \$417 | |
| 7 1/2 | 15 | 25 | 30 | 60 | 75 | 0 | 0 | 95 | CWM95-00-30+ | \$450 | |
| 10 | 20 | 30 | 40 | 75 | 75 | 0 | 0 | 105 | CWM105-00-30+ | \$540 | |

- For other auxiliary contact configurations please refer to page 163.

To complete the selection

- Replace "+" with desired coil voltage from Coil Voltage Code Table

+ DC COIL VOLTAGE CODE SELECTION FOR CONTACTORS CWM9...105

FOR CONTACTORS CWM32...CWM105

| Voltage | 24-28V | 110-130V |
|-------------|------------|------------|
| CODE | C34 | C40 |

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3 pole contactors with AC/DC electronic module coil



| Maximum UL Horsepower | | | | | | Auxiliary Contacts | | Current Rating Amps | Catalog Number | List Price | Multiplier |
|-----------------------|------|-------------|------|------|------|--------------------|------|---------------------|-------------------------------|------------|------------|
| Single Phase | | Three Phase | | | | | | | | | |
| 115V | 230V | 200V | 230V | 460V | 575V | N.O. | N.C. | | | | |
| - | - | 40 | 50 | 100 | 100 | 2 | 2 | 112 | CWM112-22-30# | \$865 | Z1 |
| - | - | 50 | 60 | 125 | 150 | 2 | 2 | 150 | CWM150-22-30# | \$960 | |
| - | - | 60 | 75 | 150 | 200 | 2 | 2 | 180 | CWM180-22-30# | \$1,350 | |
| - | - | 75 | 100 | 200 | 250 | 2 | 2 | 250 | CWM250-22-30# | \$1,920 | |
| - | - | 100 | 125 | 250 | 300 | 2 | 2 | 300 | CWM300-22-30# | \$2,150 | |
| - | - | 125 | 150 | 300 | 300 | 2 | 2 | 400 | CWM400-22-30^ | \$2,950 | |
| - | - | 200 | 250 | 500 | 500 | 2 | 2 | 630 | CWM630-22-30^ | \$4,460 | |
| - | - | 200 | 300 | 600 | 600 | 2 | 2 | 800 | CWM800-22-30^ | \$6,530 | |

- For different auxiliary contact configurations please refer to page 163.

To complete the selection

- Replace “#” or “^” with desired coil voltage from Coil Voltage Code Table

AC/DC COIL VOLTAGE CODE SELECTION FOR CONTACTORS CWM112, 150, 180, 250, 300

| Voltage | 24-28Vac/Vdc | 110-130Vac/Vdc | 208-250Vac/Vdc | 430-500Vac/Vdc |
|-------------|---------------|----------------|----------------|----------------|
| CODE | E02 | E10 | E13 | E21 |
| Mounting on | CWM112-CWM300 | CWM112-CWM300 | CWM112-CWM300 | CWM112-CWM300 |

^ AC/DC COIL VOLTAGE CODE SELECTION FOR CONTACTORS CWM400...800

| Voltage | 100-240Vac/100-220Vdc | 100-127Vac/100-110Vdc | 200-240Vac/200-220Vdc | 440-575Vac |
|-------------|-----------------------|-----------------------|-----------------------|---------------|
| CODE | E36 | E35 | E39 | D82 |
| Mounting on | CWM400 | CWM630-CWM800 | CWM630-CWM800 | CWM400-CWM800 |

The Tough Line from 100 to 600HP

With reliability as our goal, WEG contactors are modern and very compact, but they are also one of the most rugged line of contactors in the range from 100 to 600HP, assuring an extended life under the most challenging conditions of today’s industry.

Accessories

Side mounted auxiliary contact blocks are common for all CWM contactors, from 5 to 250HP @ 460V.

Electronic Module

From 100 to 600HP @ 460V, WEG offers contactors with electronic module for AC/DC Coil Applications. Such coils provide a smoother switching, therefore enhancing contactor’s performance. Built-in surge suppressor is also standard.

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2 pole contactors with AC coil

| Circuit Protection | Maximum UL Horsepower | | Auxiliary Contacts | | Current Rating Amps | Catalog Number | List Price | Multiplier |
|---------------------|-----------------------|-------|--------------------|------|---------------------|----------------|------------|------------|
| | Single Phase | | N.O. | N.C. | | | | |
| | 115V | 230V | | | | | | |
| Disconnect Switches | 1/2 | 1 1/2 | 0 | 0 | 9 | CWM9-00-20* | \$65 | Z1 |
| | 3/4 | 2 | 0 | 0 | 12 | CWM12-00-20* | \$68 | |
| | 1 | 3 | 0 | 0 | 18 | CWM18-00-20* | \$73 | |
| | 2 | 5 | 0 | 0 | 25 | CWM25-00-20* | \$99 | |
| | 3 | 5 | 0 | 0 | 32 | CWM32-00-20* | \$126 | |
| Motor Protectors | 3 | 7 1/2 | 0 | 0 | 40 | CWM40-00-20* | \$160 | |
| | 3 | 10 | 0 | 0 | 50 | CWM50-00-20* | \$174 | |
| | 5 | 10 | 0 | 0 | 65 | CWM65-00-20* | \$200 | |
| | 7 1/2 | 15 | 0 | 0 | 80 | CWM80-00-20* | \$231 | |
| | 7 1/2 | 15 | 0 | 0 | 95 | CWM95-00-20* | \$300 | |
| Contactors | 10 | 20 | 0 | 0 | 105 | CWM105-00-20* | \$321 | |

- For other auxiliary contact configurations please refer to page 163

To complete the selection

- Replace "*" with desired coil voltage from Coil Voltage Code Table

FOR CONTACTORS CWM9...CWM105

| * AC COIL VOLTAGE CODE SELECTION | | | |
|----------------------------------|------------|------------|------------|
| 60 Hz | 24V | 120V | 208-240V |
| CODE | V04 | V18 | V24 |
| 50 Hz | - | 110V | - |

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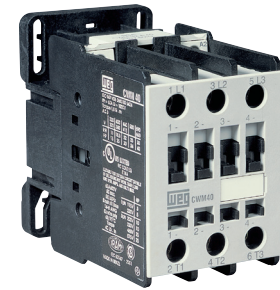
Appendix B

CWM-N Series - NEMA Rated Standard Contactor

The WEG CWM_N series NEMA rated contactor line has been designed for industrial duty and with reliability in mind. Rated for inductive loads up to 300 Amps or 200 Hp @ 460V, WEG can offer the suitable contactor for your application.

Customers who are used to specifying contactors (and starters), by a particular NEMA Size (size 00, 0, 1, 2, 3, 4, 5), now can use the WEG CWM_N series, NEMA rated contactors. Customers get the ease of choosing the product, the reliability of WEG quality, and still get the sophisticated arc quenching techniques to reduce excess heat on the contacts.

Given their compact footprints, CWM_N contactors allow total panel space optimization, with only a few compact frame sizes from 5 to 200 Hp @ 460 V. Reducing inventory is a “snap” with CWM’s common accessories. For example, side mounted auxiliary contact blocks are the same from 5 to 200 Hp @ 460 V.



Standard Features

- Ease of choosing product
- Compact footprint
- Arc Quenching technique
- Reduced inventory with common accessories
- Adjustable thermal overload relay for motor protection
- Reliable WEG Quality

| NEMA Size | NEMA Continuous Amp rating | WEG Continuous Amp rating | HP @ 230 V | HP @ 460 V |
|-----------|----------------------------|---------------------------|------------|------------|
| 00 | 9 | 9 | 1.5 | 2 |
| 0 | 18 | 18 | 3 | 5 |
| 1 | 27 | 32 | 7.5 | 10 |
| 2 | 45 | 50 | 15 | 25 |
| 3 | 90 | 95 | 30 | 50 |
| 4 | 135 | 150 | 50 | 100 |
| 5 | 270 | 300 | 100 | 200 |

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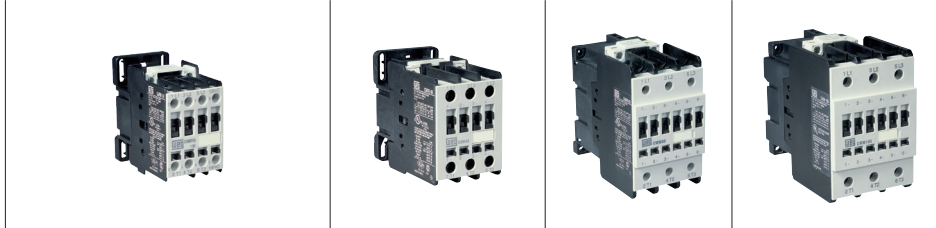
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| Catalog Number | CWM9N | CWM18N | CWM32N | CWM50N | CWM95N |
|---|-------|--------|--------|--------|--------|
| NEMA Size | 00 | 0 | 1 | 2 | 3 |
| Rated operational power ¹ | | | | | |
| Single-phase | | | | | |
| 115Vac Hp | 1/3 | 1 | 3 | 3 | 7 1/2 |
| 230Vac Hp | 1 | 3 | 5 | 7 1/2 | 15 |
| Three-phase | | | | | |
| 230Vac Hp | 1 1/2 | 3 | 7 1/2 | 15 | 30 |
| 460Vac Hp | 2 | 5 | 10 | 25 | 50 |
| 575Vac Hp | 2 | 5 | 10 | 25 | 50 |
| General Purpose A Rating | 25 | 32 | 60 | 90 | 140 |

| | | | | | | |
|------------------------|---------------|--|--|----------------|--|-------------------------|
| Overload Relays | RWM40E | | 0.4 ... 2.0 1.6 ... 8.0 5 ... 25 8 ... 40 | RWM112E | | 14 ... 56 28 ... 112 |
|------------------------|---------------|--|--|----------------|--|-------------------------|

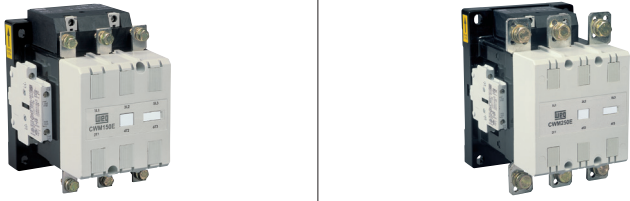



| | | | | |
|---------------------------------|--|--------------------------------|--|--|
| Auxiliary contact blocks | | BCXMF10 (1NO) BCXMF01 (1NC) | | BCXML 11 (1NO+1NC) BCXML 20 (2NO) BCXMR 11 (1NO+1NC) BCXMR 20 (2NO) |
|---------------------------------|--|--------------------------------|--|--|

| | | |
|-----------------------------|--|----------------------------------|
| Mechanical interlock | | BLIM9-105 BLIM.02 9-105 (2NC) |
|-----------------------------|--|----------------------------------|

| | | |
|--------------------------|--|---|
| Electronic Relays | | Timing Relays - RTW Series (Please refer to page B-291) |
|--------------------------|--|---|

| | | | | |
|-------------------------|--|--|--|--|
| Surge suppressor | | BAMRC4 RC block: BAMRC4 D53 24-48 V 50/60Hz BAMRC5 D55 50-127 V 50/60Hz BAMRC6 D63 130-250 V 50/60Hz Varistor block: BAMV1 D68 270-380 V 50/60Hz BAMV2 D73 400-510 V 50/60Hz | | BAMRC7 RC block: BAMRC7 D53 24-48 V 50/60Hz BAMRC8 D55 50-127 V 50/60Hz BAMRC9 D63 130-250 V 50/60Hz Varistor block: BAMV1 D68 270-380 V 50/60Hz BAMV2 D73 400-510 V 50/60Hz |
|-------------------------|--|--|--|--|

CWM-N Series - NEMA Rated Standard Contactor

| | |  | |
|---|---------|--|---------|
| Catalog Number | 3 Poles | CWM150N | CWM300N |
| NEMA Sizes | | 4 | 5 |
| Rated operational power¹⁾ | | | |
| Single-phase | | | |
| 115Vac | Hp | - | - |
| 230Vac | Hp | - | - |
| Three Phase | | | |
| 230Vac | Hp | 50 | 100 |
| 460Vac | Hp | 100 | 200 |
| 575Vac | Hp | 100 | 200 |
| General Purpose Rating | A | 225 | 410 |
| Solid State Overload relays | A |  <p>RWM420E 50...250 85...420</p> | |
| Auxiliary contact blocks | |  <p>BCXML11 (1NO+1NC) BCXML20 (2NO) BCXMR11 (1NO+1NC) BCXMR20 (2NO)</p> | |
| Mechanical interlock | |  <p>BLIM112-300</p> | |
| Surge suppressor | | built-in with electronic module | |

1) Note: Some motors characteristics may vary according to each manufacturer.

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3 POLE NEMA CONTACTORS WITH AC COIL



| NEMA Size | Maximum UL Horsepower | | | | | | Auxiliary Contacts | | Current Rating Amps | Catalog Number | List Price | Multiplier |
|-----------|-----------------------|------|-------------|------|------|------|--------------------|------|---------------------|----------------|------------|------------|
| | Single Phase | | Three Phase | | | | N.O. | N.C. | | | | |
| | 115V | 230V | 200V | 230V | 460V | 575V | | | | | | |
| 00 | 1/3 | 1 | 1.5 | 1.5 | 2 | 2 | 1 | 0 | 9 | CWM9N-10-30* | \$103 | Z1 |
| | | | | | | | 0 | 1 | | CWM9N-01-30* | | |
| 0 | 1 | 2 | 3 | 3 | 5 | 5 | 1 | 0 | 18 | CWM18N-10-30* | \$118 | |
| | | | | | | | 0 | 1 | | CWM18N-01-30* | | |
| 1 | 2 | 3 | 7.5 | 7.5 | 10 | 10 | 0 | 0 | 32 | CWM32N-00-30* | \$164 | |
| 2 | 3 | 7.5 | 10 | 15 | 25 | 25 | 0 | 0 | 50 | CWM50N-00-30* | \$233 | |
| 3 | 7.5 | 15 | 25 | 30 | 50 | 50 | 0 | 0 | 95 | CWM95N-00-30* | \$384 | |
| 4 | - | - | 40 | 50 | 100 | 100 | 2 | 2 | 150 | CWM150N-22-30# | \$1,350 | |
| 5 | - | - | 75 | 100 | 200 | 200 | 2 | 2 | 300 | CWM300N-22-30# | \$2,300 | |

- For additional auxiliary contacts, see page 163.

* AC COIL VOLTAGE CODE SELECTION

FOR CONTACTORS CWM9N...CWM95N

| | | | | | |
|-------------|------------|------------|------------|------------|------------|
| 60 Hz | 24V | 120V | 208-240V | 480V | 600V |
| CODE | V04 | V18 | V24 | V47 | V56 |
| 50 Hz | - | 110V | - | 400-415V | 500V |

AC / DC COIL VOLTAGE CODE SELECTION

FOR CONTACTORS: CWM150N, CWM300N



| | | | | |
|-------------|---------------|-----------------|-----------------|-----------------|
| Voltage | 24-28 Vac/Vdc | 110-130 Vac/Vdc | 208-250 Vac/Vdc | 430-500 VAC/VDC |
| CODE | E02 | E10 | E13 | E21 |

Notes:




- 1) CWM_N Series - 9 to 95 A - AC COIL
- 2) CWM_N Series - 150 to 300 A - AC/DC Coil with Electronic Module

CWM-N Series - NEMA Rated Standard Contactor

Accessories


| Auxiliary Contacts Block | | | | | | | |
|---|------------------------|-------------------------------|------|----------------|------------------------|-------------|----|
| Location/Description | Mounting on Contactors | Auxiliary Contacts | | Catalog Number | List Price | Multiplier | |
| | | N.O. | N.C. | | | | |
|  | Front Mounting | CWM9...105 | 1 | 0 | BCXMF10 | \$10 | Z1 |
| | | CWM9N...95N | 0 | 1 | BCXMF01 | \$10 | |
|  | Side Mounting | CWM9...CWM300 CWM9N...300N | 1 | 1 | BCXML11 | \$22 | |
| | | | 2 | 0 | BCXML20 | \$22 | |
| Side Mounting, Second Block | | | 1 | 1 | BCXMRL11 | \$22 | |
| | | | 2 | 0 | BCXMRL20 | \$22 | |
| Side Mounting | | CWM400...CWM800 | 1 | 1 | BCXML11 CWM800 | \$65 | |
| Side Mounting, Second Block | | | 1 | 1 | BCXMRL11 CWM800 | \$65 | |

Maximum # of added auxiliary contacts per contactor frame size: Note that side mountable version has 2 aux. contacts per block. CWM9...25 = 4 aux. contacts; CWM32...40 = 6 aux. contacts; CWM50...300E = 8 aux. contacts.

| Mechanical Interlock Block | | | | | | | |
|---|-------------------------------------|-------------------------------------|------|----------------|----------------------|----------------|----|
| Location/Description | Mounting on Contactors | Auxiliary Contacts | | Catalog Number | List Price | Multiplier | |
| | | N.O. | N.C. | | | | |
|  | Side mounted between two contactors | CWM9...105 CWM9N...95N | 0 | 0 | BLIM 9-105 | \$29 | Z1 |
| | | | 0 | 2 | BLIM.02 9-105 | \$40 | |
|  | | CWM112...300 1CWM150N CWM300N | 0 | 0 | BLIM 112-300 | \$77 | |
| | | | 0 | 0 | BLIM CWM400 | \$63 | |
|  | Bottom mounted | CWM400 | 0 | 0 | BLIM CWM400 | \$63 | |
| | | CWM630...CWM800 | 0 | 0 | BLIM CWM800 | \$1,850 | |

Notes: For CWM9...CWM105 the mechanical interlock can be used to interlock different frame sizes. For CWM112...CWM300, the mechanical interlock has to be used with contactors that have the same mechanical frame size.

For BLIM CWM800, a metal mount base is provided with this accessory for an accurate assembling of the contactors.


| Surge Suppressors | | | | | | |
|---|--|-----------------------------|----------------|-------------------|-------------|----|
| Description | Mounting on Contactors | Voltage Range | Catalog Number | List Price | Multiplier | |
|  | Limits switching transients from contactor pick-up | CWM9...40 CWM9N...32N | 24...48Vac | BAMRC4 D53 | \$30 | Z1 |
| | | | 50...127Vac | BAMRC5 D55 | \$30 | |
| | | | 130...250Vac | BAMRC6 D63 | \$30 | |
| | | CWM50...105 CWM50N...95N | 24...48Vac | BAMRC7 D53 | \$30 | |
| | | | 50...127Vac | BAMRC8 D55 | \$30 | |
| | | | 130...250Vac | BAMRC9 D63 | \$30 | |
| | | CWM9...105 CWM9N...95N | 270 - 380Vac | BAMV D68 | \$30 | |
| | | | 400 - 510Vac | BAMV2 V73 | \$30 | |

Note: CWM112...300 with Electronic Module and CWM400...800 already have the surge suppressor built-in on the electronic module


CWM Series - IEC Standard Contactors

Accessories

Terminal Cover for CWM_E Contactor Series

| Location/Description | Mounting on Contactors | Catalog Number | List Price | Multiplier |
|--|------------------------|----------------------------|------------|------------|
|  Protection for contactor terminals (3 covers per package) | CWM150 | BMP CWM150 | \$125 | Z1 |
| | CWM180 | BMP CWM180 | \$125 | |
| | CWM300 | BMP CWM300 | \$125 | |
| | CWM400 | BMP CWM400 | \$60 | |
| | CWM630...CWM800 | BMP CWM800 | \$110 | |

Lugs for CWM Contactor Series (3 units per package)

| Description / Wire Range | Mounting on Contactors | Catalog Number | List Price | Multiplier |
|---|------------------------|----------------------------|------------|------------|
|  300 MCM...6 AWG 300 MCM...6 AWG 600 MCM...4 AWG (2) 3-4/0 AWG (2) 3/0-600 MCM | CWM112...150 | LW1-S300 | \$52 | Z1 |
| | CWM180 | LW2-S300 | \$52 | |
| | CWM250...CWM300 | LW1-S600 | \$110 | |
| | CWM400 | BMJ CWM400 | \$98 | |
| | CWM630...CWM800 | BMJ CWM800 | \$158 | |

General Information

Circuit Protection

Disconnect Switches

Motor Protectors

Contactors

Overloads

Enclosed Starters

Relays

Pushbuttons and Pilot Lights


Terminal Blocks

Power Factor Correction

Appendix A

Appendix B

Replacement Coil

| Description | | Mounting on Contactors | Catalog Number | List Price | Multiplier | |
|---|--|---|-----------------------------------|------------------------------|------------|--|
|  | Coil voltage code is required to complete part number | AC COIL | | | | |
| | | CWM9...25 CWM9N...18N | BCA4-25* | \$28 | Z1 | |
| | | CWM32...40 CWM32N | BCA4-40* | \$35 | | |
| | | CWM50...105 CWM50N...95N | BCA-105* | \$44 | | |
| | | DC COIL² | | | | |
| | | CWM32...40 | BECC4-40+ | \$100 | Z1 | |
| | | CWM50...105 | BECC-105+ | \$60 | | |
| | | AC/DC ELECTRONIC MODULE & COIL¹ | | | | |
| | | CWM112...150 CWM150N | BCE-150# ME-300# | \$90 \$215 | Z1 | |
| | | CWM180 | BCE-215# ME-300# | \$118 \$260 | | |
| | | CWM250...300 CWM300N | BCE-300# ME-300# | \$146 \$260 | | |
| | | CWM400 | BCE-400 ^ | \$700 | | |
| | | CWM630...800 | BCE-800 ^ | \$850 | | |

-1) Module (ME-) & Coil (BCE-) must be used together for a proper contactor operation.

-2) DC Option does not include NEMA Rated Contactors

* AC COIL VOLTAGE CODE SELECTION FOR CONTACTORS CWM9...CWM105, CWM150N, CWM300N, CWM9N...95

| | | | | | | | |
|-------------|------------|------------|------------|------------|------------|------------|------------|
| 60 Hz | 24V | 48V | 120V | 208-240V | 277V | 480V | 600V |
| CODE | V04 | V10 | V18 | V24 | V37 | V47 | V56 |
| 50 Hz | - | 42V | 110V | - | 230-240V | 400-415V | 500V |

1) Stock available only for contactor version ...-10-30... and ...-00-30.... Example CWM9-10-30V24 or CWM50-00-30V24

+ DC COIL VOLTAGE CODE SELECTION 1)

FOR CONTACTORS CWM32...CWM105

| | | |
|-------------|------------|------------|
| Voltage | 24-28V | 110-130V |
| CODE | C34 | C40 |

AC/DC COIL VOLTAGE CODE SELECTION - Electronic Contactor Required

FOR CONTACTORS CWM112, 150, 180, 250, 300, CWM150N, CWM300N

| | | | | |
|----------------|---------------------|-----------------------|-----------------------|-----------------------|
| Voltage | 24-28Vac/Vdc | 110-130Vac/Vdc | 208-250Vac/Vdc | 430-500Vac/Vdc |
| CODE | E02 | E10 | E13 | E21 |
| Mounting on | CWM112-CWM300 | CWM112-CWM300 | CWM112-CWM300 | CWM112-CWM300 |

^ AC/DC COIL VOLTAGE CODE SELECTION - Electronic Contactor Required

FOR CONTACTORS CWM400, 630, 800

| | | | | |
|-------------|-----------------------|-----------------------|-----------------------|---------------|
| Voltage | 100-240Vac/100-220Vdc | 100-127Vac/100-110Vdc | 200-240Vac/200-220Vdc | 440-575Vac |
| CODE | E36 | E35 | E39 | D82 |
| Mounting on | CWM400 | CWM630-CWM800 | CWM630-CWM800 | CWM400-CWM800 |

1) DC coils cannot be used in AC coil contactors due to difference in size of coil housing. **See pg. B-36 for 3 pole contactors w/ DC Coil

General Information

Circuit Protection

Disconnect Switches

Motor Protectors

Contactors

Overloads

Enclosed Starters

Relays

Pushbuttons and Pilot Lights

Terminal Blocks

Power Factor Correction

Appendix A

Appendix B

CWM Series - IEC Standard Contactors

Control circuit ratings - AC Coil

| TYPE | CWM9 | CWM12 | CWM18 | CWM25 | CWM32 | CWM40 | CWM50 | CWM65 | CWM80 | CWM95 | CWM105 | |
|--|-------------|---------|---------|---------|---------|------------|---------|-------------|---------|---------|---------|--|
| Rated Insulation Voltage Ui | | | | | | | | | | | | |
| Acc. IEC; VDE 0660 [V] | | | | | | 1000 | | | | | | |
| Acc. UL; CSA [V] | | | | | | 600 | | | | | | |
| Rated Operating Voltage Ue | | | | | | | | | | | | |
| Acc. IEC; VDE 0660 [V] | | | | | | 690 | | | | | | |
| Acc. UL; CSA [V] | | | | | | 600 | | | | | | |
| Standard Voltages 60Hz [V] | | | | | | 24...600 | | | | | | |
| Coil Operating limits | | | | | | | | | | | | |
| Monofrequency coils xUc [V] | | | | | | 0.85...1.1 | | | | | | |
| Pick-up xUc [V] | 0.4...0.76 | | | | | 0.5...0.76 | | 0.5...0.76 | | | | |
| Drop-out xUc [V] | 0.25...0.65 | | | | | 0.3...0.65 | | 0.25...0.6 | | | | |
| Operating Time | | | | | | | | | | | | |
| Coil energization - N.O. [ms] | 8...20 | | | | | 10...19 | | 15...30 | | | | |
| Coil de-energization - N.O. [ms] | 6...13 | | | | | 5...25 | | 9...15 | | | | |
| Coil Consumption | | | | | | | | | | | | |
| Single coils | | | | | | | | | | | | |
| Sealed [VA] | 4...7.2 | | | | | 6.6...12.5 | | 13.1...19.1 | | | | |
| Inrush [VA] | 70 | | | | | 98 | | 255 | | | | |
| Thermal Power Dissipation | | | | | | | | | | | | |
| 60Hz [W] | 2.6 | | | | | 4.3 | | 8.0 | | | | |
| Power Factor | | | | | | | | | | | | |
| Closed Cos phi | 0.28 | | | | | 0.34 | | 0.32 | | | | |
| Opened Cos phi | 0.85 | | | | | 0.69 | | 0.54 | | | | |
| Stranded / Solid [AWG] (UL / CSA) | 2x12-10 | 2x12-10 | 2x12-10 | 2x12-10 | 2x12-10 | 2x12-10 | 2x12-10 | 2x12-10 | 2x12-10 | 2x12-10 | 2x12-10 | |
| | | | | | | | | | | | | |

Control circuit ratings - DC Coil

| TYPE | CWM9 | CWM12 | CWM18 | CWM25 | CWM32 | CWM40 | CWM50 | CWM65 | CWM80 | CWM95 | CWM105 | |
|--|------------|---------|---------|---------|----------|-------------|---------|-----------|---------|---------|---------|--|
| Rated Insulation Voltage Ui | | | | | | | | | | | | |
| Acc. IEC; VDE 0660 [V] | | | | | | 1000 | | | | | | |
| Acc. UL; CSA [V] | | | | | | 600 | | | | | | |
| Standard Voltages [V] | 12...440 | | | | 24...240 | | | 24...240 | | | | |
| Coil Operating limits | | | | | | | | | | | | |
| Pick-up xUc [V] | | | | | | 0.85...1.1 | | | | | | |
| Drop-out xUc [V] | 0.4...0.7 | | | | | 0.45...0.75 | | 0.7...0.8 | | | | |
| | 0.15...0.4 | | | | | 0.15...0.45 | | 0.4...0.6 | | | | |
| Operating Time | | | | | | | | | | | | |
| Coil energization - N.O. [ms] | 35...45 | | | | | 40...55 | | 50...60 | | | | |
| Coil de-energization - N.O. [ms] | 7...12 | | | | | 30...65 | | 55...60 | | | | |
| Coil Consumption | | | | | | | | | | | | |
| Sealed [W] | 3.8...9.0 | | | | | 6 | | 6.5 | | | | |
| Inrush [W] | 3.8...9.0 | | | | | 240 | | 340 | | | | |
| Stranded / Solid [AWG] (UL / CSA) | 2x12-10 | 2x12-10 | 2x12-10 | 2x12-10 | 2x12-10 | 2x12-10 | 2x12-10 | 2x12-10 | 2x12-10 | 2x12-10 | 2x12-10 | |
| | | | | | | | | | | | | |

CWM Series - IEC Standard Contactors

General Information

Circuit Protection

Disconnect Switches

Motor Protectors

Contactors

Overloads

Enclosed Starters

Relays

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Terminal Blocks

Power Factor Correction

Appendix A

Appendix B

IEC Contactors - CWM Series

| TYPE | | CWM112 | CWM150 | CWM180 | CWM250 | CWM300 | CWM400 | CWM630 | CWM800 |
|------------------------------------|------|-------------|---------|---------|----------|---------|-------------|---------|---------|
| Rated Insulation Voltage Ui | | | | | | | | | |
| Acc. IEC; VDE 0660 | [V] | | | | 1000 | | | | |
| Acc. UL; CSA | [V] | | | | 600 | | | | |
| Rated Operating Voltage Ue | | | | | | | | | |
| Acc. IEC; VDE 0660 | [V] | | | | 690 | | | | |
| Acc. UL; CSA | [V] | | | | 600 | | | | |
| Standard Voltages 50Hz; 60Hz; DC | [V] | | | | 24...600 | | | | |
| Coil Operating limits | | | | | | | | | |
| xUc | [V] | 0.65...1.1 | | | | | 0.85...1.1 | | |
| Pick-up xUc | [V] | 0.70...0.85 | | | | | 0.77...0.83 | | |
| Drop-out xUc | [V] | 0.40...0.60 | | | | | 0.48...0.53 | | |
| Operating Time | | | | | | | | | |
| Coil energization - N.O. | [ms] | 60...70 | 60...70 | 60...70 | 60...70 | 60...70 | 64...68 | 66...70 | 66...70 |
| Coil de-energization - N.O. | [ms] | 13...17 | 13...17 | 13...17 | 13...17 | 13...17 | 43...47 | 45...49 | 45...49 |
| Coil Consumption | | | | | | | | | |
| Sealed AC | [VA] | 14.8 | 14.8 | 14.1 | 14.1 | 14.1 | 14 | 17 | 29 |
| Inrush AC | [VA] | 213 | 213 | 214 | 229 | 229 | 571 | 1000 | 1000 |
| Sealed DC | [VA] | 2.4 | 2.4 | 2.4 | 2.5 | 2.5 | 14 | 17 | 29 |
| Inrush DC | [VA] | 166 | 166 | 154 | 171 | 171 | 571 | 1000 | 1000 |
| Thermal Power Dissipation | | | | | | | | | |
| AC | [W] | 3.9 | 3.9 | 3.8 | 3.7 | 3.7 | 4.7 | 4.9 | 5.3 |
| DC | [W] | 2.4 | 2.4 | 2.4 | 2.5 | 2.5 | 5.0 | 6.3 | 7.8 |

CWM Series - IEC Standard Contactors

Power Contacts

| TYPE | | CWM9 | CWM12 | CWM18 | CWM25 | CWM32 | CWM40 | CWM50 | CWM65 | CWM80 | CWM95 | CWM105 | |
|--|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-----|
| Standard UL/CSA Ratings | | | | | | | | | | | | | |
| Rated Operating Voltage | [V] | 600 | | | | | | | | | | | |
| AC-1 (General Purpose) | [A] | 25 | 25 | 32 | 32 | 60 | 60 | 90 | 110 | 110 | 140 | 140 | |
| Switching Motor Loads | | | | | | | | | | | | | |
| Full Voltage - 50/60Hz | | | | | | | | | | | | | |
| 1-phase | 115V | [A] | 9.8 | 13.8 | 16 | 24 | 34 | 34 | 56 | 56 | 80 | 80 | 100 |
| | 230V | [A] | 10 | 12 | 17 | 28 | 28 | 28 | 40 | 50 | 68 | 68 | 88 |
| | 115V | [HP] | 1/2 | 3/4 | 1 | 2 | 3 | 3 | 5 | 5 | 7-1/2 | 7-1/2 | 10 |
| | 230V | [HP] | 1-1/2 | 2 | 3 | 5 | 5 | 7 1/2 | 10 | 10 | 15 | 15 | 20 |
| 3-phase | 200V | [A] | 11 | 11 | 17.5 | 25 | 32.2 | 32.2 | 48.3 | 62.1 | 62.1 | 78.2 | 92 |
| | 230V | [A] | 9.6 | 9.6 | 15.2 | 22 | 28 | 42 | 42 | 54 | 68 | 80 | 104 |
| | 460V | [A] | 7.6 | 11 | 14 | 21 | 27 | 40 | 52 | 65 | 65 | 77 | 96 |
| | 575V | [A] | 9 | 11 | 17 | 17 | 27 | 27 | 41 | 52 | 62 | 77 | 77 |
| | 200V | [HP] | 3 | 3 | 5 | 7-1/2 | 10 | 10 | 15 | 20 | 20 | 25 | 30 |
| | 230V | [HP] | 3 | 3 | 5 | 7-1/2 | 10 | 15 | 15 | 20 | 25 | 30 | 40 |
| | 460V | [HP] | 5 | 7-1/2 | 10 | 15 | 20 | 30 | 40 | 50 | 50 | 60 | 75 |
| 575V | [HP] | 7-1/2 | 10 | 15 | 15 | 25 | 25 | 40 | 50 | 60 | 75 | 75 | |
| Short Circuit Rating | 600V [kA] | 5 | 5 | 5 | 5 | 5 | 5 | 10 | 10 | 10 | 10 | 10 | |
| Standard IEC Ratings (IEC EN 60947) | | | | | | | | | | | | | |
| Rated Operating Voltage | [V] | 690 | | | | | | 1000 | | | | | |
| Rated Thermal Current I _{th} | [A] | 25 | 25 | 32 | 45 | 60 | 60 | 90 | 110 | 110 | 140 | 140 | |
| Switching Motor Loads | | | | | | | | | | | | | |
| AC-3 - 50/60Hz | | | | | | | | | | | | | |
| 3-phase | 220-240V | [A] | 9 | 12 | 18 | 25 | 32 | 40 | 50 | 65 | 80 | 95 | 105 |
| | 380-400V | [A] | 9 | 12 | 18 | 25 | 32 | 40 | 50 | 65 | 80 | 95 | 105 |
| | 415-440V | [A] | 9 | 12 | 18 | 25 | 32 | 40 | 50 | 65 | 80 | 95 | 105 |
| | 500V | [A] | 7.5 | 10.5 | 14 | 19 | 24 | 32 | 38 | 55 | 63 | 79 | 85 |
| | 660-690V | [A] | 7 | 9 | 13 | 15 | 22 | 25 | 34 | 44 | 48 | 60 | 80 |
| | 220-240V | [kW] | 2.2 | 3 | 4 | 7.5 | 9 | 11 | 15 | 18.5 | 22 | 25 | 30 |
| | 380-400V | [kW] | 4 | 5.5 | 7.5 | 11 | 15 | 18.5 | 22 | 30 | 37 | 45 | 55 |
| | 415-440V | [kW] | 4 | 5.5 | 7.5 | 11 | 15 | 22 | 25 | 37 | 45 | 50 | 55 |
| | 500V | [kW] | 5.5 | 7.5 | 10 | 15 | 18.5 | 25 | 30 | 40 | 45 | 55 | 65 |
| 660-690V | [kW] | 5.5 | 7.5 | 10 | 15 | 18.5 | 30 | 35 | 45 | 45 | 55 | 65 | |
| Maximum Switching Rate | | | | | | | | | | | | | |
| AC-1 | [ops/hr] | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | |
| AC-3 | [ops/hr] | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 600 | 600 | |
| no load | [ops/hr] | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 5,000 | 5,000 | 5,000 | 5,000 | |
| AC-4 | | | | | | | | | | | | | |
| 200,000 operations; 50/60Hz | <= 690V [A] | 5 | 7 | 8 | 12 | 16 | 18.5 | 23 | 30 | 37 | 44 | 50 | |
| | 220-230V [kW] | 1.1 | 1.5 | 1.5 | 3 | 4 | 4.5 | 5.5 | 7.5 | 9.2 | 11 | 12.5 | |
| | [HP] | 1.5 | 2 | 2 | 4 | 5.4 | 6 | 7.5 | 10 | 12.5 | 15 | 17 | |
| | 380-400V [kW] | 2.2 | 3 | 3.7 | 5.5 | 7.5 | 9.2 | 11 | 15 | 18.5 | 22 | 22 | |
| | [HP] | 3 | 4 | 5 | 7.5 | 10 | 12.5 | 15 | 20 | 25 | 30 | 30 | |
| | 415-440V [kW] | 2.2 | 3.7 | 4.5 | 5.5 | 9.2 | 11 | 11 | 15 | 22 | 22 | 30 | |
| | [HP] | 3 | 5 | 6 | 7.5 | 12.5 | 15 | 15 | 20 | 30 | 30 | 40 | |
| | 500V [kW] | 3 | 4 | 5.5 | 7.5 | 10 | 11 | 15 | 18.5 | 22 | 25 | 30 | |
| | [HP] | 4 | 5.4 | 7.5 | 10 | 13 | 15 | 20 | 25 | 30 | 33 | 40 | |
| | 660-690V [kW] | 3 | 4.5 | 5.5 | 7.5 | 11 | 12.5 | 15 | 20 | 25 | 30 | 33 | |
| | [HP] | 4 | 6 | 7.5 | 10 | 15 | 17 | 20 | 27 | 33 | 40 | 45 | |

Power Contacts continued

Power Contacts cont.

| Type | | | CWM9 | CWM12 | CWM18 | CWM25 | CWM32 | CWM40 | CWM50 | CWM65 | CWM80 | CWM95 | CWM105 |
|-----------------------------------|-----------|--------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Breaking Capacity | Ue=400V | [A] | 250 | 250 | 250 | 450 | 450 | 920 | 920 | 920 | 920 | 1050 | 1050 |
| | Ue=500V | [A] | 250 | 250 | 250 | 320 | 450 | 920 | 920 | 920 | 920 | 1050 | 1050 |
| | Ue=690V | [A] | 130 | 130 | 130 | 170 | 205 | 780 | 780 | 780 | 780 | 950 | 950 |
| Impedance per Pole | | [mW] | 2.41 | 2.41 | 2.35 | 1.65 | 1.28 | 0.95 | 0.85 | 0.86 | 0.86 | 0.76 | 0.76 |
| Power Dissipation per Pole | | | | | | | | | | | | | |
| | AC-1 | [W] | 1.47 | 1.47 | 2.46 | 3.34 | 4.6 | 3.42 | 6.86 | 10.40 | 10.40 | 14.89 | 14.89 |
| | AC-3 | [W] | 0.19 | 0.34 | 0.78 | 1.03 | 1.31 | 1.52 | 2.12 | 3.63 | 5.5 | 6.86 | 8.37 |
| Short Time Current Icw | | | | | | | | | | | | | |
| | 1 sec. | [A] | 455 | 455 | 570 | 630 | 1010 | 1265 | 1580 | 2530 | 2530 | 3300 | 3300 |
| | 5 sec. | [A] | 205 | 205 | 254 | 280 | 450 | 450 | 710 | 1130 | 1130 | 1485 | 1485 |
| | 10 sec. | [A] | 144 | 144 | 180 | 200 | 320 | 400 | 500 | 800 | 800 | 1050 | 1050 |
| | 30 sec. | [A] | 85 | 85 | 104 | 115 | 185 | 230 | 290 | 460 | 460 | 600 | 600 |
| | 1 min. | [A] | 60 | 60 | 74 | 80 | 130 | 165 | 205 | 325 | 325 | 430 | 430 |
| | 3 min. | [A] | 35 | 35 | 46 | 50 | 90 | 100 | 120 | 185 | 185 | 250 | 250 |
| | Rec. time | [min.] | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Short Circuit Coordination | | | | | | | | | | | | | |
| Acc. to IEC | | | | | | | | | | | | | |
| Coordination Type "1" | gL/gG | [A] | 50 | 50 | 63 | 63 | 100 | 125 | 200 | 200 | 200 | 250 | 250 |
| Coordination Type "2" | gL/gG | [A] | 25 | 35 | 35 | 50 | 63 | 80 | 100 | 125 | 125 | 160 | 200 |
| Acc. to UL/CSA | J Type | [A] | 25 | 35 | 40 | 45 | 60 | 70 | 100 | 125 | 125 | 150 | 200 |

Built-in Auxiliary Contacts

| TYPE | | CWM9 | CWM12 | CWM18 |
|--|--------------------|--------------|-------|-------|
| Rated Insulation Voltage Ui | | | | |
| Acc. IEC; VDE 0660 | | [V] | 1000 | |
| Acc. UL; CSA | | [V] | 600 | |
| Rated Operating Voltage Ue | | | | |
| Acc. IEC; VDE 0660 | | [V] | 690 | |
| Acc. UL; CSA | | [V] | 600 | |
| Rated Thermal Current Ith <=55°C | | [A] | 20 | |
| Rated Operating Current Ie | | | | |
| Acc. IEC 60947-5-1 / AC-15 | 110-127V | [A] | 10 | |
| | 220-240V | [A] | 10 | |
| | 380-400V | [A] | 6 | |
| | 415-450V | [A] | 5 | |
| | 500V | [A] | 4 | |
| 660-690V | [A] | 2 | | |
| Acc. UL; CSA | | | A600 | |
| Rated Operating Current Ie | | | | |
| Acc. IEC 60947-5-1 / DC-13 | 24V | [A] | 6 | |
| | 48V | [A] | 4 | |
| | 110V | [A] | 2 | |
| | 220V | [A] | 0.7 | |
| | 440V | [A] | 0.7 | |
| Acc. UL; CSA | | | P600 | |
| Making Capacity Im | | | | |
| AC-15 / AC-11 | Ue <= 690V 50/60Hz | [A] | 250 | |
| DC-13 / DC-11 | Ue <= 440Vdc | [A] | 250 | |
| Breaking Capacity Icb | | | | |
| AC-15 / AC-11 | Ue <= 400V 50/60Hz | [A] | 250 | |
| DC-13 / DC-11 | Ue <=220Vdc | [A] | 2 | |
| Short Circuit Protection with Fuses | | | | |
| Acc. IEC 60947-5-1 - gL/gG | | [A] | 10 | |
| Minimum Switching Capacity | | [V/mA] | 17/5 | |
| Electrical Endurance | | Million ops. | 1 | |
| Mechanical Endurance | | Million ops. | 10 | |
| Guaranteed Non-Overlap Time | | [ms] | 1.5 | |
| Insulation Resistance | | [MOhm] | >10 | |

CWM Series - IEC Standard Contactors

Power Contacts cont.

| TYPE | Units | | CWM112 | CWM150 | CWM180 | CWM250 | CWM300 | CWM400 | CWM630 | CWM800 |
|--|----------|----------|--------|--------|--------|--------|--------|--------|--------|--------|
| NEMA Ratings | | | | | | | | | | |
| Rated Operating Voltage | | [V] | 600 | | | | | | | |
| AC-1 (General Purpose) | | [A] | 170 | 170 | 200 | 300 | 400 | 450 | 660 | 900 |
| Switching Motor Loads | | | | | | | | | | |
| Full Voltage - 50/60Hz | | | | | | | | | | |
| 1-phase | 115V | [A] | - | - | - | - | - | - | - | - |
| | 230V | [A] | - | - | - | - | - | - | - | - |
| | 115V | [HP] | - | - | - | - | - | - | - | - |
| | 230V | [HP] | - | - | - | - | - | - | - | - |
| 3-phase | 200V | [A] | 120 | 150 | 177 | 221 | 285 | 359 | 414 | 552 |
| | 230V | [A] | 130 | 154 | 192 | 248 | 312 | 360 | 480 | 772 |
| | 460V | [A] | 124 | 156 | 180 | 240 | 302 | 361 | 477 | - |
| | 575V | [A] | 99 | 144 | 192 | 242 | 336 | 289 | 382 | - |
| | 200V | [HP] | 40 | 50 | 60 | 75 | 100 | 125 | 150 | 200 |
| | 230V | [HP] | 50 | 60 | 75 | 100 | 125 | 150 | 200 | 300 |
| | 460V | [HP] | 100 | 125 | 150 | 200 | 250 | 300 | 400 | 600 |
| | 575V | [HP] | 100 | 150 | 200 | 250 | 350 | 300 | 400 | 600 |
| Short Circuit Rating | 600V | [kA] | 10 | 10 | 10 | 18 | 18 | 18 | 30 | 30 |
| Standard IEC Ratings (IEC/EN 60947) | | | | | | | | | | |
| Rated Operating Voltage | | [V] | 1000 | | | | | | | |
| Rated Thermal Current I _{th} | | [A] | 180 | 225 | 225 | 350 | 350 | 450 | 660 | 900 |
| Switching Motor Loads | | | | | | | | | | |
| AC-3 - 50/60Hz | | | | | | | | | | |
| 3-phase | 220-240V | [A] | 112 | 150 | 180 | 250 | 300 | 400 | 630 | 800 |
| | 380-400V | [A] | 112 | 150 | 180 | 250 | 300 | 400 | 630 | 800 |
| | 415-440V | [A] | 112 | 150 | 180 | 250 | 300 | 400 | 630 | 800 |
| | 500V | [A] | 95 | 130 | 155 | 220 | 265 | 350 | 500 | 720 |
| | 660-690V | [A] | 82 | 110 | 135 | 185 | 220 | 300 | 420 | 630 |
| | 220-240V | [kW] | 30 | 45 | 55 | 75 | 90 | 110 | 185 | 220 |
| | 380-400V | [kW] | 55 | 75 | 90 | 132 | 160 | 220 | 330 | 450 |
| | 415-440V | [kW] | 55 | 90 | 110 | 150 | 185 | 220 | 370 | 500 |
| | 500V | [kW] | 55 | 90 | 110 | 160 | 200 | 220 | 330 | 500 |
| | 660-690V | [kW] | 75 | 110 | 110 | 160 | 200 | 260 | 400 | 560 |
| Maximum Switching Rate | | | | | | | | | | |
| AC-1 | | [ops/hr] | 600 | 600 | 600 | 600 | 600 | 500 | 500 | 500 |
| AC-3 | | [ops/hr] | 600 | 600 | 600 | 600 | 600 | 500 | 500 | 500 |
| no load | | [ops/hr] | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |

Power Contact cont.

| TYPE | | | CWM112 | CWM150 | CWM180 | CWM250 | CWM300 | CWM400 | CWM500 | CWM630 | CWM800 |
|------------------------------------|----------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| AC-4 | Voltage | Units | | | | | | | | | |
| 200,000 operations; 50/60Hz | <= 690V | [A] | 50 | 55 | 58 | 100 | 130 | - | - | - | - |
| | 220-230V | [kW] | 18.5 | 20 | 22 | 37 | 45 | 90 | - | 110 | 185 |
| | | [HP] | 25 | 27 | 30 | 50 | 60 | 125 | - | 150 | 250 |
| | 380-400V | [kW] | 30 | 33 | 37 | 55 | 75 | 150 | - | 220 | 330 |
| | | [HP] | 40 | 44 | 50 | 75 | 100 | 200 | - | 300 | 450 |
| | 415-440V | [kW] | 37 | 40 | 45 | 63 | 80 | 185 | - | 220 | 370 |
| | | [HP] | 50 | 54 | 60 | 84 | 107 | 250 | - | 300 | 500 |
| | 500V | [kW] | 40 | 45 | 50 | 75 | 90 | - | - | - | - |
| | | [HP] | 54 | 60 | 67 | 100 | 121 | - | - | - | - |
| 660-690V | [kW] | 45 | 50 | 55 | 90 | 100 | - | - | - | - | |
| | [HP] | 600 | 67 | 75 | 121 | 133 | - | - | - | - | |
| Maximum Switching Rate | | [ops/hr] | 150 | 150 | 150 | 150 | 150 | - | - | - | - |
| | | | | | | | | | | | |
| Making Capacity | | [A] | 1430 | 1820 | 2100 | 2600 | 3000 | - | - | - | - |
| Breaking Capacity | | | | | | | | | | | |
| | Ue<=400V | [A] | 1290 | 1350 | 1400 | 2000 | - | 4000 | - | 6300 | 8000 |
| | Ue=500V | [A] | 1290 | 1350 | 1400 | 2000 | - | 4000 | - | 6300 | 8000 |
| Impedance per pole | | [mW] | 0.5 | 0.5 | 0.45 | 0.3 | 0.3 | - | - | - | - |
| Power Dissipation per Pole | | | | | | | | | | | |
| | AC-1 | [W] | 16 | 25 | 21.6 | 35 | 45.7 | - | - | - | - |
| | AC-3 | [W] | 6.2 | 11.1 | 13.8 | 17.9 | 25.7 | - | - | - | - |
| Short Time Current Icw | | | | | | | | | | | |
| 0° ≤ 104°F | 1 sec. | [A] | 3165 | 3763 | 4649 | 4427 | - | - | - | - | - |
| | 5 sec. | [A] | 1820 | 2164 | 2673 | 2546 | - | - | - | - | - |
| | 10 sec. | [A] | 1430 | 1700 | 2100 | 2000 | - | - | - | - | - |
| | 30 sec. | [A] | 826 | 980 | 1212 | 1155 | - | - | - | - | - |
| | 1 min. | [A] | 584 | 694 | 857 | 816 | - | - | - | - | - |
| | 3 min. | [A] | 337 | 401 | 495 | 471 | - | - | - | - | - |
| | Recovery time | [min.] | 10 | 10 | 10 | 10 | 10 | - | - | - | - |
| Short Circuit Coordination | | | | | | | | | | | |
| Acc. to IEC | | | | | | | | | | | |
| Coordination type "1" | gL/gG | [A] | 315 | 355 | 355 | 500 | 630 | 630 | - | 800 | 1000 |
| Coordination type "2" | gL/gG | [A] | 224 | 250 | 250 | 400 | 500 | - | - | - | - |
| Acc. to UL/CSA | J Type | [A] | 250 | 350 | 400 | 500 | 700 | 700 | - | 900 | 1100 |

- General Information
- Circuit Protection
- Disconnect Switches
- Motor Protectors
- Contactors
- Overloads
- Enclosed Starters
- Relays
- Pushbuttons and Pilot Lights
- Terminal Blocks
- Power Factor Correction
- Appendix A
- Appendix B

CWM Series - IEC Standard Contactors

General Ratings

| TYPE | CWM9 | CWM12 | CWM18 | CWM25 | CWM32 | CWM40 | CWM50 | CWM65 | CWM80 | CWM95 | CWM105 | | |
|---|---|----------------------------------|--------------------|--------------------|-----------------------|-----------------------|---|---------------------|---------------------|---------------------|-----------------------|-----------------------|--|
| Standards | Units: Devices according to International Standards IEC 60947-1 / 60947-4-1, European Standards EN 60947-1 / 60947-4-1, Underwriters Laboratories - UL 508; CSA C.22.2/14; VDE 0660/102 | | | | | | | | | | | | |
| Rated Insulation Voltage Ui | | | | | | | | | | | | | |
| Acc. IEC; VDE 0660 | [V] | 1000 | | | | | | | | | | | |
| Acc. UL; CSA | [V] | 600 | | | | | | | | | | | |
| Rated Impulse Voltage Uimp | | | | | | | | | | | | | |
| Acc. IEC60947-1 | [kV] | 6 | | | | | | | | 8 | | | |
| Rated Operating Frequency | [Hz] | 25...400 | | | | | | | | | | | |
| Degree of Protection | | | | | | | | | | | | | |
| Main terminals | | IP20 | | | | | Protection against direct contact Acc. VDE 0160 - Part. 100 | | | | | | |
| Coil terminals | | IP10 | | | | | | | | | | | |
| Auxiliary terminals | | | | | | | | | | | | | |
| Ambient Temperature | | | | | | | | | | | | | |
| Storage | | -55 to +80oC (-67 to +176oF) | | | | | | | | | | | |
| Operating | | -25 to +55oC (-13 to +131oF) | | | | | | | | | | | |
| Altitude | | | | | | | | | | | | | |
| Up to 1,500m | | Nominal values | | | | | | | | | | | |
| | | See graphic on page 174 | | | | | | | | | | | |
| Pollution Degree | | 3 | | | | | | | | | | | |
| Climatic Withstand | | According to IEC 60680-2 | | | | | | | | | | | |
| Mounting | | 35mm rail Acc. DIN EN 50 022 | | | | | | | | | | | |
| Vibration Resistance (5 to 200 Hz) | | | | | | | | | | | | | |
| Contactor open | [g] | 3 | 3 | 3 | 7.5 | 8 | 8 | 4.5 | 4.5 | 4.5 | 5 | 5 | |
| Contactor closed at Uc | [g] | 6 | 6 | 6 | 8 | 12 | 12 | 9 | 9 | 9 | 7 | 7 | |
| Mechanical Endurance | | | | | | | | | | | | | |
| AC Coil | Million ops. | 10 | | | | | | | | | | | |
| Electrical Endurance AC-3 | Million ops. | 1.8 | 1.6 | 1.2 | 1.2 | 1.2 | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | |
| Shock Resistance (1/2 sin wave = 11ms) | | | | | | | | | | | | | |
| Contactor open | [g] | 8 | 8 | 8 | 8 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | |
| Contactor closed at Uc | [g] | 12 | 12 | 12 | 12 | 12 | 12 | 10 | 10 | 10 | 10 | 10 | |
| Weight | [kg] | 0.30 | 0.30 | 0.30 | 0.30 | 0.52 | 0.54 | 1.11 | 1.12 | 1.13 | 1.45 | 1.47 | |
| AC Coil | [lb] | 0.65 | 0.65 | 0.65 | 0.65 | 1.15 | 1.19 | 2.44 | 2.47 | 2.49 | 3.20 | 3.24 | |
| Terminal Capacity | | | | | | | | | | | | | |
| | | Cross/Slotted Combination | | | | | | Allen Head | | | | | |
| Fine - Stranded with sleeve | Top [mm2] | | | | | | | | | | | | |
| | Bottom [mm2] | 2x0.5-2.5 | 2x0.5-2.5 | 2x0.5-2.5 | 2x1-2.5 | 0.75-16 | 0.75-16 | 1-35 | 1-35 | 1-35 | 1.5-50 | 1.5-50 | |
| Coarse - Stranded / Solid | Top [mm2] | 2x1-2.5 | 2x1-2.5 | 2x1-2.5 | 2x1-2.5 | 1-16 | 1-16 | 1.5-35 | 1.5-35 | 1.5-35 | 2.5-50 | 2.5-50 | |
| | Bottom [mm2] | or 2x2.5-6 | or 2x2.5-6 | or 2x2.5-6 | or 2x2.5-10 | 1.5-16 | 1.5-16 | 6-35 | 6-35 | 6-35 | 6-35 | 6-35 | |
| Stranded / Solid (UL / CSA) | Top [AWG] | 2x20-12 | 2x20-12 | 2x20-12 | 2x18-12 | 18-6 | 18-6 | 16-2 | 16-2 | 16-2 | 16-1 | 16-1 | |
| | Bottom [AWG] | or 2x12-10 | or 2x12-10 | or 2x12-10 | or 2x12-8 | 16-6 | 16-6 | 14-2 | 14-2 | 14-2 | 10-2 | 10-2 | |
| Drive Size | | Screwdriver - Philips #2 | | | | | | 5/32" (4mm.) | | | | | |
| Tightening Torque | lb-in (Nm) | 8.9...15 (1...1.7) | 8.9...15 (1...1.7) | 8.9...15 (1...1.7) | 14.2...26.6 (1.6...3) | 22.1...35.4 (2.5...4) | 22.1...35.4 (2.5...4) | 35.4...53.1 (4...6) | 35.4...53.1 (4...6) | 35.4...53.1 (4...6) | 44.3...57.5 (5...6.5) | 44.3...57.5 (5...6.5) | |

General Ratings

| TYPE | CWM112 | CWM150 | CWM180 | CWM250 | CWM300 | CWM400 | CWM630 | CWM800 | | |
|---|--|---|--------|--------------------|--------------------|--------------------|----------|-------------|-----------|-----------|
| Standards Units | Devices according to International Standards IEC 60947-1 / 60947-4-1, European Standards EN 60947-1 / 60947-4-1, Underwriters Laboratories - UL 508; CSA C.22.2/14; VDE 0660/102 | | | | | | | | | |
| Rated Insulation Voltage Ui | | | | | | | | | | |
| Acc. IEC; VDE 0660 | [V] | 1000 | | | | | | | | |
| Acc. UL; CSA | [V] | 600 | | | | | | | | |
| Rated Impulse Voltage Uimp | | | | | | | | | | |
| Acc. IEC60947-1 | [kV] | 8 | | | | | | | | |
| Rated Operating Frequency | [Hz] | 25...400 | | | | | | | | |
| Degree of protection | | Protection against direct contact acc. VDE 0160 - Part. 100 | | | | | | | | |
| Main terminals | | IP00 | | | | | | | | |
| Coil terminals | | IP20 | | | | | | | | |
| Auxiliary terminals | | IP20 | | | | | | | | |
| Ambient Temperature | | | | | | | | | | |
| Storage | | -55 to +80°C (-67 to +176°F) | | | | | | | | |
| Operating | | -25 to +55°C (-13 to +131°F) | | | | | | | | |
| Altitude | | | | | | | | | | |
| Up to 1,500m | | Nominal values | | | | | | | | |
| Other altitudes | | See graphic on page 174 | | | | | | up to 2000m | | |
| Pollution Degree | | 3 | | | | | | | | |
| Climatic withstand | | According to IEC 68-2 | | | | | | | | |
| Mounting | | Screw to panel | | | | | | | | |
| Vibration Resistance (5 to 200 Hz) | | | | | | | | | | |
| Contactors open | [g] | 4 | | | | | | | | |
| Contactors closed at Uc | [g] | 4 | | | | | | | | |
| Mechanical Endurance | | | | | | | | | | |
| AC Coil | Million ops. | 10 | | | | | | 5 | | |
| Electrical Endurance AC-3 | Million ops. | 1.1 | 1.1 | 1.0 | 1.0 | 1.0 | 0.5 | | | |
| Shock Resistance (1/2 sin wave = 11ms) | | | | | | | | | | |
| Contactors open | [g] | 3 | | | | | | | | |
| Contactors closed at Uc | [g] | 3 | | | | | | | | |
| Weight | | | | | | | | | | |
| AC/DC Coil | [kg] | 2.54 | 2.54 | 4.04 | 6.14 | 6.14 | 9.2 | 22.4 | 22.4 | |
| | [lb] | 5.60 | 5.60 | 8.91 | 13.54 | 13.54 | 20 | 49 | 49 | |
| Terminal Capacity | | | | | | | | | | |
| Fine - Stranded with sleeve | [mm ²] | 2 x (25-70) | | 2 x (50-120) | | 2 x (50-150) | | 1 x 150 | 1 x 240 | 1 x 240 |
| AWG wires with end sleeve | | 1 x 300 or 2 x 107 | | | 1 x 500 or 2 x 300 | | Nº2 30x5 | Nº2 50x5 | Nº2 60x5 | |
| Busbars | [mm] | 2 x (15 x 3) | | 2 x (20 x 3) | | 2 x (30 x 5) | | - | - | - |
| Tightening Torque | lb-in (Nm) | 47.8-53.1(5.4-6) | | 123.9-141.6(14-16) | | 203.6-230.1(23-26) | | 203.6(23) | 504.5(57) | 504.5(57) |

General Information

Circuit Protection

Disconnect Switches

Motor Protectors

Contactors

Overloads

Enclosed Starters

Relays

Pushbuttons and Pilot Lights

Terminal Blocks

Power Factor Correction

Appendix A

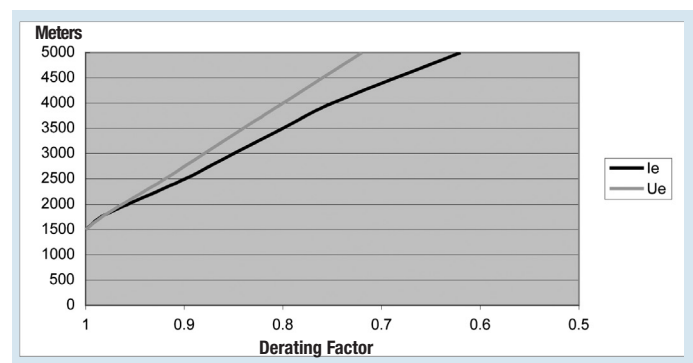
Appendix B

Contactors

CWM Series - IEC Standard Contactors Auxiliary contact block ratings

| TYPE | BCXMF | BCXML | BCXMRL | BLIM.02 |
|--|--------------------|--------------|--------|---------|
| Rated Insulation Voltage Ui | | | | |
| Acc. IEC; VDE 0660 | [V] | | | 1000 |
| Acc. UL; CSA | [V] | | | 600 |
| Rated Operating Voltage Ue | | | | |
| Acc. IEC; VDE 0660 | [V] | | | 690 |
| Acc. UL; CSA | [V] | | | 600 |
| Rated Thermal Current I _{th} <=55°C | [A] | | | 10 |
| Rated Operating Current Ie | | | | |
| Acc. IEC 60947-5-1 / AC-15 | 110-127V | [A] | | 6 |
| | 220-240V | [A] | | 6 |
| | 380-400V | [A] | | 4 |
| | 415-450V | [A] | | 3.5 |
| | 500V | [A] | | 2.5 |
| | 660-690V | [A] | | 1.5 |
| Acc. UL; CSA | | | | A600 |
| Rated Operating Current Ie | | | | |
| Acc. IEC 60947-5-1 / DC-13 | 24V | [A] | | 4 |
| | 48V | [A] | | 2 |
| | 110V | [A] | | 0.7 |
| | 220V | [A] | | 0.3 |
| | 440V | [A] | | 0.15 |
| Acc. UL; CSA | | | | Q600 |
| Making Capacity Im | | | | |
| AC-15 / AC-11 | Ue <= 400V 50/60Hz | [A] | | 90 |
| DC-13 / DC-11 | Ue <= 220Vdc | [A] | | 90 |
| Breaking Capacity Ic | | | | |
| AC-15 / AC-11 | Ue <= 400V 50/60Hz | [A] | | 60 |
| DC-13 / DC-11 | Ue <= 220Vdc | [A] | | 0.95 |
| Short Circuit Protection with Fuses | | | | |
| Acc. IEC 60947-5-1 - gL/gG | | [A] | | 10 |
| Minimum Switching Capacity | | [V/mA] | | 17/5 |
| Electrical Endurance | | Million ops. | | 1 |
| Mechanical Endurance | | Million ops. | | 10 |
| Guaranteed Non-Overlap Time | | [ms] | | 1.5 |
| Insulation Resistance | | [MΩ] | | >10 |

Graphic Altitude



NOTE:

Altitude compensation in CWM Series contactors, considers a factor according to which the rated power must be reduced.

The derating of the permissible operating power for installation altitudes above 1,500 m (5,000 ft) is calculated according to:

$$\text{Total derating} = \text{Derating}_{\text{current}} \times \text{Derating}_{\text{voltage}}$$

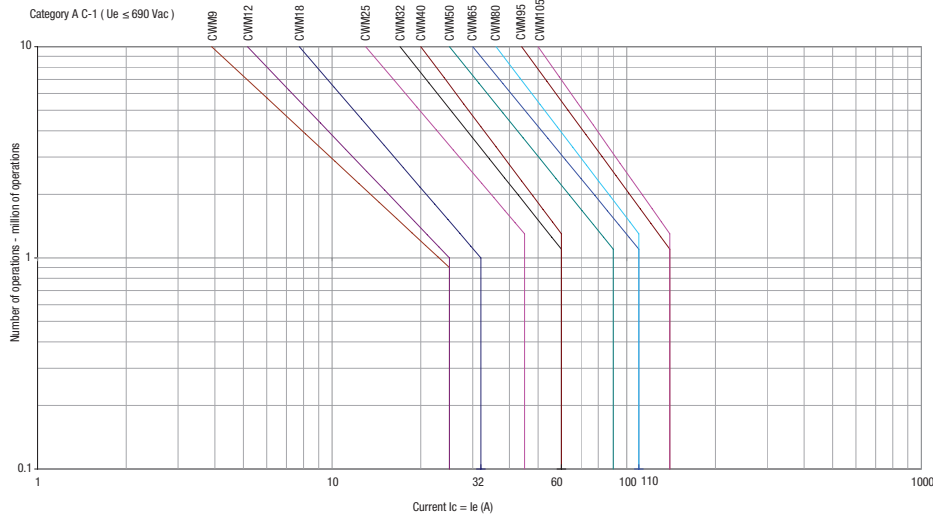
Example: Altitude: 3,000 m (10,000 ft):

Derating current K1 = 0.85

Derating voltage K2 = 0.88

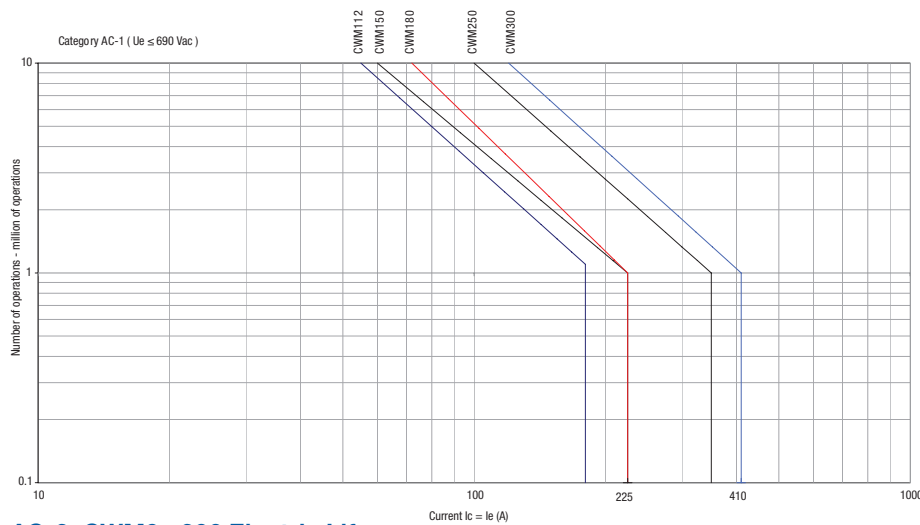
$$\text{Total derating} = 0.85 \times 0.88 = 0.75 \times \text{HP}$$

AC-1: CWM9...105 Electric Lifespan



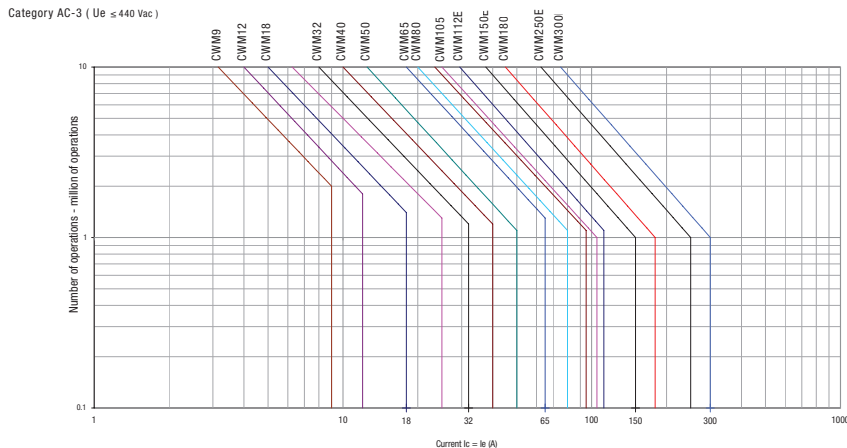
Control of resistive circuits (power factor ≥ 0.95)
The current broken (I_c) in category AC-1 is equal to the current (I_e) drawn by the load.

AC-1: CWM112...300 Electric Lifespan



Control of resistive circuits (power factor ≥ 0.95)
The current broken (I_c) in category AC-1 is equal to the current (I_e) drawn by the load.

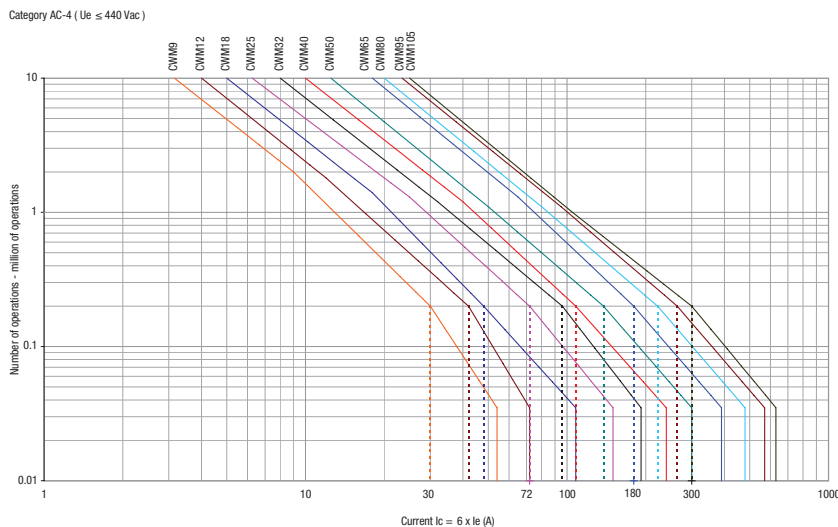
AC-3: CWM9...300 Electric Lifespan



Control of 3-phase asynchronous squirrel cage motors with breaking while running. The current broken (I_c) in category AC-3 is equal to the operational current of the motor (I_e).

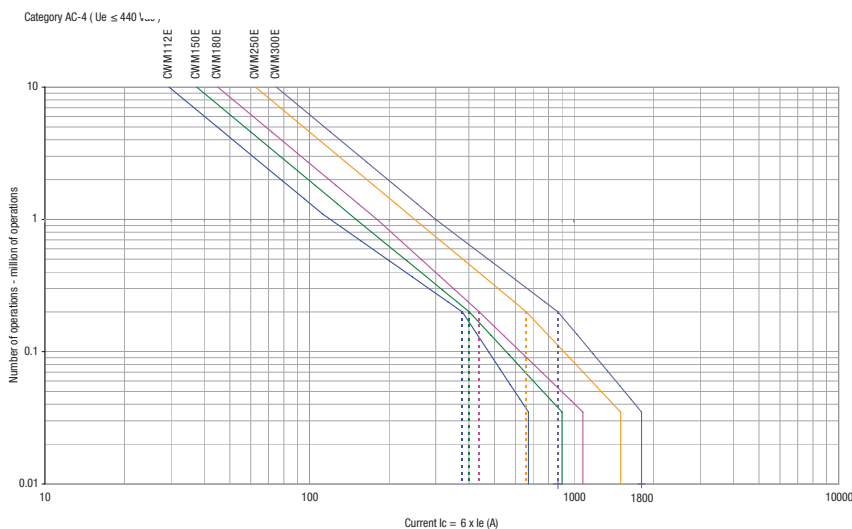
CWM Series - IEC Standard Contactors

AC-4: CWM9...105 Electric Lifespan



Control of 3-phase asynchronous squirrel cage motors with breaking while motor stalled. The current broken (I_c) in category AC-4 is equal to 6 times the operational current of the motor (I_e).

AC-4: CWM112...300 Electric Lifespan



Control of 3-phase asynchronous squirrel cage motors with breaking while motor stalled. The current broken (I_c) in category AC-4 is equal to 6 times the operational current of the motor (I_e).

In many applications there is a mixture of AC-3 and AC-4 duty. For these applications the electric lifespan of a particular contactor can be estimated using the formula:

$$E = \frac{AC3}{1 - \left(\frac{P}{100}\right) + \left(\frac{P}{100} \times \frac{AC3}{AC4}\right)}$$

E= Estimated electric lifespan for mixed duty application.

AC-3= Number of electrical operations taken from the AC-3 Duty life curve.

AC-4= Number of electrical operations taken from the AC-4 Duty life curve.

P= Proportion of AC-4 operations to total operations for the application, expressed as a percentage.

General Information

Circuit Protection

Disconnect Switches

Motor Protectors

Contactors

Overloads

Enclosed Starters

Relays

Pushbuttons and Pilot Lights

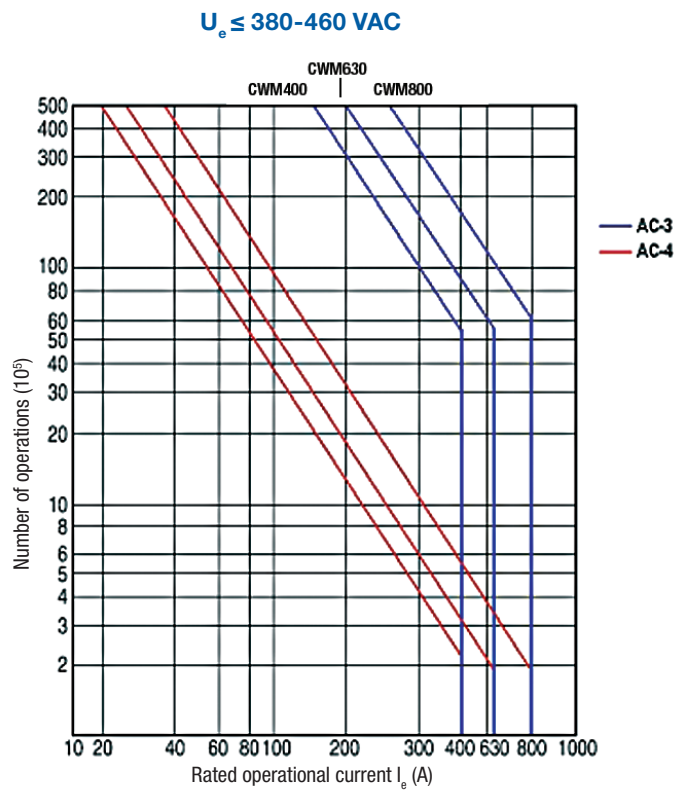
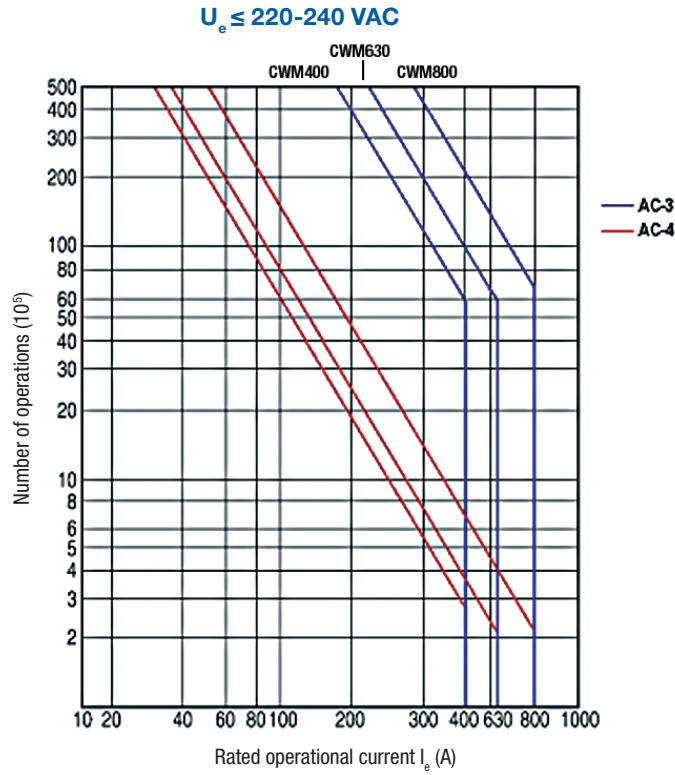
Terminal Blocks

Power Factor Correction

Appendix A

Appendix B

Electrical Lifespan

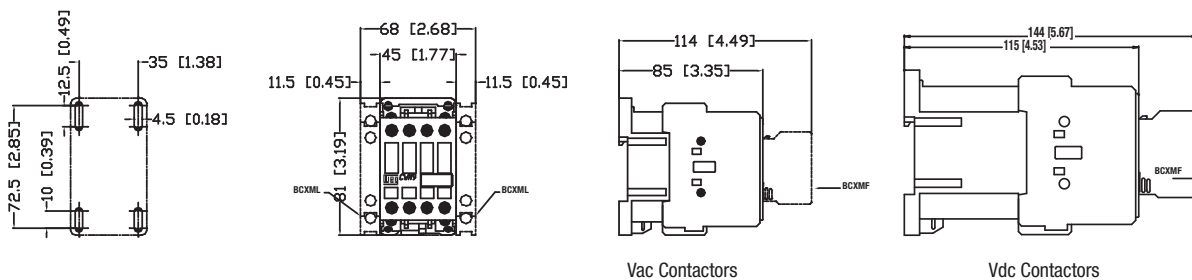


- General Information
- Circuit Protection
- Disconnect Switches
- Motor Protectors
- Contactors**
- Overloads
- Enclosed Starters
- Relays
- Pushbuttons and Pilot Lights
- Terminal Blocks
- Power Factor Correction
- Appendix A
- Appendix B

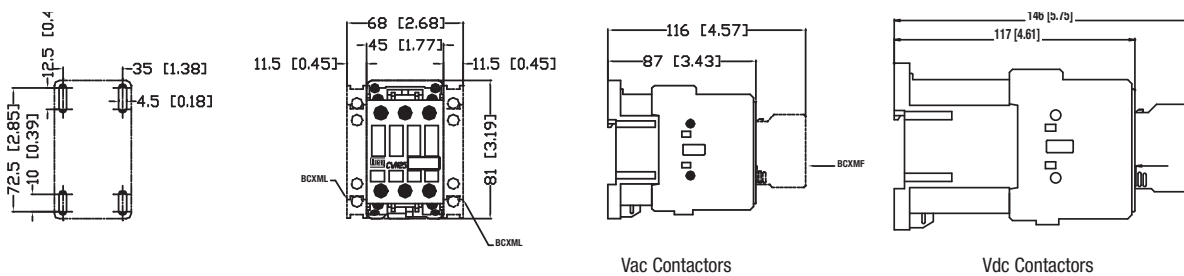
CWM-N Series - NEMA Rated Standard Contactor

Mechanical Drawings mm (in)

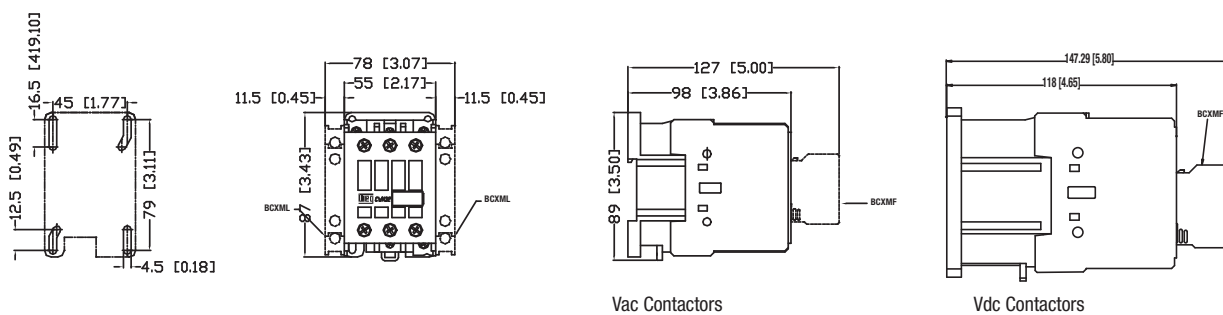
CWM9, CWM9N, CWM12, CWM18, and CWM18N



CWM25



CWM32, CWM32N and CWM40



General Information

Circuit Protection

Disconnect Switches

Motor Protectors

Contactors

Overloads

Enclosed Starters

Relays

Pushbuttons and Pilot Lights

Terminal Blocks

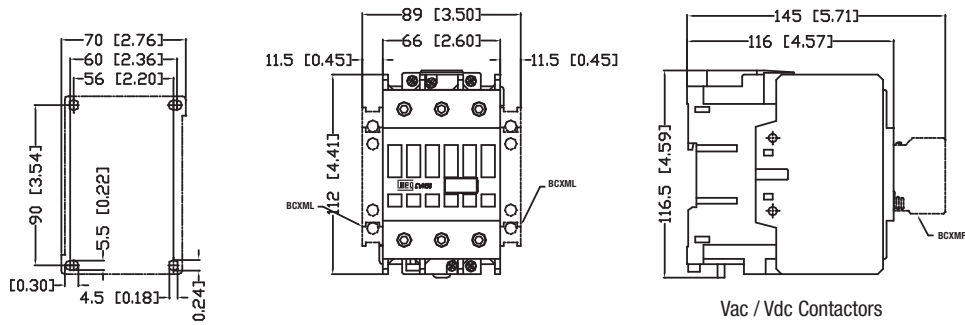
Power Factor Correction

Appendix A

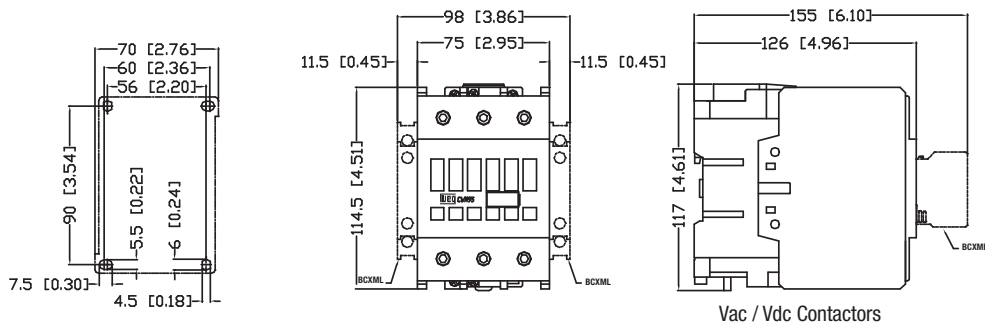
Appendix B

Mechanical Drawings mm (in)

CWM50, CWM50N, CWM65 and CWM80



CWM95, CWM95N, and CWM105



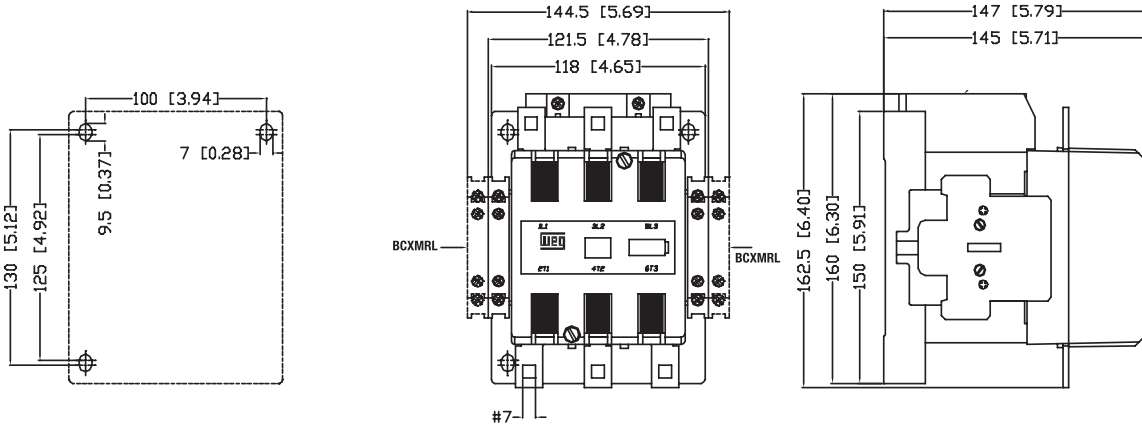
- General Information
- Circuit Protection
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- Contactors
- Overloads
- Enclosed Starters
- Relays
- Pushbuttons and Pilot Lights
- Terminal Blocks
- Power Factor Correction
- Appendix A
- Appendix B

Contactors

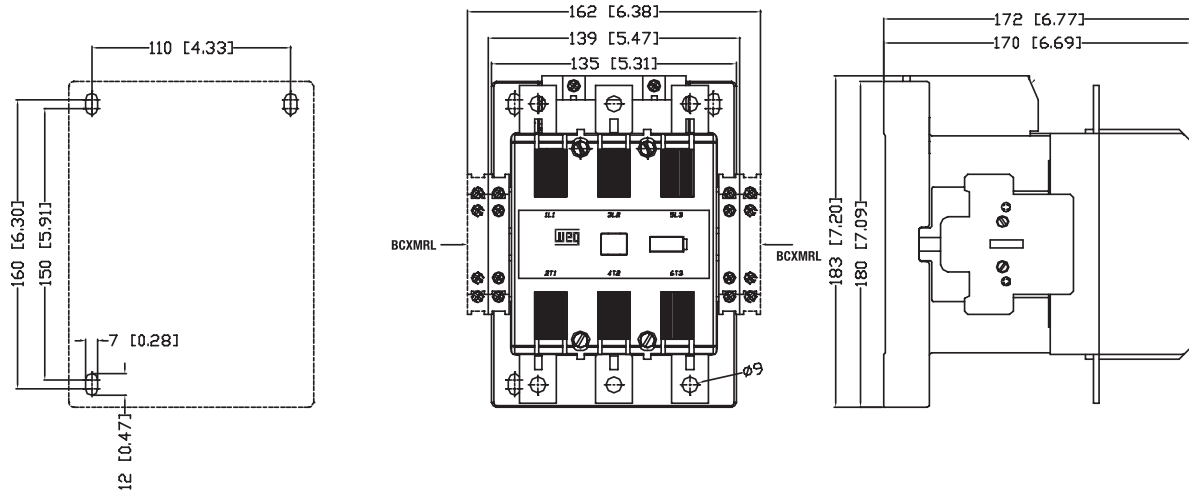
CWM-N Series - NEMA Rated Standard Contactor

Mechanical Drawings mm (in)

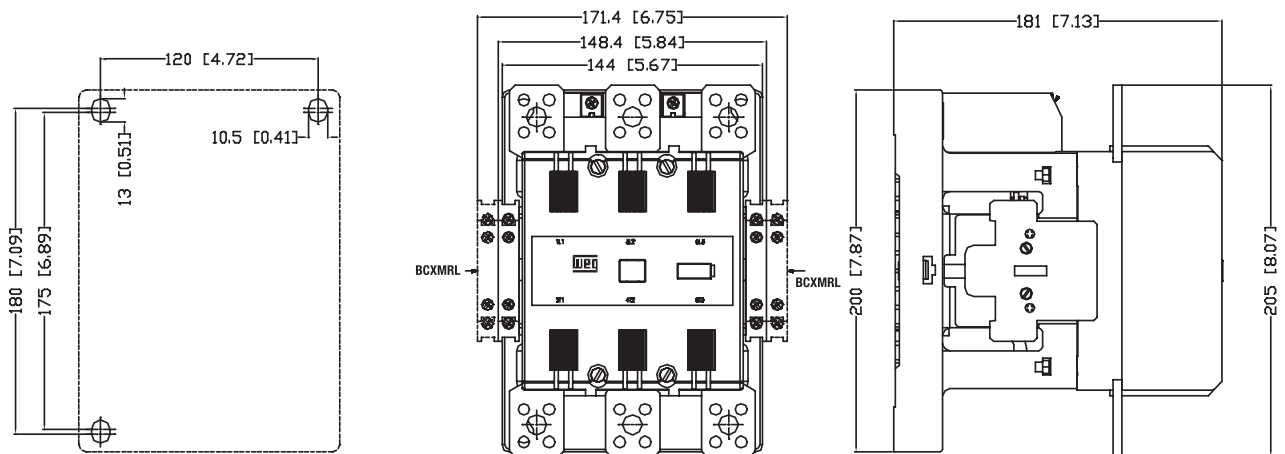
CWM112, CWM150 and CWM150N



CWM180



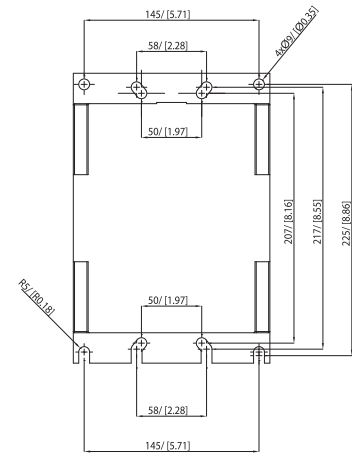
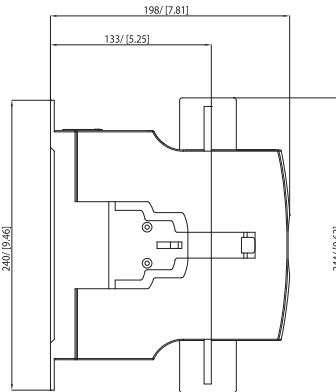
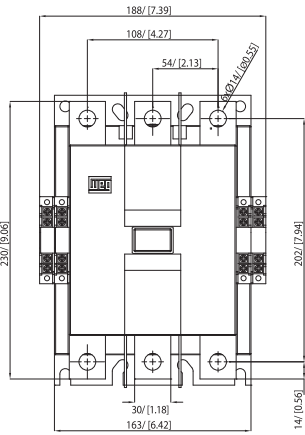
CWM250, CWM300 and CWM300N



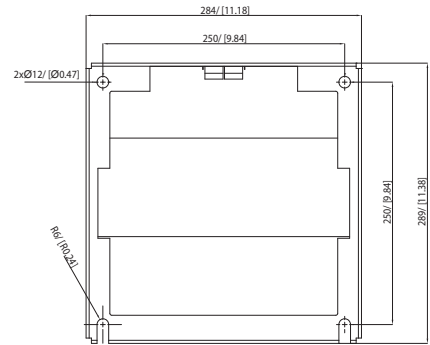
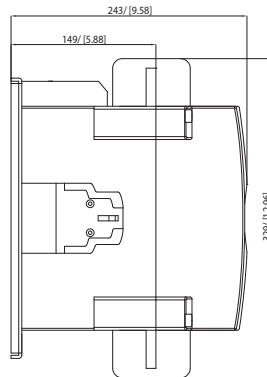
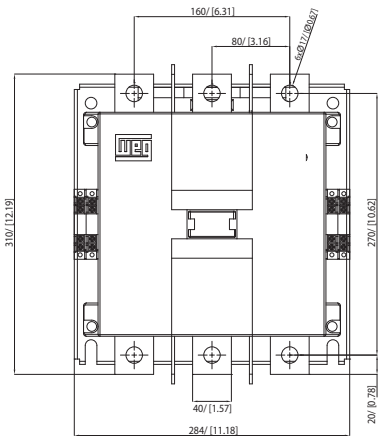
- General Information
- Circuit Protection
- Disconnect Switches
- Motor Protectors
- Contactors
- Overloads
- Enclosed Starters
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Mechanical Drawings mm (in)

CWM400



CWM630 and CWM800



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Motor Protectors

Contactors

Overloads

Enclosed Starters

Relays

Pushbuttons and Pilot Lights

Terminal Blocks

Power Factor Correction

Appendix A

Appendix B

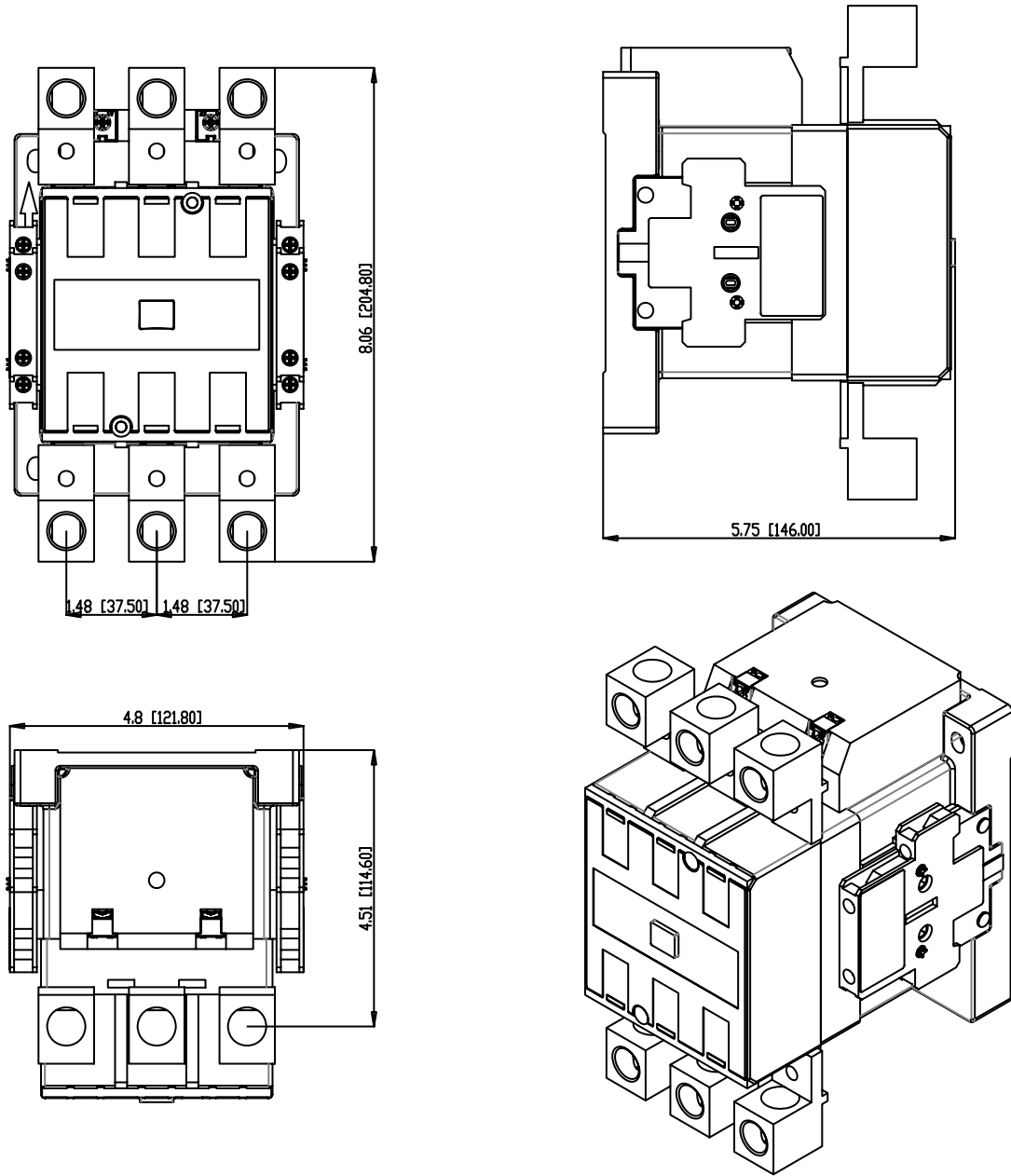
Contactors

CWM Series - IEC Standard Contactors

Mechanical Drawings mm (in)

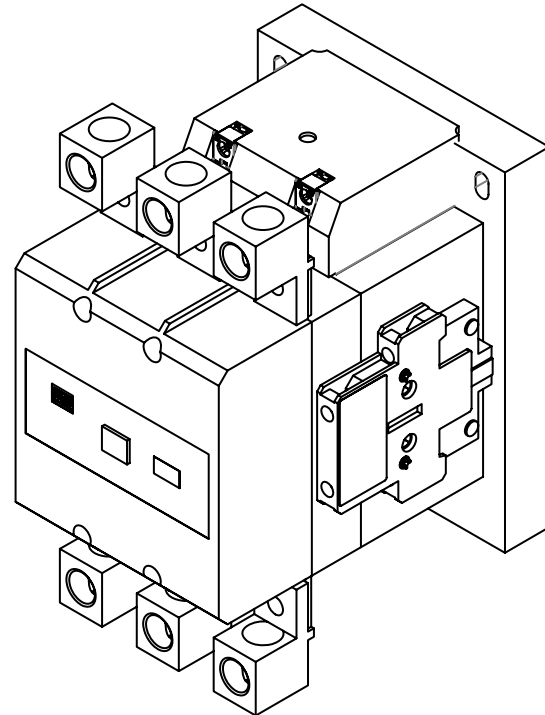
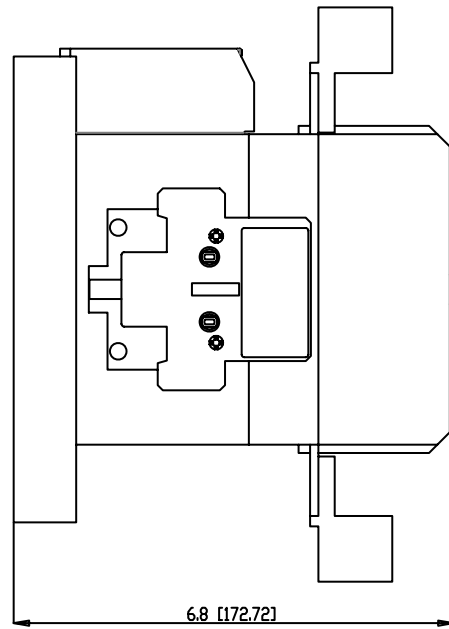
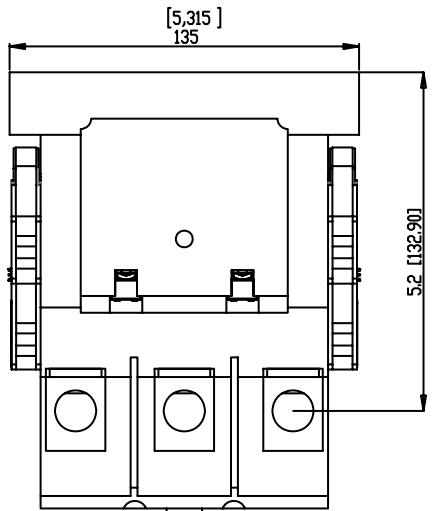
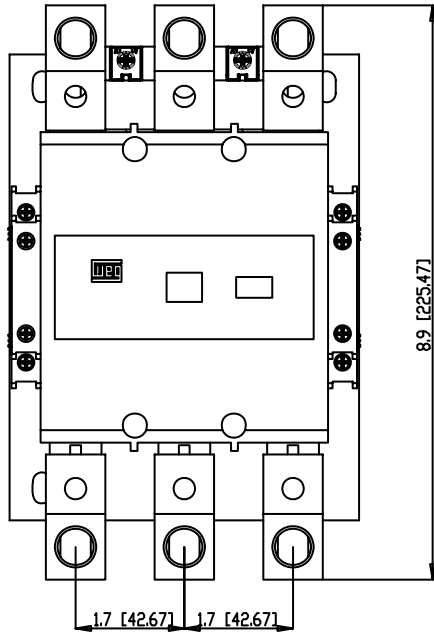
CWM112 - CWM150 + LW1-S300 (contactor with lugs)

- General Information
- Circuit Protection
- Disconnect Switches
- Motor Protectors
- Contactors**
- Overloads
- Enclosed Starters
- Relays
- Pushbuttons and Pilot Lights
- Terminal Blocks
- Power Factor Correction
- Appendix A
- Appendix B



Mechanical Drawings mm (in)

CWM180 + LW2-S300 (contactor with lugs)



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Disconnect Switches

Motor Protectors

Contactors

Overloads

Enclosed Starters

Relays

Pushbuttons and Pilot Lights

Terminal Blocks

Power Factor Correction

Appendix A

Appendix B

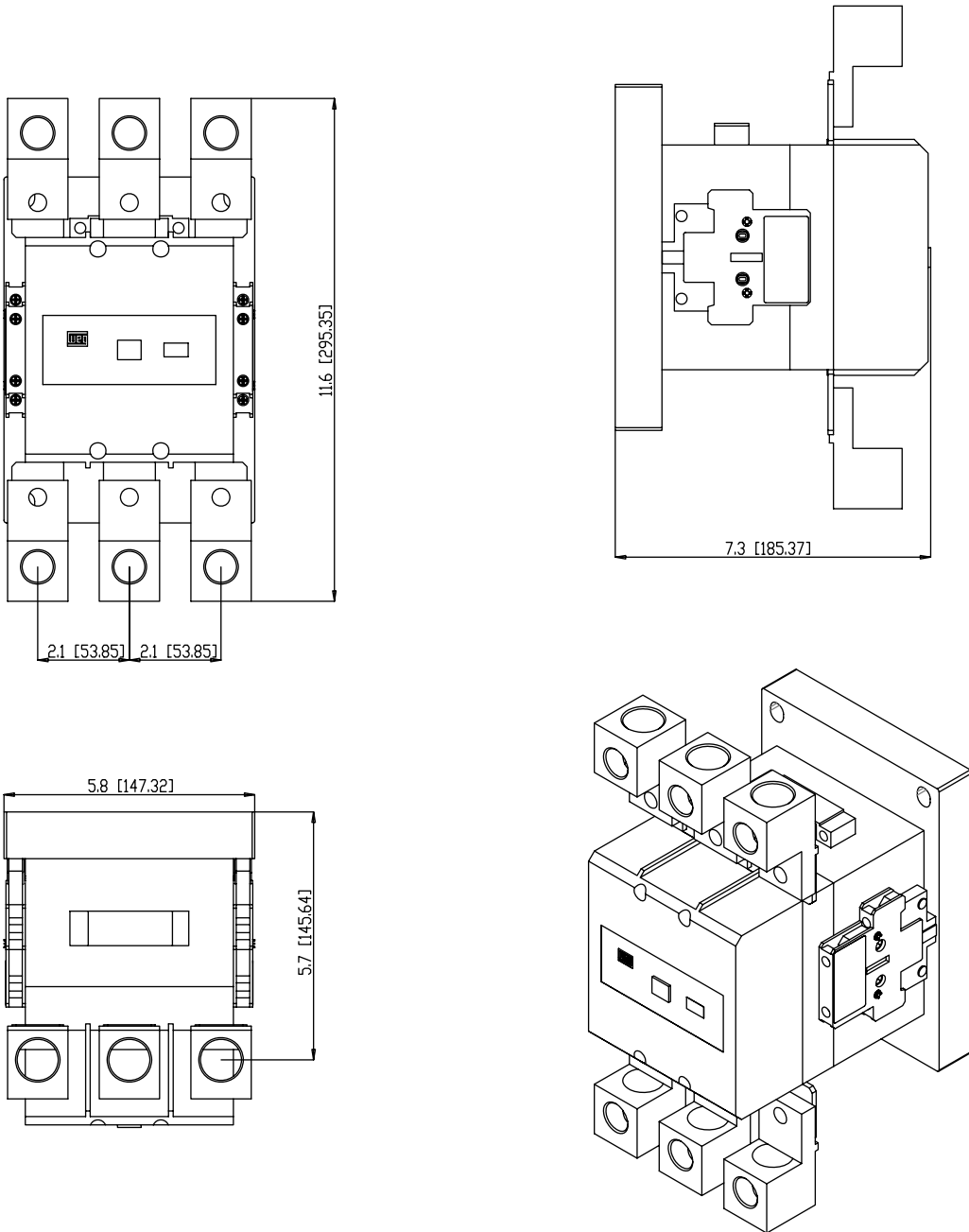
Contactors

CWM Series - IEC Standard Contactors

Mechanical Drawings mm (in)

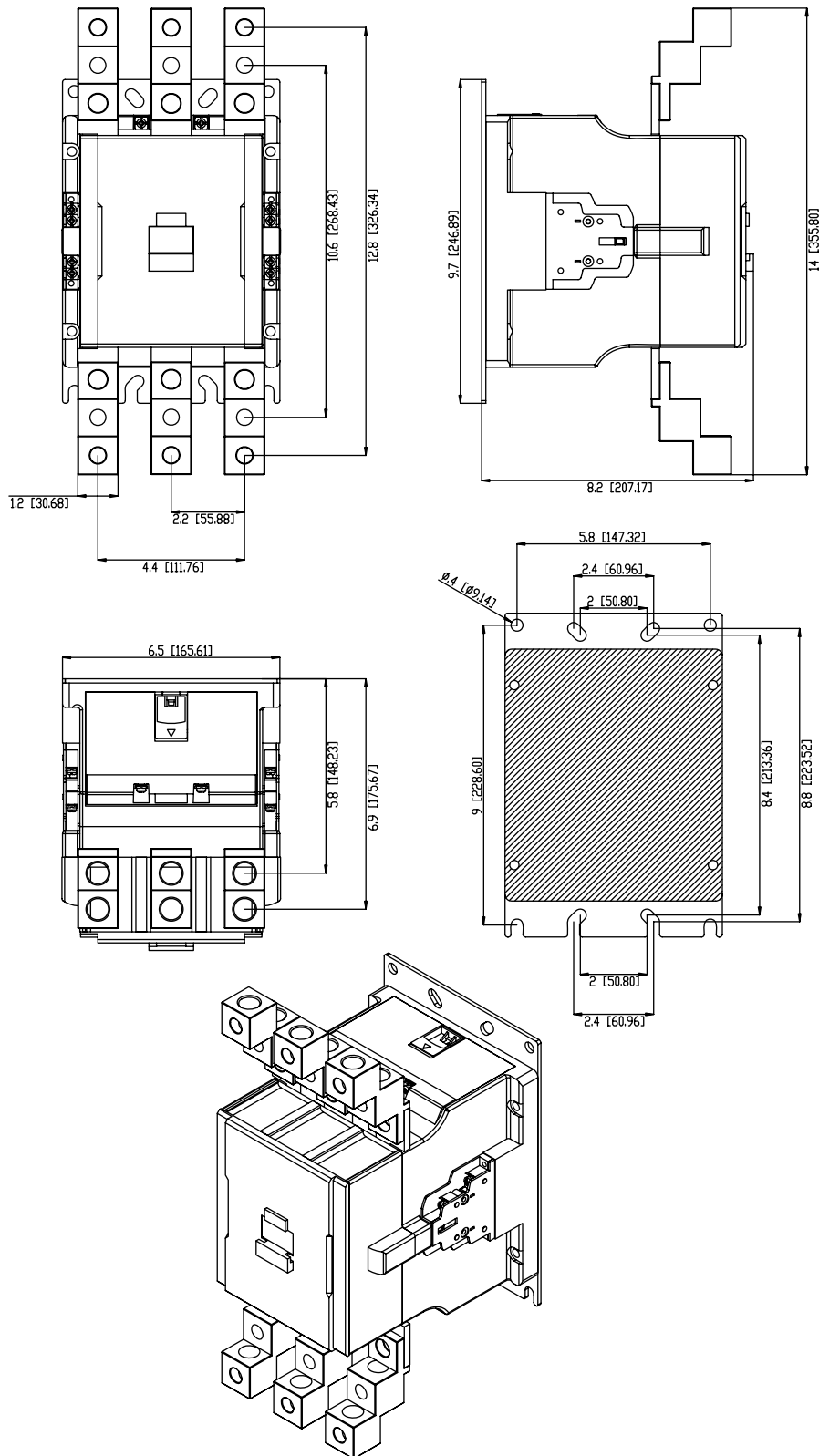
CWM250 + LW1-S600 (contactor with lugs)

- General Information
- Circuit Protection
- Disconnect Switches
- Motor Protectors
- Contactors**
- Overloads
- Enclosed Starters
- Relays
- Pushbuttons and Pilot Lights
- Terminal Blocks
- Power Factor Correction
- Appendix A
- Appendix B



Mechanical Drawings mm (in)

CWM400 + BMJ (contactor with lugs)



General Information

Circuit Protection

Disconnect Switches

Motor Protectors

Contactors

Overloads

Enclosed Starters

Relays

Pushbuttons and Pilot Lights

Terminal Blocks

Power Factor Correction

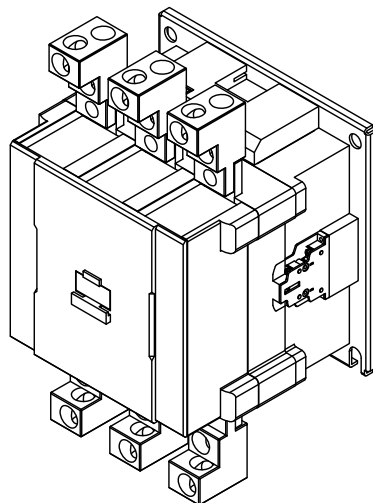
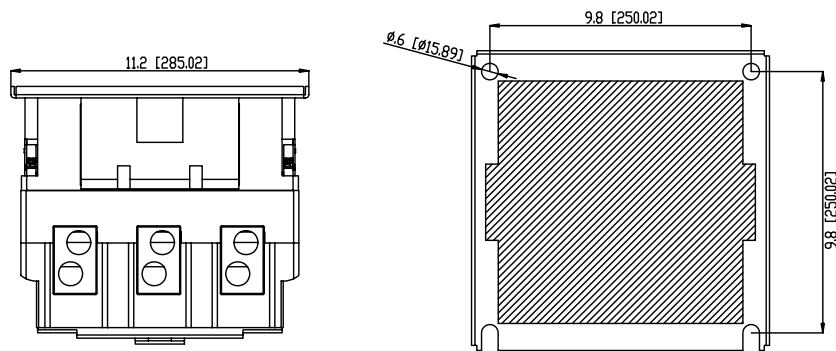
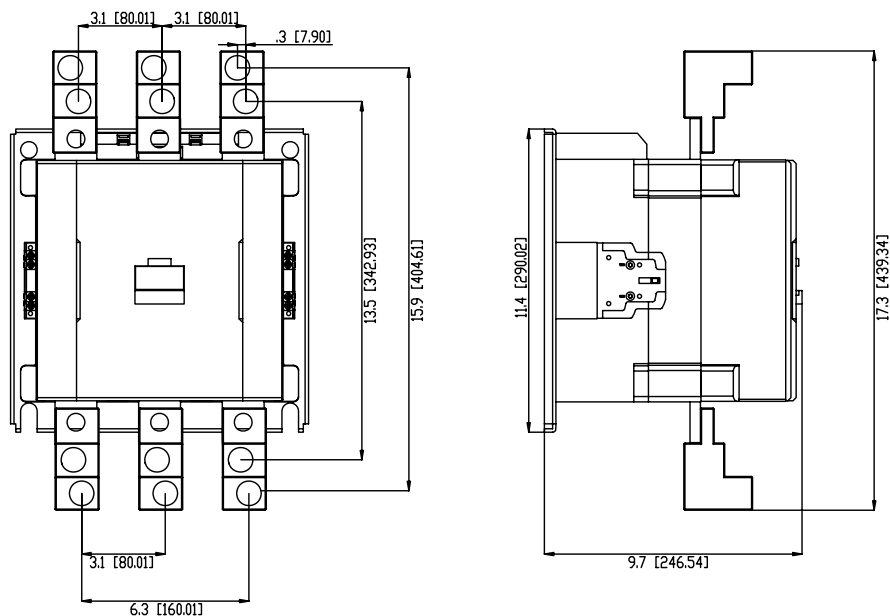
Appendix A

Appendix B

CWM Series - IEC Standard Contactors

Mechanical Drawings mm (in)

CWM630-CWM800 + BMJ (contactor with lugs)



General Information

Circuit Protection

Disconnect Switches

Motor Protectors

Contactors

Overloads

Enclosed Starters

Relays

Pushbuttons and Pilot Lights

Terminal Blocks

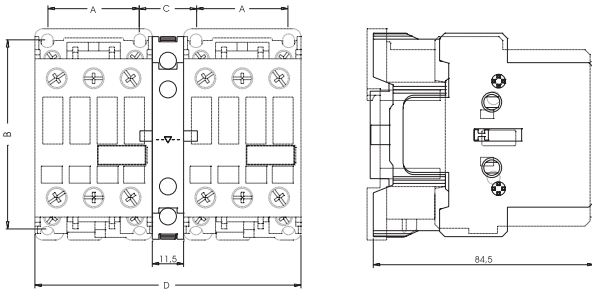
Power Factor Correction

Appendix A

Appendix B

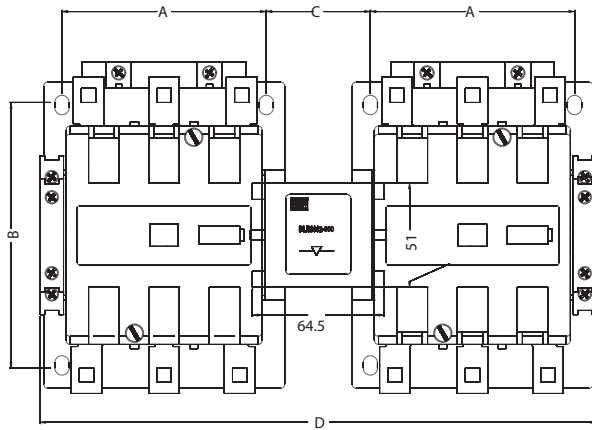
Reversing Contactors mm (in)

BLIM9-105



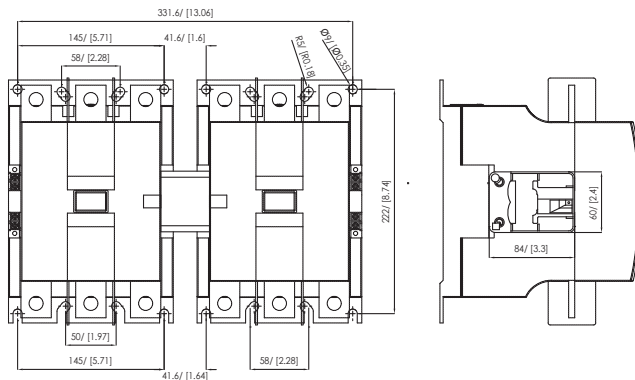
| Models | A | B | C | D |
|-------------|----------|------------|------------|-----------|
| CWM9...25 | 35 (1,4) | 72,5 (2,9) | 22 (0,9) | 102 (4) |
| CWM32...40 | 45 (1,8) | 79 (3,1) | 22 (0,9) | 122 (4,8) |
| CWM50...80 | 57 (2,2) | 90 (3,5) | 21 (0,8) | 144 (5,7) |
| CWM95...105 | 57 (2,2) | 90 (3,5) | 29,8 (1,2) | 153 (6) |

BLIM112-300

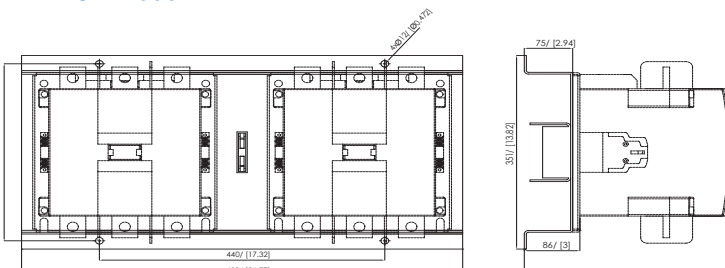


| Models | A | B | C | D |
|--------------|-----------|-----------|------------|--------------|
| CWM112...150 | 100 (3,9) | 130 (5,1) | 51 (2) | 272,5 (10,7) |
| CWM180 | 110 (4,3) | 160 (6,3) | 58,5 (2,3) | 303,5 (11,9) |
| CWM250...300 | 120 (4,7) | 180 (7,1) | 57 (2,2) | 325,4 (12,8) |

BLIM CWM400



BLIM CWM800



General Information

Circuit Protection

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Relays

Pushbuttons and Pilot Lights

Terminal Blocks

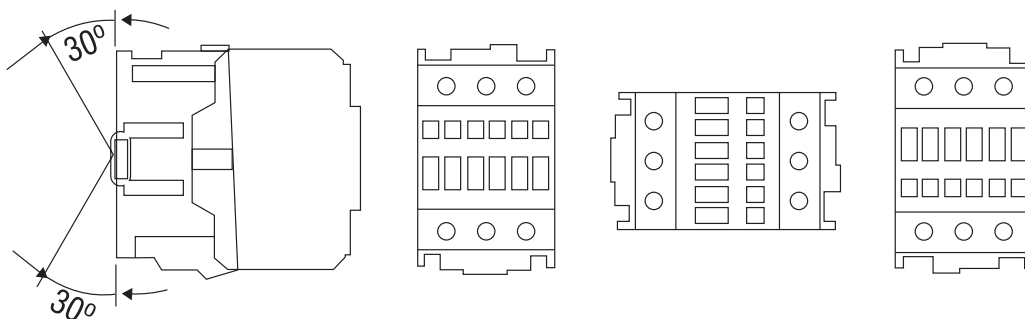
Power Factor Correction

Appendix A

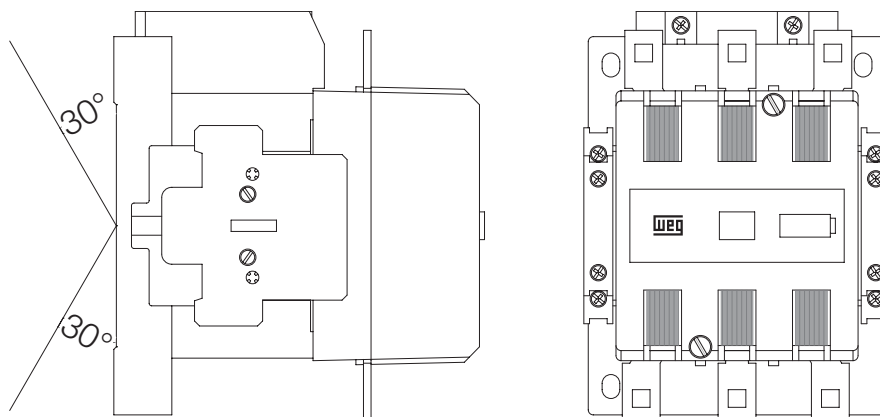
Appendix B

Mounting position¹

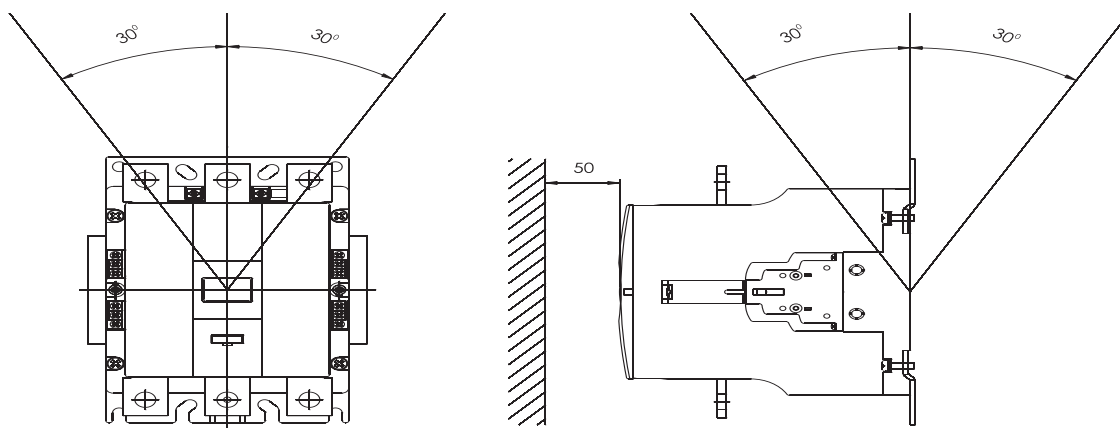
CWM9...105



CWM112...300



CWM400...800



Note: 1) Consult WEG if application requires a different mounting position

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