

# Table of Specifications

## Midi-Contactors



| Frame size   |                               |
|--|-------------------------------|
| Type   | Terminal type                 |
| Number of poles  |                               |
| Rated operational voltage, Ue                            |                               |
| Rated insulation voltage, Ui                             |                               |
| Rated frequency  |                               |
| Rated impulse withstand voltage, Uimp                    |                               |
| Maximum operating rate in operating cycles per hour(AC3) |                               |
| Durability   | Mechanical                    |
|  | Electrical                    |
| Current and power  | AC-1, Thermal current A       |
|  | AC-3 200/240V kW              |
|  | 380/440V kW                   |
|  | 500/550V kW                   |
|  | 690V kW                       |
| UL rating (50/60Hz)                                      | Continuous current A          |
|  | Single phase 110~120V HP      |
|  | 220~240V HP                   |
|  | 200~208V HP                   |
|  | Three phase 220~240V HP       |
|  | 440~480V HP                   |
| Size and weight  | NEMA size                     |
|  | Weight kg                     |
| Auxiliary(standard)                                      | AC control Size(W × H × D) mm |
|  | DC control Size(W × H × D) mm |
| Auxiliary  | Side mount                    |
|  | Front mount                   |



| 22AF                     |      |      |      |
|--------------------------|------|------|------|
| CC9                      | CC12 | CC18 | CC22 |
| Screw Only               |      |      |      |
| 3pole                    |      |      |      |
| 690V                     |      |      |      |
| 690V                     |      |      |      |
| 50/60Hz                  |      |      |      |
| 6kV                      |      |      |      |
| 1800 operations per hour |      |      |      |
| 15 mil. operations       |      |      |      |
| 2.5 mil. operations      |      |      |      |
| 25                       | 25   | 32   | 40   |
| 2.5                      | 3.5  | 4.5  | 5.5  |
| 11                       | 13   | 18   | 22   |
| 4                        | 5.5  | 7.5  | 11   |
| 9                        | 12   | 18   | 22   |
| 4                        | 7.5  | 7.5  | 15   |
| 7                        | 12   | 13   | 20   |
| 4                        | 7.5  | 7.5  | 15   |
| 6                        | 9    | 9    | 18   |
| 25                       | 25   | 40   | 40   |
| 0.5                      | 0.75 | 1    | 2    |
| 1.5                      | 2    | 3    | 3    |
| 2                        | 3    | 5    | 7.5  |
| 3                        | 5    | 7.5  | 10   |
| 5                        | 7.5  | 10   | 15   |
| 7.5                      | 10   | 15   | 20   |
| 00                       | 00   | 0    | 1    |
| 0.34                     |      |      |      |
| 45 × 73.5 × 86           |      |      |      |
| 0.51                     |      |      |      |
| 45 × 73.5 × 117.7        |      |      |      |
| GUA1, GUA2, GUA4         |      |      |      |
| GUA-1                    |      |      |      |
| GUA-2, GUA-4             |      |      |      |

| 40AF                     |      |
|--------------------------|------|
| CC32                     | CC40 |
| Screw Only               |      |
| 3pole                    |      |
| 690V                     |      |
| 1000V                    |      |
| 50/60Hz                  |      |
| 8kV                      |      |
| 1800 operations per hour |      |
| 12 mil. operations       |      |
| 2 mil. operations        |      |
| 50                       | 60   |
| 7.5                      | 11   |
| 32                       | 40   |
| 15                       | 18.5 |
| 32                       | 40   |
| 18.5                     | 22   |
| 28                       | 32   |
| 18.5                     | 22   |
| 20                       | 23   |
| 50                       | 60   |
| 2                        | 3    |
| 5                        | 7.5  |
| 7.5                      | 15   |
| 10                       | 15   |
| 20                       | 30   |
| 25                       | 30   |
| 1                        | 1    |
| 0.55                     |      |
| 69 × 83 × 93             |      |
| 0.77                     |      |
| 69 × 83 × 120            |      |
| GUA-1                    |      |
| GUA-2, GUA-4             |      |

Note) Minimum conduct current of Auxiliary contactor is DC 17V 5mA.

## GT Type Thermal Overload Relays



| Type                                  |                    |
|---------------------------------------|--------------------|
| Screws clamp terminals                |                    |
| Rated operational voltage, Ue         |                    |
| Rated insulation voltage, Ui          |                    |
| Rated impulse withstand voltage, Uimp |                    |
| Trip class                            |                    |
| Setting range                         |                    |
| Size and weight                       | Weight kg          |
|                                       | Size(W × H × D) mm |



| GT32         |  |
|--------------|--|
| ●            |  |
| 690V         |  |
| 690V         |  |
| 6kV          |  |
| 10A, 20      |  |
| 0.1~40A      |  |
| 0.17         |  |
| 45 × 75 × 90 |  |

| GT32         |  |
|--------------|--|
| ●            |  |
| 690V         |  |
| 690V         |  |
| 6kV          |  |
| 10A, 20      |  |
| 0.1~40A      |  |
| 0.17         |  |
| 45 × 75 × 90 |  |

# Table of Specifications



| 65AF                     |      |
|--------------------------|------|
| CC50                     | CC65 |
| Screw or Lug             |      |
| 3pole                    |      |
| 690V                     |      |
| 1000V                    |      |
| 50/60Hz                  |      |
| 8kV                      |      |
| 1800 operations per hour |      |
| 12 mil. operations       |      |
| 2 mil. operations        |      |
| 70                       | 100  |
| 15                       | 18,5 |
| 55                       | 65   |
| 22                       | 30   |
| 50                       | 65   |
| 30                       | 33   |
| 43                       | 60   |
| 30                       | 33   |
| 28                       | 35   |
| 70                       | 100  |
| 3                        | 5    |
| 10                       | 15   |
| 20                       | 25   |
| 25                       | 30   |
| 40                       | 50   |
| 50                       | 60   |
| 2                        | 2    |
| 1.05                     |      |
| 79 × 106 × 122           |      |
| 1.3                      |      |
| 79 × 106 × 149           |      |

| GUA-1        |  |
|--------------|--|
| GUA-2, GUA-4 |  |



| GT63          |
|---------------|
| •             |
| 690V          |
| 690V          |
| 6kV           |
| 10A, 20       |
| 4~65A         |
| 0.31/0.33     |
| 55 × 81 × 100 |



| 100AF                    |      |       |
|--------------------------|------|-------|
| CC75                     | CC85 | CC100 |
| Screw or Lug             |      |       |
| 3pole                    |      |       |
| 690V                     |      |       |
| 1000V                    |      |       |
| 50/60Hz                  |      |       |
| 8kV                      |      |       |
| 1800 operations per hour |      |       |
| 12 mil. operations       |      |       |
| 2 mil. operations        |      |       |
| 110                      | 135  | 160   |
| 22                       | 25   | 30    |
| 75                       | 85   | 105   |
| 37                       | 45   | 55    |
| 75                       | 85   | 105   |
| 37                       | 45   | 55    |
| 64                       | 75   | 85    |
| 37                       | 45   | 45    |
| 42                       | 45   | 65    |
| 110                      | 135  | 160   |
| 5                        | 7.5  | 10    |
| 15                       | 15   | 20    |
| 25                       | 30   | 30    |
| 30                       | 40   | 40    |
| 50                       | 60   | 75    |
| 60                       | 75   | 75    |
| 2                        | 3    | 3     |
| 1.93                     |      |       |
| 94 × 140 × 137           |      |       |
| 2.8                      |      |       |
| 94 × 140 × 174           |      |       |

| GUA-1        |  |  |
|--------------|--|--|
| GUA-2, GUA-4 |  |  |



| GT95          |
|---------------|
| •             |
| 690V          |
| 690V          |
| 6kV           |
| 10A, 20       |
| 7~100A        |
| 0.48/0.5      |
| 70 × 97 × 110 |

# Table of Specifications



| 400AF                    |        |                     |
|--------------------------|--------|---------------------|
| CC265*                   | CC330* | CC400*              |
| Screw Only               |        |                     |
| 3pole                    |        |                     |
| 690V                     |        |                     |
| 1000V                    |        |                     |
| 50/60Hz                  |        |                     |
| 8kV                      |        |                     |
| 1200 operations per hour |        |                     |
| 5 mil. operations        |        | 2.5 mil. operations |
| 1 mil. operations        |        | 0.5 mil. operations |
| 300                      | 350    | 450                 |
| 80                       | 90     | 125                 |
| 265                      | 330    | 400                 |
| 147                      | 160    | 200                 |
| 265                      | 330    | 400                 |
| 147                      | 160    | 225                 |
| 225                      | 280    | 350                 |
| 160                      | 200    | 250                 |
| 185                      | 225    | 300                 |
| 300                      | 350    | 450                 |
| -                        | -      | -                   |
| -                        | -      | -                   |
| 75                       | 100    | 125                 |
| 100                      | 125    | 150                 |
| 200                      | 250    | 300                 |
| 200                      | 250    | 300                 |
| 5                        | 5      | 5                   |

| 800AF                    |        |                     |
|--------------------------|--------|---------------------|
| CC500*                   | CC630* | CC800*              |
| Screw Only               |        |                     |
| 3pole                    |        |                     |
| 690V                     |        |                     |
| 1000V                    |        |                     |
| 50/60Hz                  |        |                     |
| 8kV                      |        |                     |
| 1200 operations per hour |        |                     |
| 2.5 mil. operations      |        | 0.5 mil. operations |
| 580                      | 660    | 900                 |
| 147                      | 190    | 220                 |
| 500                      | 630    | 800                 |
| 265                      | 330    | 440                 |
| 500                      | 630    | 800                 |
| 265                      | 330    | 500                 |
| 400                      | 500    | 720                 |
| 300                      | 400    | 500                 |
| 380                      | 420    | 630                 |
| 580                      | 660    | 900                 |
| -                        | -      | -                   |
| -                        | -      | -                   |
| 150                      | 200    | 200                 |
| 200                      | 250    | 300                 |
| 400                      | 500    | 600                 |
| 400                      | 500    | 600                 |
| 6                        | 6      | 7                   |

9.2  
163 × 243 × 198

22.4  
285 × 312 × 242

| 2a2b |
|------|
| -    |
| -    |

| 2a2b |
|------|
| -    |
| -    |



| GT400           |
|-----------------|
| ●               |
| 690V            |
| 690V            |
| 6kV             |
| 10A, 20         |
| 85~400A         |
| 2.6             |
| 151 × 171 × 198 |

| GT800           |
|-----------------|
| ●               |
| 690V            |
| 690V            |
| 6kV             |
| 10A, 20         |
| 200~800A        |
| 11.5            |
| 360 × 530 × 212 |

Specifications are subject to change without notice.

# Type Numbering System

## Midi-Contactor

|  |  |   |  |   |   |  |   |
|--|--|---|--|---|---|--|---|
| <b>CC</b><br>Magnetic 3-pole<br>Midi-Contactor | <b>9</b><br>Amperage Size  | <b>BLANK</b><br>Type<br>3-pole<br>/4-4-pole | <b>S</b><br>Terminal Type<br>S - Screw<br>L - Lug (>50A) | <b>A</b><br>Coil Type<br>A - AC type<br>D - DC type | <b>120</b><br>Coil Voltage<br>24 - 24V<br>120 - 120V<br>&<br>600 - 600V | <b>BLANK</b><br>AC Coil<br>Frequency<br>- 50/60 Hz<br>50Hz - 50Hz only<br>60Hz - 60Hz only | <b>BLANK</b><br>Auxiliary<br>Contact s<br>- standard<br>arrangement<br><b>NOAUX</b><br>- no aux.<br>contact (>=32A) |
|  | 9 - 9A<br>12 - 12A<br>18 - 18A<br>22 - 22A<br>32 - 32A<br>40 - 40A<br>50 - 50A<br>65 - 65A<br>75 - 75A<br>85 - 85A<br>100 - 100A |   |  |   |   |  |   |

## Overload

|   |   |   |  |  |
|---|---|---|--|--|
| <b>GT</b><br>Bimetallic<br>Midi-Overload  | <b>32</b><br>Frame Size   | <b>BLANK</b><br>Class<br>class 10<br>L - class 20   | <b>S</b><br>Terminal Type<br>(Must match<br>contactor<br>number)<br>S - Screw<br>L - Lug (>35A)  | <b>0.16A</b><br>Setting Ranges<br>(Use upper<br>limit in part)   |
|   | 32 - 9, 12, 18A<br>22, 32, 40A<br>65 - 50, 65A<br>75 - 75, 85, 100A |   |  | 0.1 ~ 0.16A<br>0.16 ~ 0.25A<br>0.25 ~ 0.4A<br>0.4 ~ 0.63A<br>0.63 ~ 1A<br>1 ~ 1.6A<br>1.6 ~ 2.5A<br>2.5 ~ 4A<br>4 ~ 6A<br>5 ~ 8A<br>6 ~ 9A<br>7 ~ 10A<br>9 ~ 13A<br>12 ~ 18A<br>16 ~ 22A<br>18 ~ 25A<br>22 ~ 32A<br>24 ~ 36A<br>28 ~ 40A<br>34 ~ 50A<br>45 ~ 65A<br>54 ~ 75A<br>63 ~ 85A<br>70 ~ 95A<br>80 ~ 100A<br>(Setting Range Guide) |
| <b>CGE</b><br>Electronic<br>Midi Overload | <b>22</b><br>Frame Size   | <b>3P</b><br>Protection<br>Direct Mount<br>22 and 40AF<br>2P - 2-Pole<br>3P - 3-Pole<br>3PR - 3-pole<br>Separate Mount<br>All CGE sizes<br>2S - 2-Pole<br>3S - 3-Pole<br>3SR - 3-Pole | <b>22A</b><br>Setting Range<br>(Use upper<br>limit in part)<br><b>CGE22</b><br>0.3 ~ 1.5A<br>1 ~ 5A<br>4.4 ~ 22A<br><b>CGE40</b><br>4 ~ 20A<br>8 ~ 40A<br><b>CGE80</b><br>16 ~ 80A | CGE22<br>CGE40<br>CGE80  |
|   | 22 - 9, 12, 18, 22A<br>40 - 32, 40A<br>80 - 50, 65, 75, 85A         |   |  | Tunnel Type<br>22 and 40AF<br>2T - 2-Pole<br>3T - 3-Pole<br>3TR - 3-Pole   |

## Optional Accessories

### Auxiliary contact unit



| Version | Contact composition |
|---------|---------------------|
| GUA1    | Side mount          |
| GUA2    | Front mount(2P)     |
| GUA4    | Front mount(4P)     |
|         | 11 1NO+1NC          |
|         | 20 2NO              |
|         | 02 2NC              |
|         | 40 4NO              |
|         | 31 3NO+1NC          |
|         | 22 2NO+2NC          |
|         | 13 1NO+3NC          |
|         | 04 4NC              |

### Surge absorber



| Composition and voltage      |
|------------------------------|
| 1 Varistor+RC AC/DC 24~48V   |
| 2 Varistor+RC AC/DC 100~125V |
| 3 Varistor+RC AC/DC 200~240V |
| 4 Varistor+RC AC 380~440V    |
| 5 Varistor+RC AC 24~48V      |
| 6 Varistor+RC AC 100~125V    |
| 11 Varistor AC 200~240V      |
| 12 Varistor DC 24~48V        |
| 13 Varistor DC 100~125V      |
| 14 Varistor DC 200~220V      |
| 22 RC AC 100~125V            |

Note) See page 52 for details.

### Interlock unit



| Contact composition |
|---------------------|
| 02 2NC              |

### Wire kit for Interlocking



| Frame size |
|------------|
| 22 22AF    |
| 32 32AF    |
| 63 63AF    |
| 95 95AF    |

### Separate mounting unit (For relay)



| Frame size |
|------------|
| 32 32AF    |
| 63 63AF    |
| 95 95AF    |
| 150 150AF  |

### Remote reset unit (For relay)

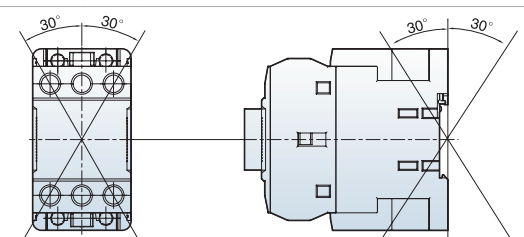


| Cable length |
|--------------|
| 16 400       |
| 20 500       |
| 24 600       |

# Environment / Connections



## Environment

|  |   |
|--|---|
| Standards  | IEC/EN 60947-1, IEC/EN 60947-4-1, UL508, K60947                                     |
| Certifications   | CE, UL  |
| Rated insulation voltage (Ui)                                  | 1000V   |
| Rated impulse withstand voltage (Uimp)                         | 8kV   |
| Degree of protection   | IP20 (Conforming to IEC60529)   |
| Ambient air temperature  | Storage: -50° C ~ +80° C<br>Operation: -5° C ~ +60° C                               |
| Operating altitude   | 3000m (8900ft)  |
| Operating positions  |  |
| Shock resistance<br>(1/2 sine wave =11ms)                      | Opened: 8G<br>Closed: 10G   |
| Vibration resistance (Conforming to IEC68-2-6)<br>(5...300 Hz) | Opened: 2G<br>Closed: 4G  |
| Flame resistance   | Conforming to UL 94: Vo<br>Conforming to IEC 695-2-1: 960° C                        |

## Connections

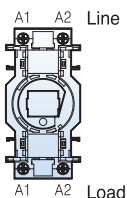
| Frame     | Wire type | Main Terminal Size | Wire types      |                     |                     |         |     |      | Torque  |      |
|-----------|-----------|--------------------|-----------------|---------------------|---------------------|---------|-----|------|---------|------|
|           |           |                    | (AWG / mm²)     |                     |                     | mm(max) |     |      | [lb-in] | [Nm] |
| CC9       |           | M4                 | 18~10 / 1~6     | 18~10 / 1~6         | 18~10 / 1~6         | 9.6     | 20  | 2.25 |         |      |
| CC12      |           |                    | 18~10 / 1~6     | 16~10 / 1~6         | 16~10 / 1~6         |         |     |      |         |      |
| CC18      |           |                    | 18~10 / 1~6     | 16~8 / 1.5~10       | 16~8 / 1.5~10       |         |     |      |         |      |
| CC22      |           | M5                 | 18~10 / 1~6     | 14~8 / 2.5~10       | 14~8 / 2.5~10       | 12.8    | 35  | 4    |         |      |
| CC32      |           |                    | 18~10 / 1~6     | 12~8 / 2.5~10       | 12~8 / 2.5~10       |         |     |      |         |      |
| CC40      |           | M6                 | -               | 10~4 / 6~25         | 10~4 / 6~25         | 14      | 35  | 4    |         |      |
| CC50      |           |                    | -               | 8~3 / 10~35         | 8~3 / 10~35         |         |     |      |         |      |
| CC65      |           |                    | -               | 8~2 / 10~35         | 8~2 / 10~35         |         |     |      |         |      |
| CC75      |           | M8                 | -               | 8~1/0 / 10~50       | 8~1/0 / 10~50       | 17      | 45  | 5.1  |         |      |
| CC85      |           |                    | -               | 8~2/0 / 10~70       | 8~2/0 / 10~70       |         |     |      |         |      |
| CC100     |           | M8                 | -               | 3~2/0 / 35~70       | 3~2/0 / 35~70       | 24.5    | 80  | 9.1  |         |      |
| CC110     |           |                    | -               | 3~4/0 / 35~95       | 3~4/0 / 35~95       |         |     |      |         |      |
| CC130     |           | M8                 | -               | 3~2/0 / 35~70       | 3~2/0 / 35~70       | 24.5    | 80  | 9.1  |         |      |
| CC150     |           |                    | -               | 3~4/0 / 35~95       | 3~4/0 / 35~95       |         |     |      |         |      |
| CC9~150   |           | M4                 | 20~14 / 0.5~2.5 | 18~12 / 0.75~2.5    | 18~12 / 0.75~2.5    | 7.6     | 15  | 1.75 |         |      |
| CC185     |           | M10                | -               | 1~4/0 / 50~95       | 1~4/0 / 50~95       | 25      | 130 | 14.7 |         |      |
| CC225     |           |                    | -               | 1/0~300 / 50~150    | 1/0~300 / 50~150    |         |     |      |         |      |
| CC265     |           | M12                | -               | 3/0~500 / 95~240    | 3/0~500 / 95~240    | 30      | 200 | 22.6 |         |      |
| CC330     |           |                    | -               | 4/0~500 / 95~240    | 4/0~500 / 95~240    |         |     |      |         |      |
| CC400     |           | M16                | -               | 350~700 / 185~185x2 | 350~700 / 185~185x2 | 40      | 500 | 26.5 |         |      |
| CC500     |           |                    | -               | 350~800 / 185~240x2 | 350~800 / 185~240x2 |         |     |      |         |      |
| CC630     |           | M16                | -               | 600~2000            | -                   | 40      | 500 | 26.5 |         |      |
| CC800     |           |                    | -               | 1700~Busbar         | -                   |         |     |      |         |      |
| CC185~800 |           | M4                 | 20~14 / 0.5~2.5 | 18~12 / 0.75~2.5    | 18~12 / 0.75~2.5    | 7.6     | 15  | 1.75 |         |      |

a data sheet and specify products, visit [www.CarloGavazziOnline.com](http://www.CarloGavazziOnline.com)

# Control Coil Characteristics



| Frame size               |                      | 22AF   | 40AF      | 65AF      | 100AF       | 150AF            |
|--------------------------|----------------------|--|-----------|-----------|-------------|------------------|
| Type                     |                      | CC9  | CC32      | CC50      | CC75        | CC130            |
|                          |                      | CC12   | CC40      | CC65      | CC85        | CC150            |
|                          |                      | CC12   |           |           | CC100       |                  |
|                          |                      | CC22   |           |           |             |                  |
| <b>AC coil</b>           |                      |  |           |           |             |                  |
| Control voltage          | [Uc]                 | 24, 32, 36, 42, 48, 80, 100, 110, 220, 230, 240, 380, 400, 415, 440, 500, 550V |           |           |             | 24, 48, 110,     |
|                          | 50Hz [V]             | 24, 48, 100, 110, 120, 200, 208, 220, 230, 240, 277, 380, 440, 480, 600V       |           |           |             | 220, 300,        |
|                          | 60Hz [V]             | 24, 48, 100, 110, 120, 200, 220, 230, 240, 380, 415, 440, 500, 550V            |           |           |             | 400, 500         |
| Voltage limit            | [Uc]                 |  |           |           |             |                  |
|                          | Pick-up              | 85 ~110% (50Hz)  |           |           |             |                  |
|                          | Drop-out             | 85 ~110% (60Hz)  |           |           |             |                  |
| Coil consumption at 20°C |                      | 30 ~ 60%   |           |           |             |                  |
|                          | AC 220V Inrush [VA]  | 58/56  | 53/50     | 110/104   | 229/216     | 108/104          |
|                          | 50/60Hz Holding [VA] | 9.0/6.0  | 12.0/9.0  | 13.0/10.0 | 17.0/13.0   | 18.0/21.0        |
| Heat dissipation         | [W]                  | 2.1/1.5  | 2.7/2.2   | 2.8/2.4   | 5.4/4.7     | 2.7/3.6          |
| Operating time           |                      |  |           |           |             |                  |
|                          | Closing [ms]         | 12 ... 22  | 12 ... 22 | 12 ... 22 | 15 ... 30   | 20 ... 40        |
|                          | Opening [ms]         | 4 ... 19   | 4 ... 19  | 4 ... 19  | 10 ... 30   | 60 ... 70        |
| <b>DC coil</b>           |                      |  |           |           |             |                  |
| Control voltage          | [Uc]                 | 12, 20, 24, 48, 60, 80, 100, 110, 125, 200, 220, 250                           |           |           |             | 24, 48, 110, 220 |
| Voltage limit            | [Uc]                 |  |           |           |             |                  |
|                          | Pick-up              | 70 ~ 110%  |           |           |             |                  |
|                          | Drop-out             | 10 ~ 30%   |           |           |             |                  |
| Coil consumption at 20°C |                      |  |           |           |             |                  |
|                          | DC 110V Inrush [W]   | 9  | 7         | 9         | 18          | 213              |
|                          | Holding [W]          | 9  | 7         | 9         | 18          | 7.5              |
| Time constant (L/R)      | [ms]                 | 28   | 28        | 65        | 75          |                  |
| Operating time           |                      |  |           |           |             |                  |
|                          | Closing [ms]         | 35 ... 50  | 50 ... 65 | 50 ... 65 | 100 ... 120 | 70 ... 80        |
|                          | Opening [ms]         | 4 ... 19   | 4 ... 19  | 4 ... 19  | 10 ... 25   | 60 ... 70        |



Note) A1(A2) in line side is internally connected to A1(A2) in load side.

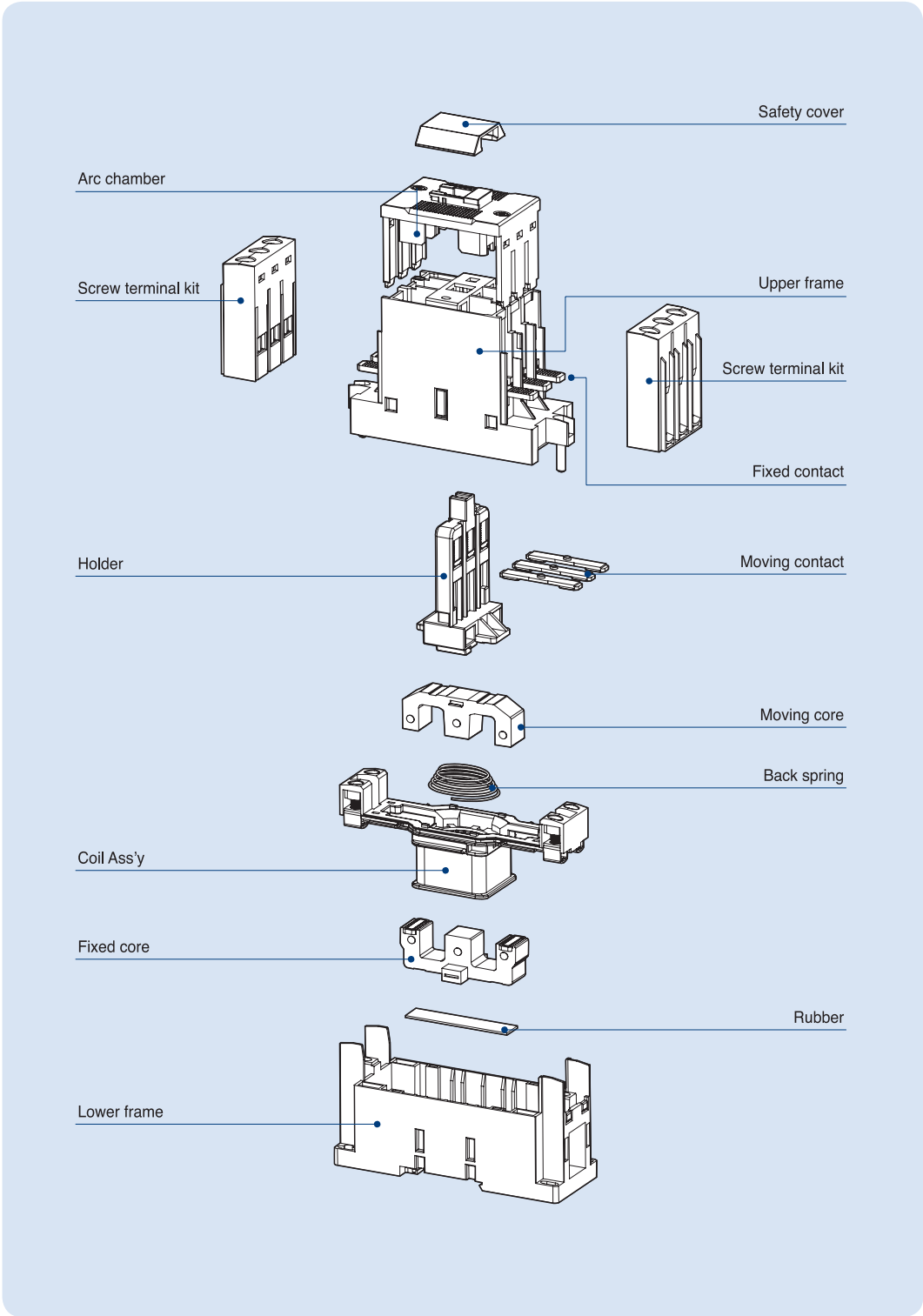
To instantly view a data sheet and specify products, visit [www.GavazziOnline.com](http://www.GavazziOnline.com)

# Control Coil Characteristics



| Frame size               | 225AF                        | 400AF  | 800AF  |
|--------------------------|------------------------------|--|--|
| Type                     | <b>CC185</b><br><b>CC225</b> | <b>CC265</b><br><b>CC330</b><br><b>CC400</b> | <b>CC500</b><br><b>CC630</b><br><b>CC800</b> |
| <b>AC/DC common coil</b> |                              |  |  |
| Control voltage [Uc]     |                              |  |  |
| AC/DC                    | 24/24                        | -  | -  |
| AC/DC                    | 48/48                        | -  | 100/100                                      |
| AC/DC                    | 100~240/100~220              | 100~240/100~220                              | 200/200                                      |
| AC                       | 300                          | 300  | 300  |
| AC                       | 400                          | 400  | 400  |
| AC                       | 500                          | 500  | 500  |
| Voltage limit [Uc]       |                              |  |  |
| Pick-up                  |                              | 86~110%                                      |  |
| Drop-out                 |                              | 30~60%                                       |  |
| Coil consumption at 20°C |                              |  |  |
| AC 220V Inrush [VA]      | 380                          | 571  | 1000   |
| 50/60Hz Holding [VA]     | 11.6                         | 14   | 29   |
| Heat dissipation [W]     | 4.7                          | 5  | 7.8  |
| Operating time           |                              |  |  |
| Closing [ms]             | 70                           | 55   | 75   |
| Opening [ms]             | 70                           | 55   | 75   |

# Internal Structure





# Contactors (22AF)

## Description

- 3-pole(NO) main contact
- Finger proof design
- DIN rail or screw mountable
- AC or DC control in different physical size
- Front/side mountable accessories available
- Direct mountable overload relay available Rating
- 1NO1NC Auxiliary contact built-in as standard.

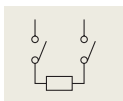


## Rating

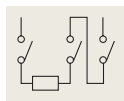
| Contactor type                    |                                  |                 | CC9                  |    | CC12   |    | CC18   |    | CC22   |    |    |
|-----------------------------------|----------------------------------|-----------------|----------------------|----|--------|----|--------|----|--------|----|----|
|                                   |                                  |                 | kW                   | A  | kW     | A  | kW     | A  | kW     | A  |    |
| AC duty                           | AC3                              | 200/240V        | 2,5                  | 11 | 3,5    | 13 | 4,5    | 18 | 5,5    | 22 |    |
|                                   |                                  | 380/440V        | 4                    | 9  | 5,5    | 12 | 7,5    | 18 | 11     | 22 |    |
|                                   |                                  | 500/550V        | 4                    | 7  | 7,5    | 12 | 7,5    | 13 | 15     | 20 |    |
|                                   |                                  | 690V            | 4                    | 5  | 7,5    | 9  | 7,5    | 9  | 15     | 18 |    |
|                                   | AC4                              | 200/240V        | 1,5                  | 8  | 2,2    | 11 | 3,7    | 16 | 3,7    | 18 |    |
|                                   |                                  | 380/440V        | 2,2                  | 6  | 4      | 9  | 4      | 11 | 5,5    | 13 |    |
| AC1                               |                                  | -               | 25                   | -  | 25     | -  | 32     | -  | 40     |    |    |
| DC1 duty<br>(L/R=1ms)             | 2-pole                           | 24V             | -                    | 18 | -      | 18 | -      | 18 | -      | 32 |    |
|                                   |                                  | in series       | 48V                  | -  | 17     | -  | 17     | -  | 17     | -  | 30 |
|                                   |                                  | 110V            | -                    | 12 | -      | 12 | -      | 12 | -      | 23 |    |
|                                   | 3-pole                           | 24V             | -                    | 20 | -      | 20 | -      | 20 | -      | 32 |    |
|                                   |                                  | in series       | 48V                  | -  | 20     | -  | 20     | -  | 20     | -  | 32 |
|                                   |                                  | 110V            | -                    | 15 | -      | 15 | -      | 15 | -      | 27 |    |
| DC 2,4 duty<br>(L/R=15ms)         | 2-pole                           | 24V             | -                    | 15 | -      | 15 | -      | 15 | -      | 25 |    |
|                                   |                                  | in series       | 48V                  | -  | 12     | -  | 12     | -  | 12     | -  | 20 |
|                                   |                                  | 110V            | -                    | 8  | -      | 8  | -      | 8  | -      | 15 |    |
|                                   | 3-pole                           | 24V             | -                    | 18 | -      | 18 | -      | 18 | -      | 30 |    |
|                                   |                                  | in series       | 48V                  | -  | 15     | -  | 15     | -  | 15     | -  | 30 |
|                                   |                                  | 110V            | -                    | 12 | -      | 12 | -      | 12 | -      | 20 |    |
| Directly mountable Overload relay |                                  |                 | <b>GT32</b>          |    |        |    |        |    |        |    |    |
| Conductor size (solid, stranded)  | AWG                              |                 | 16~10                |    | 16~8   |    | 14~8   |    | 14~8   |    |    |
|                                   | (the max. number of conducts: 2) | mm <sup>2</sup> | 1,5~4                |    | 1,5~10 |    | 2,5~10 |    | 2,5~10 |    |    |
| Conductor type                    |                                  |                 | 65/75°C Cu-wire only |    |        |    |        |    |        |    |    |



## Coil Voltage



2-pole in series



3-pole in series

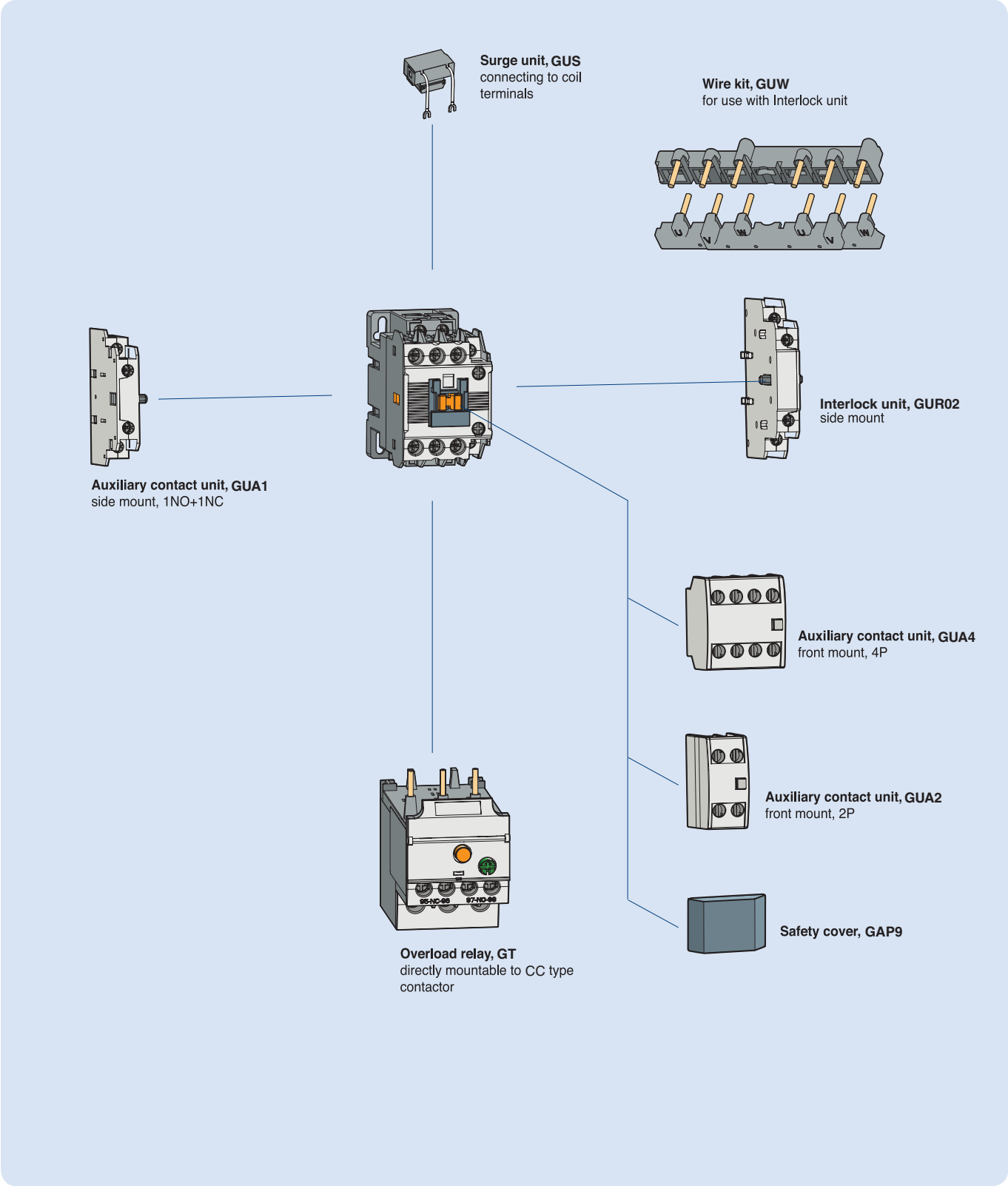
|    |         |   |
|----|---------|---|
| AC | 50Hz    | 24, 32, 42, 48, 80, 100, 110, 220, 230, 240, 380, 400, 500, 550V    |
|    | 60Hz    | 24, 48, 110, 110, 12, 200, 208, 220, 230, 240, 277, 380, 480, 600V  |
|    | 50/60Hz | 24, 48, 100, 110, 120, 200, 220, 230, 240, 380, 415, 440, 500, 550V |
| DC | DC      | 12, 20, 24, 48, 60, 80, 100, 110, 125, 200, 220, 250V               |

### Certification

- CE(IEC)
- UL508

# Contactors (22AF)

## Accessories



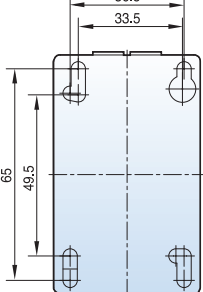
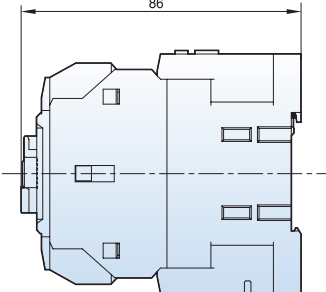
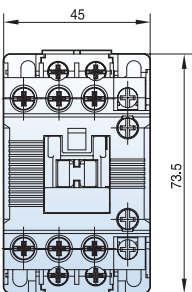
# Rated Short Breaking Capacity of Installation

| Manual Motor Starter                                 | Adjustment Range (A) | Manual Motor Controller Group Installation |           |           | Applied Contactor (GC Series) | Applied Contactor (CC Series) |
|--|----------------------|--|-----------|-----------|-------------------------------|-------------------------------|
|  |                      | Short Circuit Rating(KAIC)                 |           |           |                               |                               |
|  |                      | 240V                                       | 480Y/277V | 600Y/347V |                               |                               |
| <b>32AF Rotary operation, standard interruption</b>  |                      |  |           |           |                               |                               |
| GMS-32H-0.16   | 0.1~0.16             | 100  | 65        | 25        | GC9                           | CC9                           |
| GMS-32H-0.25   | 0.16~0.25            | 100  | 65        | 25        | GC9                           | CC9                           |
| GMS-32H-0.4  | 0.25~0.4             | 100  | 65        | 25        | GC9                           | CC9                           |
| GMS-32H-0.63   | 0.4~0.63             | 100  | 65        | 25        | GC9                           | CC9                           |
| GMS-32H-1  | 0.63~1               | 100  | 65        | 25        | GC9                           | CC9                           |
| GMS-32H-1.6  | 1~1.6                | 100  | 65        | 25        | GC9                           | CC9                           |
| GMS-32H-2.5  | 1.6~2.5              | 100  | 65        | 25        | GC12                          | CC12                          |
| GMS-32H-4  | 2.5~4                | 100  | 65        | 25        | GC12                          | CC12                          |
| GMS-32H-6  | 4~6                  | 100  | 65        | 25        | GC18                          | CC18                          |
| GMS-32H-8  | 5~8                  | 100  | 65        | 10        | GC18                          | CC18                          |
| GMS-32H-10   | 6~10                 | 100  | 65        | 10        | GC18                          | CC18                          |
| GMS-32H-13   | 9~13                 | 100  | 65        | 10        | GC25                          | CC22                          |
| GMS-32H-17   | 11~17                | 100  | 30        | 10        | GC25                          | CC22                          |
| GMS-32H-22   | 14~22                | 100  | 30        | 10        | GC25                          | CC22                          |
| GMS-32H-26   | 18~26                | 100  | 30        | 10        | GC32                          | CC32                          |
| GMS-32H-32   | 22~32                | 100  | 30        | 10        | GC32                          | CC32                          |
| <b>63AF Rotary operation, standard interruption</b>  |                      |  |           |           |                               |                               |
| GMS-63S-10   | 6~10                 | 100  | 50        | 10        | GC35                          | CC50                          |
| GMS-63S-13   | 9~13                 | 100  | 50        | 10        | GC35                          | CC50                          |
| GMS-63S-17   | 11~17                | 100  | 40        | 10        | GC35                          | CC50                          |
| GMS-63S-22   | 14~22                | 100  | 40        | 10        | GC35                          | CC50                          |
| GMS-63S-26   | 18~26                | 100  | 40        | 10        | GC35                          | CC50                          |
| GMS-63S-32   | 22~32                | 100  | 40        | 10        | GC35                          | CC50                          |
| GMS-63S-40   | 28~40                | 100  | 40        | 10        | GC40                          | CC50                          |
| GMS-63S-50   | 34~50                | 100  | 40        | 10        | GC50                          | CC50                          |
| GMS-63S-63   | 45~63                | 100  | 40        | 10        | GC63                          | CC65                          |
| GMS-63S-65   | 47~65                | 100  | 40        | 10        | —                             | CC65                          |
| <b>63AF Rotary operation, High interruption</b>      |                      |  |           |           |                               |                               |
| GMS-63H-10   | 6~10                 | 100  | 65        | 25        | GC35                          | CC50                          |
| GMS-63H-13   | 9~13                 | 100  | 65        | 25        | GC35                          | CC50                          |
| GMS-63H-17   | 11~17                | 100  | 50        | 10        | GC35                          | CC50                          |
| GMS-63H-22   | 14~22                | 100  | 50        | 10        | GC35                          | CC50                          |
| GMS-63H-26   | 18~26                | 100  | 50        | 10        | GC35                          | CC50                          |
| GMS-63H-32   | 22~32                | 100  | 50        | 10        | GC35                          | CC50                          |
| GMS-63H-40   | 28~40                | 100  | 50        | 10        | GC40                          | CC50                          |
| GMS-63H-50   | 34~50                | 100  | 50        | 10        | GC50                          | CC50                          |
| GMS-63H-63   | 45~63                | 100  | 50        | 10        | GC63                          | CC65                          |
| GMS-63H-65   | 47~65                | 100  | 40        | 10        | —                             | CC65                          |
| <b>100AF Rotary operation, Standard interruption</b> |                      |  |           |           |                               |                               |
| GMS-100S-17  | 11~17                | 100  | 50        | 10        | GC65                          | CC75                          |
| GMS-100S-22  | 14~22                | 100  | 50        | 10        | GC65                          | CC75                          |
| GMS-100S-26  | 18~26                | 100  | 50        | 10        | GC65                          | CC75                          |
| GMS-100S-32  | 22~32                | 100  | 50        | 10        | GC65                          | CC75                          |
| GMS-100S-40  | 28~40                | 100  | 50        | 10        | GC65                          | CC75                          |
| GMS-100S-50  | 34~50                | 100  | 50        | 10        | GC65                          | CC75                          |
| GMS-100S-63  | 45~63                | 100  | 40        | 10        | GC65                          | CC75                          |
| GMS-100S-75  | 55~75                | 100  | 40        | 10        | GC75                          | CC75                          |
| GMS-100S-90  | 70~90                | 100  | 40        | 10        | GC85                          | CC85                          |
| GMS-100S-100   | 80~100               | 100  | 40        | 10        | GC95                          | CC100                         |
| <b>100AF Rotary operation, High interruption</b>     |                      |  |           |           |                               |                               |
| GMS-100H-17  | 11~17                | 100  | 65        | 25        | GC65                          | CC75                          |
| GMS-100H-22  | 14~22                | 100  | 65        | 20        | GC65                          | CC75                          |
| GMS-100H-26  | 18~26                | 100  | 65        | 20        | GC65                          | CC75                          |
| GMS-100H-32  | 22~32                | 100  | 65        | 20        | GC65                          | CC75                          |
| GMS-100H-40  | 28~40                | 100  | 65        | 20        | GC65                          | CC75                          |
| GMS-100H-50  | 34~50                | 100  | 65        | 20        | GC65                          | CC75                          |
| GMS-100H-63  | 45~63                | 100  | 50        | 10        | GC65                          | CC75                          |
| GMS-100H-75  | 55~75                | 100  | 50        | 10        | GC75                          | CC75                          |
| GMS-100H-90  | 70~90                | 100  | 50        | 10        | GC85                          | CC85                          |
| GMS-100H-100   | 80~100               | 100  | 50        | 10        | GC95                          | CC100                         |

Specifications are subject to change without notice.

# Contactors (22AF)

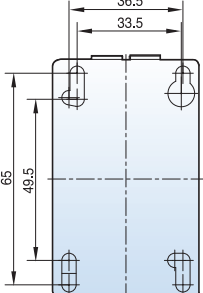
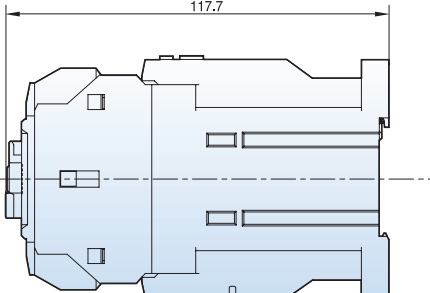
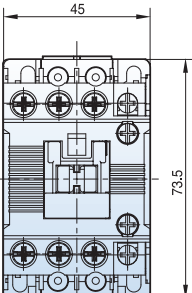
CC9 ~ CC22  
AC coil  
1NO1NC aux



[mm]

0.3kg

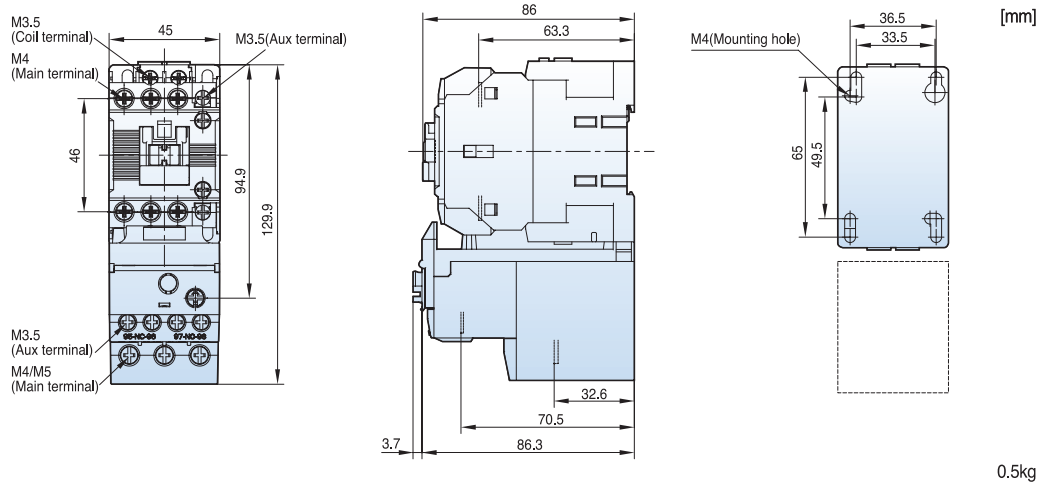
CC9 ~ CC22  
DC coil  
1NO1NC aux



0.5kg

# Motor Starters (18AF ~ 40AF)

**CC9 ~ CC22  
with GT32  
shown with no  
aux contact**



**CC32 ~ CC40  
with GT32  
shown with no  
aux contact**

