



Auxiliary  
contactor  
BG09

Product designation

Product type designation

**Contact characteristics**

|  |   |                      |
|--|---|----------------------|
| Number of poles                                      | nr.   | 3                    |
| Rated insulation voltage $U_i$                       | V   | 690                  |
| Rated impulse withstand voltage $U_{imp}$            | kV  | 6                    |
| Operating frequency                                  | Operational frequency min                               | Hz 25                |
|  | Operational frequency max                               | Hz 400               |
| Conventional free air thermal current $I_{th}$       | A   | 20                   |
| Operating current                                    | Operational current AC3 ( $\leq 440V \leq 55^\circ C$ ) | A 9                  |
|  | Operational current AC4 (400V)                          | A 4                  |
| Short-time allowable current for 10s (IEC/EN60947-1) | A   | 96                   |
| Protection fuse                                      | gG (IEC)  | A 20                 |
|  | aM (IEC)  | A 10                 |
| Making capacity (RMS value)                          | A   | 92                   |
| Breaking capacity at voltage                         | Breaking capacity 440V                                  | A 72                 |
|  | Breaking capacity 500V                                  | A 72                 |
|  | Breaking capacity 690V                                  | A 72                 |
| Resistance per pole (average value)                  |   | m $\Omega$ 10        |
|  | Power dissipation per pole (average value)              |                      |
|  | Power dissipation pole (average value) $I_{th}$         | W 4                  |
|  | AC3   | W 0.81               |
| Tightening torque for terminals                      | min   | Nm 0.8               |
|  | max   | Nm 1                 |
|  | min   | lbft 0.59            |
|  | max   | lbft 0.74            |
| Tightening torque for coil terminal                  | min   | Nm 0.8               |
|  | max   | Nm 1                 |
|  | min   | lbft 0.59            |
|  | max   | lbft 0.74            |
| max number of wires simultaneously connectable       | nr.   | 2                    |
| Conductor section                                    | AWG   |                      |
|  |   |                      |
|  | min   | 18                   |
|  | max   | 12                   |
| Flexible w/o lug conductor section                   |   |                      |
|  |   |                      |
|  | min   | mm <sup>2</sup> 0.75 |
|  | max   | mm <sup>2</sup> 2.5  |

|   |                  |                 |                       |
|---|------------------|-----------------|-----------------------|
| Flexible c/w lug conductor section                  |                  |                 |                       |
|   | min              | mm <sup>2</sup> | 1.5                   |
|   | max              | mm <sup>2</sup> | 2.5                   |
| Flexible with insulated spade lug conductor section |                  |                 |                       |
|   | min              | mm <sup>2</sup> | 1.5                   |
|   | max              | mm <sup>2</sup> | 2.5                   |
| Power terminal protection according to IEC/EN 60529 |                  |                 | IP20                  |
| <b>Auxiliary contact characteristics</b>            |                  |                 |                       |
| Type of contact                                     |                  |                 | 1 NA                  |
| Thermal current I <sub>th</sub>                     |                  |                 | A 10                  |
| IEC/EN 60947-5-1 designation                        |                  |                 | A600                  |
| <b>Ambient conditions</b>                           |                  |                 |                       |
| Temperature   |                  |                 |                       |
| Operating temperature                               |                  |                 |                       |
|   | min              | °C              | -40                   |
|   | max              | °C              | 60                    |
| Storage temperature                                 |                  |                 |                       |
|   | min              | °C              | -55                   |
|   | max              | °C              | 70                    |
| Max altitude  |                  |                 | m 3,000               |
| Operating position                                  |                  |                 |                       |
|   | normal allowable |                 | Vertical plan ±30°    |
| Mounting  |                  |                 | Screw / DIN rail 35mm |
| Weight  |                  |                 | g 0.18                |
| <b>Operations</b>                                   |                  |                 |                       |
| Mechanical life                                     |                  |                 | Cycles 20,000,000     |
| Electrical life                                     |                  |                 | Cycles 500000         |
| <b>Safety related data</b>                          |                  |                 |                       |
| Mirror contacts according to IEC/EN 60947-4-1       |                  |                 | Yes                   |
| EMC compatibility                                   |                  |                 | Yes                   |
| <b>AC coil operating</b>                            |                  |                 |                       |
| Rated AC voltage at 50/60Hz, 60Hz                   |                  |                 |                       |
|   | min              | V               | 12                    |
|   | max              | V               | 575                   |
| AC operating voltage                                |                  |                 |                       |
| of 50/60Hz coil powered at 50Hz                     |                  |                 |                       |
| pick-up   |                  |                 |                       |
|   | min              | %Us             | 75                    |
|   | max              | %Us             | 115                   |
| drop-out  |                  |                 |                       |
|   | min              | %Us             | 20                    |
|   | max              | %Us             | 55                    |
| of 50/60Hz coil powered at 60Hz                     |                  |                 |                       |
| pick-up   |                  |                 |                       |
|   | min              | %Us             | 80                    |
|   | max              | %Us             | 115                   |
| drop-out  |                  |                 |                       |
|   | min              | %Us             | 20                    |
|   | max              | %Us             | 55                    |
| of 60Hz coil powered at 60Hz                        |                  |                 |                       |
| pick-up   |                  |                 |                       |
|   | min              | %Us             | 75                    |

|  |                                 |         |          |       |
|--|---------------------------------|---------|----------|-------|
|  |                                 | max     | %Us      | 115   |
|  | drop-out                        | min     | %Us      | 20    |
|  |                                 | max     | %Us      | 55    |
| <b>AC operating voltage</b>  |                                 |         |          |       |
|  | of 50/60Hz coil powered at 50Hz | in-rush | VA       | 30    |
|  |                                 | holding | VA       | 4     |
|  | of 50/60Hz coil powered at 60Hz | in-rush | VA       | 25    |
|  |                                 | holding | VA       | 3     |
|  | of 60Hz coil powered at 60Hz    | in-rush | VA       | 30    |
|  |                                 | holding | VA       | 4     |
| Dissipation at holding $\leq 20^{\circ}\text{C}$ 50Hz                |                                 |         | W        | 0.95  |
| <b>DC coil operating</b>   |                                 |         |          |       |
| DC rated control voltage   |                                 |         |          |       |
|  |                                 | min     | V        | 6     |
|  |                                 | max     | V        | 250   |
| <b>DC operating voltage</b>  |                                 |         |          |       |
|  | pick-up                         | min     | %Us      | 75    |
|  |                                 | max     | %Us      | 115   |
|  | drop-out                        | min     | %Us      | 10    |
|  |                                 | max     | %Us      | 20    |
| <b>Average coil consumption <math>\leq 20^{\circ}\text{C}</math></b> |                                 |         |          |       |
|  |                                 | in-rush | W        | 3.2   |
|  |                                 | holding | W        | 3.2   |
| <b>Max cycles frequency</b>  |                                 |         |          |       |
| Mechanical operations  |                                 |         | Cycles/h | 3,600 |
| <b>Operating times</b>   |                                 |         |          |       |
| Average time for Us control  |                                 |         |          |       |
|  | in AC                           |         |          |       |
|  | Closing NO                      | min     | ms       | 12    |
|  |                                 | max     | ms       | 21    |
|  | Opening NO                      | min     | ms       | 9     |
|  |                                 | max     | ms       | 18    |
|  | Closing NC                      | min     | ms       | 17    |
|  |                                 | max     | ms       | 26    |
|  | Opening NC                      | min     | ms       | 7     |
|  |                                 | max     | ms       | 17    |
|  | in DC                           |         |          |       |
|  | Closing NO                      | min     | ms       | 18    |
|  |                                 | max     | ms       | 25    |
|  | Opening NO                      | min     | ms       | 2     |
|  |                                 | max     | ms       | 3     |
|  | Closing NC                      |         |          |       |

|            |     |    |    |
|------------|-----|----|----|
|            | min | ms | 3  |
|            | max | ms | 5  |
| Opening NC |     |    |    |
|            | min | ms | 11 |
|            | max | ms | 17 |

**UL technical data**

Full-load current (FLA) for three-phase AC motor

|         |   |     |
|---------|---|-----|
| at 480V | A | 7.6 |
| at 600V | A | 6.1 |

Yielded mechanical performance

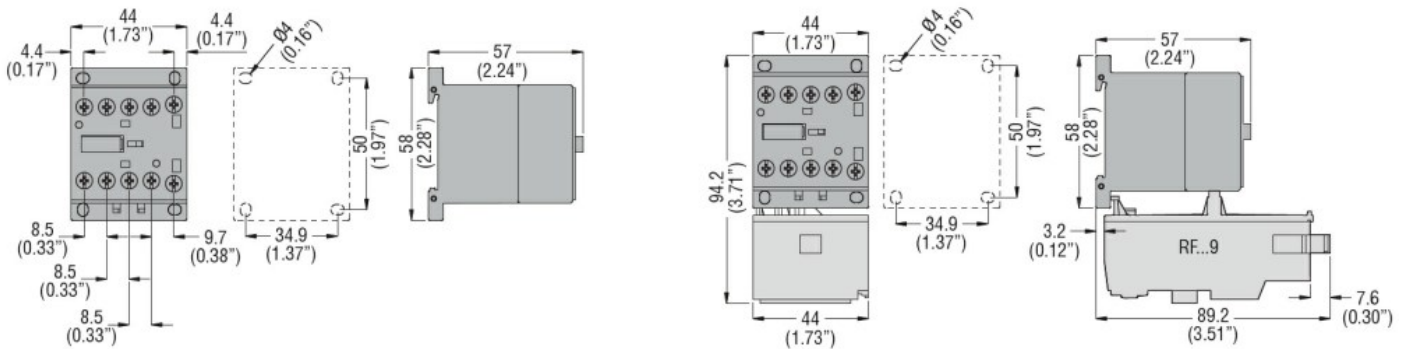
for single-phase AC motor

|             |    |     |
|-------------|----|-----|
| at 110/120V | hp | 0.5 |
| at 230V     | hp | 1.5 |

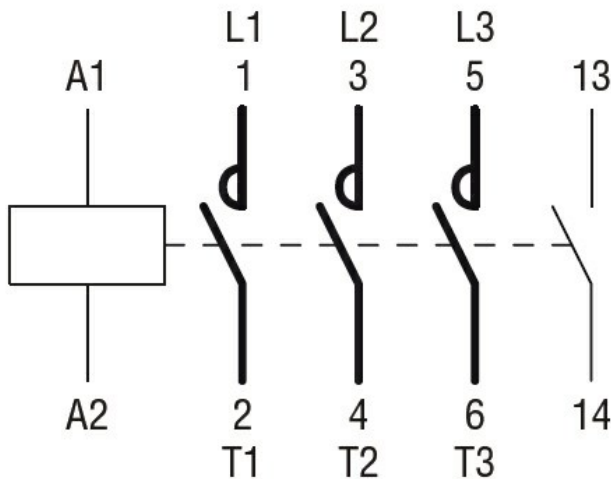
for three-phase AC motor

|             |    |   |
|-------------|----|---|
| at 200/208V | hp | 2 |
| at 220/230V | hp | 3 |
| at 460/480V | hp | 5 |
| at 575/600V | hp | 5 |

**Dimensions**



**Wiring diagrams**



**Certifications and compliance**

Certifications

- CSA C22.2 n° 60947-1
- CSA C22.2 n° 60947-4-1
- IEC/EN 60947-1
- IEC/EN 60947-4-1
- UL 60947-1
- UL 60947-4-1

Compliance

CCC

---

cULus

---

EAC

ETIM 6 classification

EC000066 - Power contactor, AC switching