



|  |   |      |      |                 |
|--|---|------|------|-----------------|
| Product designation  |   |      |      | Power contactor |
| Product type designation                                   |   |      |      | BG09            |
| <b>Contact characteristics</b>                             |   |      |      |                 |
| Number of poles  | Nr.   |      |      | 4               |
| Rated insulation voltage $U_i$ IEC/EN                      | V   |      |      | 690             |
| Rated impulse withstand voltage $U_{imp}$                  | kV  |      |      | 6               |
| Operational frequency                                      | min   | Hz   | 25   |                 |
|  | max   | Hz   | 400  |                 |
| Operational current $I_e$                                  | AC-1 ( $\leq 40^\circ\text{C}$ )                  | A    | 20   |                 |
|  | AC-1 ( $\leq 55^\circ\text{C}$ )                  | A    | 18   |                 |
|  | AC-1 ( $\leq 70^\circ\text{C}$ )                  | A    | 15   |                 |
|  | AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ ) | A    | 9    |                 |
|  | AC-4 (400V)                                       | A    | 4    |                 |
| Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ ) | 230V  | kW   | 8    |                 |
|  | 400V  | kW   | 14   |                 |
|  | 500V  | kW   | 16   |                 |
|  | 690V  | kW   | 22   |                 |
| 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                               | 440V  | A    | 72   |                 |
|  | 500V  | A    | 72   |                 |
|  | 690V  | A    | 72   |                 |
| Resistance per pole (average value)                        | m $\Omega$  | 10   |      |                 |
| Power dissipation per pole (average value)                 | Ith   | W    | 4    |                 |
|  | AC-3  | W    | 0.81 |                 |
| Tightening torque for terminals                            | min   | Nm   | 0.8  |                 |
|  | max   | Nm   | 1    |                 |
|  | min   | Ibin | 9    |                 |
|  | max   | Ibin | 9    |                 |
| Tightening torque for coil terminal                        | min   | Nm   | 0.8  |                 |
|  | max   | Nm   | 1    |                 |
|  | min   | Ibin | 9    |                 |
|  | max   | Ibin | 9    |                 |
| Max number of wires simultaneously connectable             | Nr.   | 2    |      |                 |
| Conductor section  |   |      |      |                 |

|   |     |                 |      |
|---|-----|-----------------|------|
| AWG/Kcmil   |     |                 |      |
|   | 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 when properly wired

**Mechanical features**

|                    |                             |                       |     |
|--------------------|-----------------------------|-----------------------|-----|
| Operating position | normal allowable            | Vertical plan ±30°    |     |
| Fixing             |                             | Screw / DIN rail 35mm |     |
| Weight             |                             | g                     | 180 |
| Conductor section  | AWG/kcmil conductor section |                       |     |
|                    | max                         | 12                    |     |

**Auxiliary contact characteristics**

Thermal current I<sub>th</sub> A 10

**Operations**

Mechanical life cycles 20000000  
Electrical life cycles 500000

**Safety related data**

Performance level B10d according to EN/ISO 13489-1

|  |                 |        |          |
|--|-----------------|--------|----------|
|  | rated load      | cycles | 500000   |
|  | mechanical load | cycles | 20000000 |

Mirror contacts according to IEC/EN 60947-4-1 YES

EMC compatibility yes

**AC coil operating**

Rated AC voltage at 60Hz V 48

|                      |                              |     |     |
|----------------------|------------------------------|-----|-----|
| AC operating voltage | of 60Hz coil powered at 60Hz |     |     |
|                      | pick-up                      |     |     |
|                      | min                          | %Us | 75  |
|                      | max                          | %Us | 115 |
|                      | drop-out                     |     |     |
|                      | min                          | %Us | 20  |
|                      | max                          | %Us | 55  |

AC average coil consumption at 20°C

|  |                                 |    |    |
|--|---------------------------------|----|----|
|  | 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>Max cycles frequency</b>                           |  |          |       |
| Mechanical operation                                  |  | cycles/h | 3600  |
| <b>Operating times</b>                                |  |          |       |
| Average time for $U_s$ 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      |          |    |     |
|                                | 110/120V | HP | 0.5 |
|                                | 230V     | HP | 1.5 |
| for three-phase AC motor       |          |    |     |
|                                | 200/208V | HP | 2   |
|                                | 220/230V | HP | 3   |
|                                | 460/480V | HP | 5   |
|                                | 575/600V | HP | 5   |

|             |            |   |    |
|-------------|------------|---|----|
| General USE |            |   |    |
| Contactor   |            |   |    |
|             | AC current | A | 20 |

**Ambient conditions**

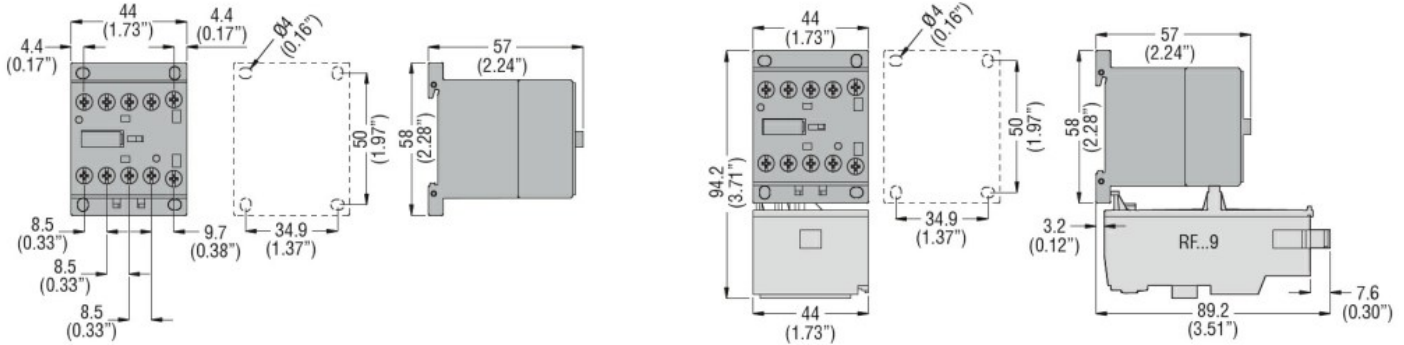
|                       |     |                    |     |
|-----------------------|-----|--------------------|-----|
| Temperature           |     |                    |     |
| Operating temperature |     |                    |     |
|                       | min | $^{\circ}\text{C}$ | -50 |
|                       | max | $^{\circ}\text{C}$ | +70 |
| Storage temperature   |     |                    |     |
|                       | min | $^{\circ}\text{C}$ | -60 |

|              |     |    |      |
|--------------|-----|----|------|
| Max altitude | max | °C | +80  |
|              |     | m  | 3000 |

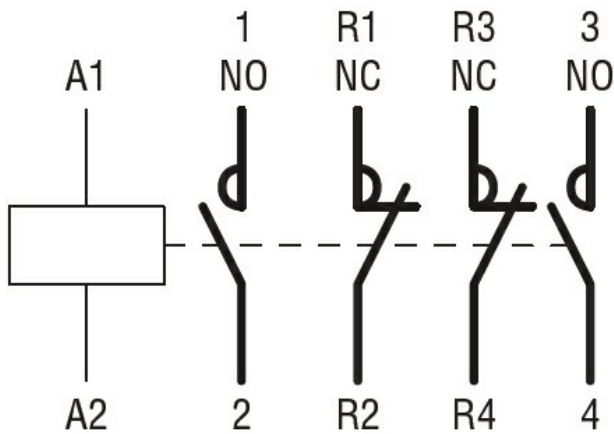
**Resistance & Protection**

|                  |   |
|------------------|---|
| Pollution degree | 3 |
|------------------|---|

**Dimensions**



**Wiring diagrams**



**Certifications and compliance**

|            |                        |
|------------|------------------------|
| Compliance | 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           |

|              |       |
|--------------|-------|
| Certificates | CCC   |
|              | cULus |
|              | EAC   |

**ETIM classification**

|          |  |
|----------|--|
| ETIM 8.0 | EC000066 - Power contactor, AC switching |
|----------|--|