



|  |   |           |  |                 |
|--|---|-----------|--|-----------------|
| 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)                        | $\text{m}\Omega$                                  |           |  | 10              |
| Power dissipation per pole (average value)                 | $I_{th}$  | W         |  | 4               |
|  | AC-3  | W         |  | 0.81            |
| Tightening torque for terminals                            | min   | Nm        |  | 0.8             |
|  | max   | Nm        |  | 1               |
|  | min   | $I_{bin}$ |  | 9               |
|  | max   | $I_{bin}$ |  | 9               |
| Tightening torque for coil terminal                        | min   | Nm        |  | 0.8             |
|  | max   | Nm        |  | 1               |
|  | min   | $I_{bin}$ |  | 9               |
|  | max   | $I_{bin}$ |  | 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         |
| <b>Mechanical features</b>                          |                             |  |                            |                                  |
| Operating position                                  |                             |  | normal allowable           | Vertical plan ±30°               |
| Fixing  |                             |  |                            | Screw / DIN rail 35mm            |
| Weight  |                             |  |                            | g 221                            |
| Conductor section                                   | AWG/kcmil conductor section |  | max                        | 12                               |
| <b>Auxiliary contact characteristics</b>            |                             |  |                            |                                  |
| Thermal current I <sub>th</sub>                     |                             |  | A                          | 10                               |
| <b>Operations</b>                                   |                             |  |                            |                                  |
| Mechanical life                                     |                             |  | cycles                     | 20000000                         |
| Electrical life                                     |                             |  | cycles                     | 500000                           |
| <b>Safety related data</b>                          |                             |  |                            |                                  |
| Performance level B10d according to EN/ISO 13489-1  |                             |  | rated load mechanical load | cycles 500000<br>cycles 20000000 |
| Mirror contacts according to IEC/EN 60947-4-1       |                             |  |                            | YES                              |
| EMC compatibility                                   |                             |  |                            | yes                              |
| <b>DC coil operating</b>                            |                             |  |                            |                                  |
| DC rated control voltage                            |                             |  | V                          | 12                               |
| DC operating voltage                                | pick-up                     |  | min                        | %Us 75                           |
|   |                             |  | max                        | %Us 115                          |
|   | drop-out                    |  | min                        | %Us 10                           |
|   |                             |  | max                        | %Us 25                           |
| Average coil consumption ≤20°C                      |                             |  | in-rush holding            | W 3.2<br>W 3.2                   |
| <b>Max cycles frequency</b>                         |                             |  |                            |                                  |
| Mechanical operation                                |                             |  | cycles/h                   | 3600                             |
| <b>Operating times</b>                              |                             |  |                            |                                  |
| Average time for U <sub>s</sub> 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 |
| <hr/>      |  |     |    |    |
| 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

Contactors

|            |   |    |
|------------|---|----|
| AC current | A | 20 |
|------------|---|----|

**Ambient conditions**

Temperature

Operating temperature

|     |    |     |
|-----|----|-----|
| min | °C | -50 |
| max | °C | +70 |

Storage temperature

|     |    |     |
|-----|----|-----|
| min | °C | -60 |
| max | °C | +80 |

Max altitude

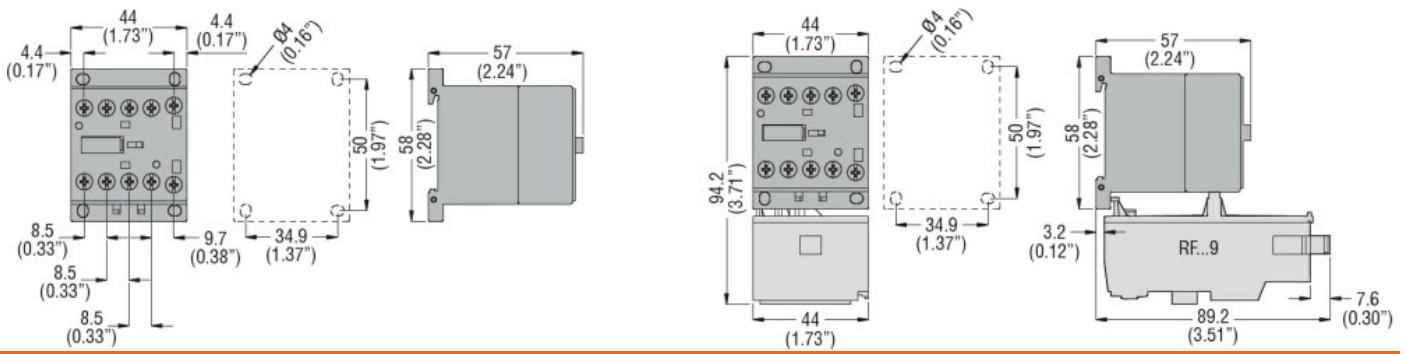
|   |      |
|---|------|
| m | 3000 |
|---|------|

**Resistance & Protection**

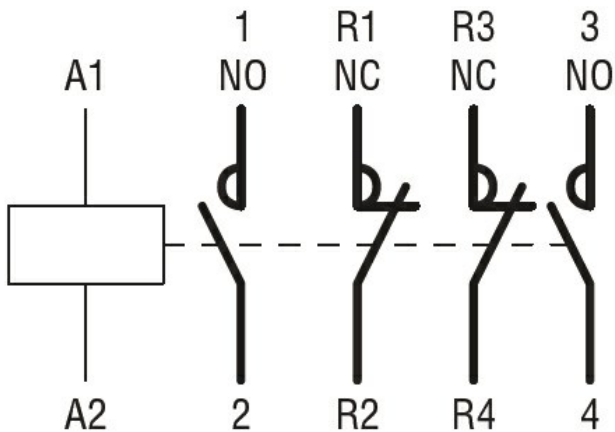
Pollution degree

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