



Power contactor  
BG09

Product designation

Product type designation

**Contact characteristics**

|  |   |        |
|--|---|--------|
| 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 |
| IEC Conventional free air thermal current $I_{th}$         | A   | 20     |
| 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)                 | $I_{th}$  | W 4    |
|  | AC3   | W 0.81 |
| Tightening torque for terminals                            | min   | Nm 0.8 |
|  | max   | Nm 1   |
|  | min   | lbin 9 |
|  | max   | lbin 9 |
| Tightening torque for coil terminal                        | min   | Nm 0.8 |
|  | max   | Nm 1   |
|  | min   | lbin 9 |
|  | max   | lbin 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 wired       |
| <b>Mechanical features</b>                          |                                 |        |                       |
| Operating position                                  |                                 |        |                       |
|   | normal allowable                |        | Vertical plan ±30°    |
| Fixing  |                                 |        | Screw / DIN rail 35mm |
| Weight  |                                 | g      | 182                   |
| Conductor section                                   |                                 |        |                       |
| AWG/kcmil conductor section                         |                                 | max    | 12                    |
| <b>Auxiliary contact characteristics</b>            |                                 |        |                       |
| Thermal current I <sub>th</sub>                     |                                 | A      | 10                    |
| IEC/EN 60947-5-1 designation                        |                                 |        | A600                  |
| Operating current DC12                              |                                 |        |                       |
|   | 110V                            | A      | 2.9                   |
| Operating current DC13                              |                                 |        |                       |
|   | 24V                             | A      | 2.9                   |
|   | 48V                             | A      | 1.4                   |
|   | 60V                             | A      | 1.1                   |
|   | 125V                            | A      | 0.3                   |
|   | 220V                            | A      | 0.1                   |
|   | 600V                            | A      | 0.6                   |
| <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                      | cycles | 500000                |
|   | mechanical load                 | cycles | 20000000              |
| Mirror contacts according to IEC/EN 60947-4-1       |                                 |        | YES                   |
| EMC compatibility                                   |                                 |        | yes                   |
| <b>AC coil operating</b>                            |                                 |        |                       |
| Rated AC voltage at 50/60Hz                         |                                 | V      | 230                   |
| 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   |
| 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 ≤20°C 50Hz   |            |         | W        | 0.95 |
| <b>Max cycles frequency</b>         |            |         |          |      |
| Mechanical operation                |            |         | cycles/h | 3600 |
| <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

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

Storage temperature

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

Max altitude

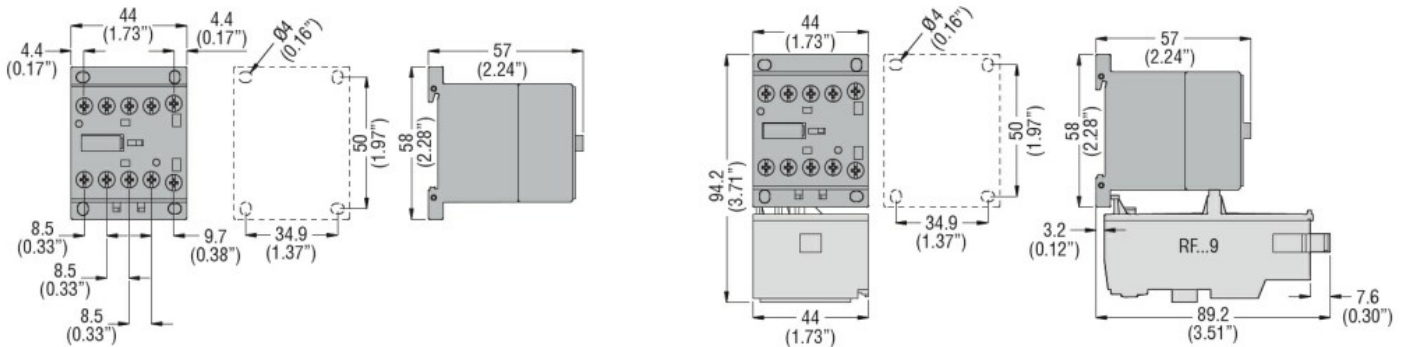
|   |      |
|---|------|
| m | 3000 |
|---|------|

Resistance & Protection

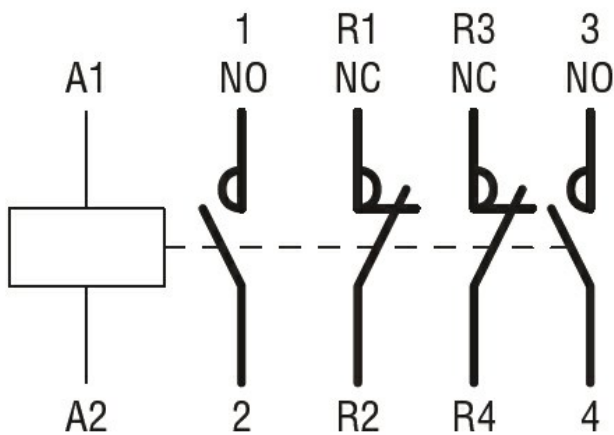
Pollution degree

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

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IEC/EN 60947-4-1

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UL 60947-1

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UL 60947-4-1

Certificates

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CCC

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cULus

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EAC

ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching