





| Product designation Product type designation                    |                    |     | Power contactor<br>BG09 |
|---|--------------------|-----|-------------------------|
| Contact characteristics   |                    |     |                         |
| Number of poles   |                    | Nr. | 3                       |
| Rated insulation voltage Ui IEC/EN                              |                    | V   | 690                     |
| Rated impulse withstand voltage Uimp                            |                    | kV  | 6                       |
| Operational frequency   |                    |     |                         |
|   | min                | Hz  | 25                      |
|   | max                | Hz  | 400                     |
| IEC Conventional free air thermal current Ith                   |                    | Α   | 20                      |
| Operational current le  |                    |     |                         |
| •   | AC-1 (≤40°C)       | Α   | 20                      |
|   | AC-1 (≤55°C)       | Α   | 18                      |
|   | AC-1 (≤70°C)       | Α   | 15                      |
|   | AC-3 (≤440V ≤55°C) | Α   | 9                       |
|   | AC-4 (400V)        | Α   | 4                       |
| Rated operational power AC-3 (T≤55°C)                           | ,                  |     |                         |
| , , ,   | 230V               | kW  | 2.2                     |
|   | 400V               | kW  | 4                       |
|   | 415V               | kW  | 4.3                     |
|   | 440V               | kW  | 4.5                     |
|   | 500V               | kW  | 5                       |
|   | 690V               | kW  | 5                       |
| Rated operational power AC-1 (T≤40°C)                           |                    |     |                         |
|   | 230V               | kW  | 8                       |
|   | 400V               | kW  | 14                      |
|   | 500V               | kW  | 16                      |
|   | 690V               | kW  | 22                      |
| IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series |                    |     |                         |
| ·   | ≤24V               | Α   | 12                      |
|   | 48V                | Α   | 10                      |
|   | 75V                | Α   | 4                       |
|   | 110V               | Α   | 3                       |
|   | 220V               | Α   | _                       |
| IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series |                    |     |                         |
| ·   | ≤24V               | Α   | 15                      |
|   | 48V                | Α   | 14                      |
|   | 75V                | Α   | 9                       |
|   | 110V               | Α   | 8                       |
|   | 220V               | Α   | _                       |
| IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series |                    |     |                         |
| •   | ≤24V               | Α   | 16                      |
|   | 48V                | Α   | 16                      |
|   | 75V                | Α   | 10                      |
|   | 110V               | Α   | 10                      |
|   |                    |     |                         |





|  | 220V     | Α    | 2            |
|--|----------|------|--------------|
| IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series      |          |      |              |
| ·  | ≤24V     | Α    | 16           |
|  | 48V      | Α    | 16           |
|  | 75V      | A    | 10           |
|  | 110V     | A    | 10           |
|  | 220V     | A    | 2            |
| IFO  | 220 V    | A    |              |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series |          | _    | _            |
|  | ≤24V     | Α    | 7            |
|  | 48V      | Α    | 6            |
|  | 75V      | Α    | 2            |
|  | 110V     | Α    | 1            |
|  | 220V     | Α    | _            |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series |          |      |              |
|  | ≤24V     | Α    | 8            |
|  | 48V      | Α    | 8            |
|  | 75V      | A    | 5            |
|  | 110V     | A    | 4            |
|  |          |      |              |
| 150  | 220V     | Α    |              |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series |          |      |              |
|  | ≤24V     | Α    | 10           |
|  | 48V      | Α    | 10           |
|  | 75V      | Α    | 6            |
|  | 110V     | Α    | 5            |
|  | 220V     | Α    | 0,8          |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series |          |      | ,            |
|  | ≤24V     | Α    | 10           |
|  | 48V      | A    | 10           |
|  | 75V      | A    | 6            |
|  |          |      |              |
|  | 110V     | A    | 5            |
|  | 220V     | Α    | 0,8          |
| Short-time allowable current for 10s (IEC/EN60947-1)                 |          | A    | 96           |
| Protection fuse  |          |      |              |
|  | gG (IEC) | Α    | 20           |
|  | aM (IEC) | Α    | 10           |
| Making capacity (RMS value)  |          | Α    | 92           |
| Breaking capacity at voltage   |          |      |              |
|  | 440V     | Α    | 72           |
|  | 500V     | A    | 72           |
|  | 690V     | A    | 72           |
| Posietaneo por polo (avorago valuo)                                  | 090 v    |      |              |
| Resistance per pole (average value)                                  |          | mΩ   | 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      | lbin | 9            |
|  | max      | Ibin | 9            |
| Tightening torque for coil terminal                                  | 11107    |      | <del>-</del> |
| Tighterning torque for conficilitial                                 | min      | Nm   | 0.8          |
|  | min      |      |              |
|  | max      | Nm   | 1            |
|  | min      | lbin | 9            |
|  |          |      |              |





|  |   | max   | lbin                                      | 9   |
|--|---|---|---|---|
|  | simultaneously connectable                          |   | Nr.                                       | 2   |
| Conductor section  |   |   |   |   |
|  | AWG/Kcmil   |   |   | 4.0   |
|  | Fig. 21. de la constanta constant                   | max   |   | 12  |
|  | Flexible w/o lug conductor section                  |   |   | 0.75  |
|  |   | min   | mm²                                       | 0.75<br>2.5   |
|  | Flexible c/w lug conductor section                  | max   | mm²                                       | 2.5   |
|  | Flexible C/W lug colludctor Section                 | min   | mm²                                       | 1.5   |
|  |   | max   | mm²                                       | 2.5   |
|  | Flexible with insulated spade lug conductor section |   | 111111                                    | 2.0   |
|  | Tioxible with inculated opace tag conductor cocton  | min   | mm²                                       | 1.5   |
|  |   | max   | mm²                                       | 2.5   |
|  |   |   |   | IP20 when   |
| Power terminal protect   | ction according to IEC/EN 60529                     |   |   | properly wired  |
| Mechanical features  |   |   |   |   |
| Operating position   |   |   |   |   |
|  |   | normal  |   | Vertical plan   |
|  |   | allowable   |   | ±30°  |
| Fixing   |   |   |   | Screw / DIN rail  |
|  |   |   |   | 35mm  |
| Weight   |   |   | g   | 215   |
| Conductor section  |   |   |   |   |
|  | AWG/kcmil conductor section                         |   |   |   |
|  |   |   |   |   |
|  |   | max   |   | 12  |
| Auxiliary contact chara  | acteristics   | max   | ·   |   |
| Thermal current Ith  |   | max   | A   | 10  |
| Thermal current Ith IEC/EN 60947-5-1 de  | esignation  | max   | A   |   |
| Thermal current Ith  | esignation  |   |   | 10<br>A600 - Q600   |
| Thermal current Ith IEC/EN 60947-5-1 de  | esignation  | 230V  | A   | 10<br>A600 - Q600   |
| Thermal current Ith IEC/EN 60947-5-1 de  | esignation  | 230V<br>400V  | A<br>A                                    | 10<br>A600 - Q600<br>3<br>1.9   |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC   | esignation<br>15                                    | 230V  | A   | 10<br>A600 - Q600   |
| Thermal current Ith IEC/EN 60947-5-1 de  | esignation<br>15                                    | 230V<br>400V<br>500V  | A<br>A<br>A                               | 10<br>A600 - Q600<br>3<br>1.9<br>1.4  |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC  | esignation<br>15                                    | 230V<br>400V  | A<br>A                                    | 10<br>A600 - Q600<br>3<br>1.9   |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC   | esignation<br>15                                    | 230V<br>400V<br>500V  | A<br>A<br>A                               | 10<br>A600 - Q600<br>3<br>1.9<br>1.4  |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC  | esignation<br>15                                    | 230V<br>400V<br>500V<br>110V  | A<br>A<br>A                               | 10<br>A600 - Q600<br>3<br>1.9<br>1.4<br>2.9   |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC  | esignation<br>15                                    | 230V<br>400V<br>500V<br>110V<br>24V<br>48V  | A<br>A<br>A<br>A                          | 10<br>A600 - Q600<br>3<br>1.9<br>1.4<br>2.9   |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC  | esignation<br>15                                    | 230V<br>400V<br>500V<br>110V<br>24V<br>48V<br>60V                                 | A<br>A<br>A<br>A<br>A                     | 10<br>A600 - Q600<br>3<br>1.9<br>1.4<br>2.9<br>2.9<br>1.4<br>1.2                              |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC  | esignation<br>15                                    | 230V<br>400V<br>500V<br>110V<br>24V<br>48V<br>60V<br>110V                         | A<br>A<br>A<br>A<br>A                     | 10<br>A600 - Q600<br>3<br>1.9<br>1.4<br>2.9<br>2.9<br>1.4<br>1.2<br>0.6                       |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC  | esignation<br>15                                    | 230V<br>400V<br>500V<br>110V<br>24V<br>48V<br>60V                                 | A<br>A<br>A<br>A<br>A                     | 10<br>A600 - Q600<br>3<br>1.9<br>1.4<br>2.9<br>2.9<br>1.4<br>1.2                              |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC  | esignation<br>15                                    | 230V<br>400V<br>500V<br>110V<br>24V<br>48V<br>60V<br>110V<br>125V                 | A<br>A<br>A<br>A<br>A<br>A                | 10<br>A600 - Q600<br>3<br>1.9<br>1.4<br>2.9<br>2.9<br>1.4<br>1.2<br>0.6<br>0.55               |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC  | esignation<br>15                                    | 230V<br>400V<br>500V<br>110V<br>24V<br>48V<br>60V<br>110V<br>125V<br>220V         | A A A A A A A A                           | 10<br>A600 - Q600<br>3<br>1.9<br>1.4<br>2.9<br>2.9<br>1.4<br>1.2<br>0.6<br>0.55<br>0.3        |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC   | esignation<br>15                                    | 230V<br>400V<br>500V<br>110V<br>24V<br>48V<br>60V<br>110V<br>125V<br>220V         | A A A A A A A A                           | 10<br>A600 - Q600<br>3<br>1.9<br>1.4<br>2.9<br>2.9<br>1.4<br>1.2<br>0.6<br>0.55<br>0.3        |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC Operating current DC  | esignation<br>15                                    | 230V<br>400V<br>500V<br>110V<br>24V<br>48V<br>60V<br>110V<br>125V<br>220V         | A<br>A<br>A<br>A<br>A<br>A<br>A           | 10<br>A600 - Q600<br>3<br>1.9<br>1.4<br>2.9<br>2.9<br>1.4<br>1.2<br>0.6<br>0.55<br>0.3<br>0.1 |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operating current DC  Mechanical life  | esignation<br>15                                    | 230V<br>400V<br>500V<br>110V<br>24V<br>48V<br>60V<br>110V<br>125V<br>220V         | A<br>A<br>A<br>A<br>A<br>A<br>A<br>Cycles | 10<br>A600 - Q600<br>3<br>1.9<br>1.4<br>2.9<br>2.9<br>1.4<br>1.2<br>0.6<br>0.55<br>0.3<br>0.1 |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operations Mechanical life Electrical life Safety related data   | esignation<br>15                                    | 230V<br>400V<br>500V<br>110V<br>24V<br>48V<br>60V<br>110V<br>125V<br>220V         | A<br>A<br>A<br>A<br>A<br>A<br>A<br>Cycles | 10<br>A600 - Q600<br>3<br>1.9<br>1.4<br>2.9<br>2.9<br>1.4<br>1.2<br>0.6<br>0.55<br>0.3<br>0.1 |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operations Mechanical life Electrical life Safety related data   | esignation 15 12 13                                 | 230V<br>400V<br>500V<br>110V<br>24V<br>48V<br>60V<br>110V<br>125V<br>220V         | A<br>A<br>A<br>A<br>A<br>A<br>A<br>Cycles | 10<br>A600 - Q600<br>3<br>1.9<br>1.4<br>2.9<br>2.9<br>1.4<br>1.2<br>0.6<br>0.55<br>0.3<br>0.1 |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operations Mechanical life Electrical life Safety related data   | esignation 15 12 13 Od according to EN/ISO 13489-1  | 230V<br>400V<br>500V<br>110V<br>24V<br>48V<br>60V<br>110V<br>125V<br>220V<br>600V | A A A A A A A A Cycles cycles             | 10 A600 - Q600  3 1.9 1.4  2.9  2.9  1.4 1.2 0.6 0.55 0.3 0.1  20000000  500000               |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operating current DC  Electrical life Electrical life Safety related data Performance level B1   | esignation 15 12 13 Od according to EN/ISO 13489-1  | 230V<br>400V<br>500V<br>110V<br>24V<br>48V<br>60V<br>110V<br>125V<br>220V<br>600V | A A A A A A A A Cycles cycles             | 10 A600 - Q600  3 1.9 1.4  2.9  2.9 1.4 1.2 0.6 0.55 0.3 0.1  20000000  500000                |
| Thermal current Ith IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC | esignation  12  13  Od according to EN/ISO 13489-1  | 230V<br>400V<br>500V<br>110V<br>24V<br>48V<br>60V<br>110V<br>125V<br>220V<br>600V | A A A A A A A A Cycles cycles             | 10 A600 - Q600  3 1.9 1.4  2.9  2.9  1.4 1.2 0.6 0.55 0.3 0.1  20000000  500000  500000       |

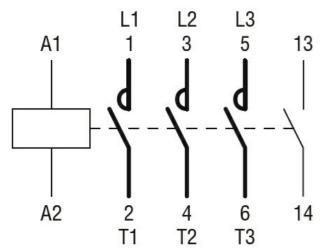




| DC rated control volta |                               |            |                                  | V              | 125    |
|------------------------|-------------------------------|------------|----------------------------------|----------------|--------|
| DC operating voltage   |                               |            |                                  |                |        |
|                        | pick-up                       |            | min                              | %Us            | 75     |
|                        |                               |            | max                              | %Us            | 115    |
|                        | drop-out                      |            |                                  | ,,,,,          |        |
|                        | ·                             |            | min                              | %Us            | 10     |
|                        |                               |            | max                              | %Us            | 25     |
| Average coil consum    | otion ≤20°C                   |            |                                  |                |        |
|                        |                               |            | in-rush                          | W              | 3.2    |
| Max cycles frequency   |                               |            | holding                          | W              | 3.2    |
| Mechanical operation   |                               |            |                                  | cycles/h       | 3600   |
| Operating times        |                               |            |                                  | 0,0100/11      | 0000   |
| Average time for Us o  | control                       |            |                                  |                |        |
|                        | in AC                         |            |                                  |                |        |
|                        |                               | Closing NO |                                  |                |        |
|                        |                               |            | min                              | ms             | 12     |
|                        |                               | Onanina NO | max                              | ms             | 21     |
|                        |                               | Opening NO | min                              | ms             | 9      |
|                        |                               |            | max                              | ms             | 18     |
|                        |                               | Closing NC | max                              |                | . 0    |
|                        |                               | C          | min                              | ms             | 17     |
|                        |                               |            | max                              | ms             | 26     |
|                        |                               | Opening NC |                                  |                |        |
|                        |                               |            | min                              | ms             | 7      |
|                        | in DC                         |            | max                              | ms             | 17     |
|                        | In DC                         | Closing NO |                                  |                |        |
|                        |                               | Closing NO | min                              | ms             | 18     |
|                        |                               |            | max                              | ms             | 25     |
|                        |                               | Opening NO |                                  |                |        |
|                        |                               |            | min                              | ms             | 2      |
|                        |                               |            | max                              | ms             | 3      |
|                        |                               | Closing NC |                                  |                | 0      |
|                        |                               |            | min                              | ms             | 3<br>5 |
|                        |                               | Opening NC | max                              | ms             | 5      |
|                        |                               | Oponing NO | min                              | ms             | 11     |
|                        |                               |            | max                              | ms             | 17     |
| UL technical data      |                               |            |                                  |                |        |
| Full-load current (FLA | (a) for three-phase           | AC motor   |                                  |                |        |
|                        |                               |            | at 480V                          | A              | 7.6    |
| Violate described a    |                               |            | at 600V                          | A              | 6.1    |
| Yielded mechanical p   | erformance<br>for single-phas | e AC motor |                                  |                |        |
|                        | ioi sirigie-prias             |            | 110/120V                         | HP             | 0.5    |
|                        |                               |            | 230V                             | HP             | 1.5    |
|                        | for three-phase               | e AC motor |                                  |                |        |
|                        | ,                             |            | 200/208V                         | HP             | 2      |
|                        |                               |            | 000/0001/                        | LID            | •      |
|                        |                               |            | 220/230V                         | HP             | 3      |
|                        |                               |            | 220/230V<br>460/480V<br>575/600V | HP<br>HP<br>HP | 5<br>5 |

| General USE  |  |   |         |                 |
|--|--|---|---------|-----------------|
|  | Contactor                                |   |         |                 |
|  |  | AC current  | Α       | 20              |
| Short-circuit protection   | on fuse, 600V                            |   |         |                 |
|  | High fault                               |   |         |                 |
|  |  | Short circuit current   | kA      | 100             |
|  |  | Fuse rating   | Α       | 30              |
|  |  | Fuse class  |         | J               |
|  | Standard fault                           |   |         |                 |
|  |  | Short circuit current   | kA      | 5               |
|  |  | Fuse rating   | Α       | 30              |
|  |  | Fuse class  |         | RK5             |
|  | iliary contacts according to UL          |   |         | A600 - Q600     |
| Ambient conditions   |  |   |         |                 |
| Temperature  |  |   |         |                 |
|  | Operating temperature                    |   |         |                 |
|  |  | min   | °C      | -50             |
|  |  | max   | °C      | +70             |
|  | Storage temperature                      |   |         |                 |
|  |  | min   | °C      | -60             |
|  |  | max   | °C      | +80             |
| Max altitude   |  |   | m       | 3000            |
| Resistance & Protec  | tion                                     |   |         |                 |
| Pollution degree   |  |   |         | 3               |
| Dimensions   |  |   |         |                 |
| 4.4<br>(0.17") (0.17") (0.17") (0.17") (0.17") (0.38") (0.33") (0.38") | (2.24")<br>(2.24")<br>(2.88")<br>(2.88") | 44<br>(1.73")<br>(0.12")<br>44<br>(1.73")<br>(0.12")<br>(0.12") | (2.28") | 8F9 7.6 (0.30") |

#### Wiring diagrams



### Certifications and compliance

Compliance

CSA C22.2 n° 60947-1



### 11BG0910D125

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 125VDC, 1NO AUXILIARY CONTACT

|              | 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 classificatior

ETIM 8.0

EC000066 -Power contactor, AC switching