



Product designation Power contactor Product type designation **BG09** Contact characteristics Nr. 3 Number of poles Rated insulation voltage Ui IEC/EN ٧ 690 Rated impulse withstand voltage Uimp kV 6 Operational frequency Нъ 25 min Hz 400 max IEC Conventional free air thermal current Ith 20 Α Operational current le AC-1 (=40°C) Α 20 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 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 14 75V Α 9 110V Α 8 220V 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 2

IEC max current le in DC1 with L/R = 1ms with 4 poles in series





|   | =24V          | Α          | 16           |
|---|---------------|------------|--------------|
|   | 48V           | Α          | 16           |
|   | 75V           | Α          | 10           |
|   | 110V          | Α          | 10           |
|   | 220V          | Α          | 2            |
| 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           | Α          | 5            |
|   | 110V          | Α          | 4            |
|   | 220V          | A          | <del>-</del> |
| IEC max current le in DC3-DC5 with L/R = 15ms with 3 poles in series  | 220 V         |            |              |
| TEC max current le in DC3-DC3 with L/K = 13ms with 3 poles in series  | =24V          | Α          | 10           |
|   | =24 V<br>48 V |            |              |
|   |               | A          | 10           |
|   | 75V           | A          | 6            |
|   | 110V          | A          | 5            |
| 150   | 220V          | A          | 0,8          |
| IEC max current le in DC3-DC5 with L/R = 15ms with 4 poles in series  |               | _          |              |
|   | =24V          | Α          | 10           |
|   | 48V           | Α          | 10           |
|   | 75V           | Α          | 6            |
|   | 110V          | Α          | 5            |
|   | 220V          | A          | 0,8          |
| Short-time allowable current for 10s (IEC/EN60947-1)  |               | Α          | 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          | Α          | 72           |
|   | 690V          | Α          | 72           |
| Resistance per pole (average value)   |               | m?         | 10           |
| Power dissipation per pole (average value)  |               |            |              |
|   | Ith           | W          | 4            |
|   | AC3           | W          | 0.81         |
| Tightening torque for terminals   |               |            |              |
| Tigricoling torque for terrimicale  | min           | Nm         | 0.8          |
|   | max           | Nm         | 1            |
|   | min           | Ibin       | 9            |
|   | max           | lbin       | 9            |
| Tightening torque for coil terminal   | Пал           | 10111      |              |
| rightering torque for contentimal   | min           | Nlm        | 0.8          |
|   | min           | Nm<br>Nm   |              |
|   | max           | Nm<br>Ibin | 1            |
|   | min           | lbin       | 9            |
| Management of colors also the constant of the | max           | Ibin       | 9            |
| Max number of wires simultaneously connectable  |               | Nr.        | 2            |



| Conductor section  | AMO II Comit   |                  |   |
|--|--|------------------|---|
|  | AWG/Kcmil  |                  | 12  |
|  | Flexible w/o lug conductor section   |                  | 12  |
|  | min  | mm²              | 0.75  |
|  | max  | mm²              | 2.5   |
|  | Flexible c/w lug conductor section   |                  |   |
|  | min  | mm²              | 1.5   |
|  | max  | mm²              | 2.5   |
|  | Flexible with insulated spade lug conductor section                                  |                  |   |
|  | min  | mm²              | 1.5   |
|  | max  | mm²              | 2.5   |
|  | ction according to IEC/EN 60529  |                  | IP20 when wired                                 |
| Mechanical features  |  |                  |   |
| Operating position   |  |                  | Made III  |
|  | normal   |                  | Vertical plan                                   |
|  | allowable  |                  | ±30°<br>Screw / DIN rail                        |
| Fixing   |  |                  | 35mm  |
| <br>Weight   |  | g                | 179   |
| Conductor section  |  | 9                | 170   |
| Conductor Gootlon  | AWG/kcmil conductor section  |                  |   |
|  | max  |                  | 12  |
| Auxiliary contact char   |  |                  |   |
| Thermal current Ith  |  | Α                | 10  |
| IEC/EN 60947-5-1 de  | esignation   |                  | A600 - Q600                                     |
| Operating current AC   | 215  |                  |   |
|  | 230V   | Α                | 3   |
|  | 400V   | Α                | 1.9   |
|  | 500V   | Α                | 1.4   |
| Operating current DC   |  |                  |   |
|  | 110V   | Α                | 2.9   |
| Operating current DC   |  | _                |   |
|  | 24V  | A                | 2.9   |
|  | 48V  | A                | 1.4   |
|  | 60V<br>110V  | A<br>A           | 1.2<br>0.6                                      |
|  | 110V<br>125V   | A                | 0.55  |
|  | 220V   | A                | 0.3   |
|  |  |                  | 0.1   |
|  | 600\/  | Δ                |   |
| Operations   | 600V   | A                | 0.1   |
| Operations Mechanical life   | 600V   |                  |   |
| Mechanical life  | 600V   | cycles           | 20000000  |
| Mechanical life<br>Electrical life   | 600V   |                  |   |
| Mechanical life Electrical life Safety related data  |  | cycles           | 20000000  |
| Mechanical life Electrical life Safety related data  | 10d according to EN/ISO 13489-1  | cycles           | 20000000  |
| Mechanical life Electrical life Safety related data  | 10d according to EN/ISO 13489-1  | cycles<br>cycles | 20000000<br>500000                              |
| Mechanical life Electrical life Safety related data Performance level B'   | 10d according to EN/ISO 13489-1<br>rated load  | cycles cycles    | 20000000<br>500000<br>500000                    |
| Mechanical life Electrical life Safety related data Performance level B'   | 10d according to EN/ISO 13489-1<br>rated load<br>mechanical load                     | cycles cycles    | 20000000<br>500000<br>500000<br>20000000        |
| Mechanical life Electrical life Safety related data Performance level B' Mirror contats accord   | 10d according to EN/ISO 13489-1<br>rated load<br>mechanical load                     | cycles cycles    | 20000000<br>500000<br>500000<br>20000000<br>yes |
| Mechanical life Electrical life Safety related data Performance level Bander of the second sec | 10d according to EN/ISO 13489-1 rated load mechanical load ding to IEC/EN 609474-4-1 | cycles cycles    | 20000000<br>500000<br>500000<br>20000000<br>yes |

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 consu   | umption at 20°C         |               |          |           |          |
|                         | of 50/60Hz coil pov     | vered at 50Hz |          |           |          |
|                         |                         |               | in-rush  | VA        | 30       |
|                         |                         |               | holding  | VA        | 4        |
|                         | of 50/60Hz coil pow     | vered at 60Hz |          |           |          |
|                         | ·                       |               | in-rush  | VA        | 25       |
|                         |                         |               | holding  | VA        | 3        |
|                         | of 60Hz coil powere     | ed at 60Hz    |          |           |          |
|                         | o. oo oo poo            |               | in-rush  | VA        | 30       |
|                         |                         |               | holding  | VA        | 4        |
| Dissipation at holding  | =20°C 50Hz              |               | noiding  | W         | 0.95     |
| Max cycles frequency    |                         |               |          | v v       | J.JU     |
| Mechanical operation    |                         |               |          | cycles/h  | 3600     |
| Operating times         |                         |               |          | cycles/II | 3000     |
| Average time for Us of  | ontrol                  |               |          |           |          |
| Average time for Us C   | in AC                   |               |          |           |          |
|                         | In AC                   | Ola sia si NO |          |           |          |
|                         |                         | Closing NO    |          |           | 40       |
|                         |                         |               | 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    |          |           |          |
|                         |                         | Ŭ             | min      | ms        | 18       |
|                         |                         |               | max      | ms        | 25       |
|                         |                         | Opening NO    |          |           | -        |
|                         |                         |               | min      | ms        | 2        |
|                         |                         |               | max      | ms        | 3        |
|                         |                         | Closing NC    | παλ      | 1113      | •        |
|                         |                         | Closing NO    | min      | ms        | 3        |
|                         |                         |               | max      | ms        | 5        |
|                         |                         | Opening NC    | IIIdX    | 1113      | 5        |
|                         |                         | Opening No    | min      | mo        | 11       |
|                         |                         |               | min      | ms        | 11<br>17 |
| III tochnical data      |                         |               | max      | ms        | 17       |
| UL technical data       | ) for three phase AO    | motor         |          |           |          |
| Full-load current (FLA) | ) for trifee-phase AC i | HOIOI         | -1.4001/ | ^         | 7.0      |
|                         |                         |               | at 480V  | A         | 7.6      |
| 70.11                   |                         |               | at 600V  | Α         | 6.1      |
| Yielded mechanical pe   |                         |               |          |           |          |
|                         | for single-phase AC     | C motor       |          |           |          |
|                         |                         |               | 110/120V | HP        | 0.5      |
|                         |                         |               |          |           |          |

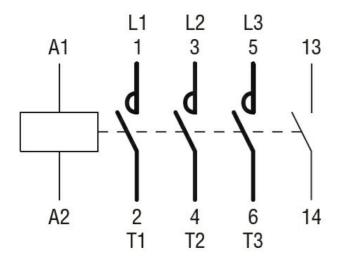




|   |                                    | 230V                  | HP             | 1.5                       |
|---|------------------------------------|-----------------------|----------------|---------------------------|
| for   | three-phase AC motor               |                       |                |                           |
|   |                                    | 200/208V              | HP             | 2                         |
|   |                                    | 220/230V              | HP             | 3                         |
|   |                                    | 460/480V              | HP             | 5                         |
|   |                                    | 575/600V              | HP             | 5                         |
| General USE   |                                    |                       |                |                           |
| Co  | ontactor                           |                       |                |                           |
|   |                                    | AC current            | Α              | 20                        |
| Short-circuit protection fuse                         | e, 600V                            |                       |                |                           |
| Hiç   | gh fault                           |                       |                |                           |
|   |                                    | Short circuit current | kA             | 100                       |
|   |                                    | Fuse rating           | Α              | 30                        |
|   |                                    | Fuse class            |                | J                         |
| Sta   | andard fault                       |                       |                |                           |
|   |                                    | Short circuit current | kA             | 5                         |
|   |                                    | Fuse rating           | Α              | 30                        |
| Contact rating of auxiliary of                        | contacts according to UL           |                       |                | A600 - Q600               |
| Ambient conditions                                    | ,                                  |                       |                |                           |
| Temperature   |                                    |                       |                |                           |
| -   | perating temperature               |                       |                |                           |
| - 1   | 3 1 1 1 1 1 1 1                    | min                   | °C             | -50                       |
|   |                                    | 111111                |                |                           |
|   |                                    | max                   | °C             |                           |
| Sto   | orage temperature                  |                       |                | +70                       |
| Sto   | orage temperature                  | max                   | °C             | +70                       |
| Sto   | orage temperature                  | max<br>min            | °C             | +70<br>-60                |
|   | orage temperature                  | max                   | °C<br>°C<br>°C | +70<br>-60<br>+80         |
| Max altitude  | orage temperature                  | max<br>min            | °C             | +70<br>-60                |
| Max altitude Resistance & Protection                  | orage temperature                  | max<br>min            | °C<br>°C<br>°C | +70<br>-60<br>+80<br>3000 |
| Max altitude Resistance & Protection Pollution degree | orage temperature                  | max<br>min            | °C<br>°C<br>°C | +70<br>-60<br>+80         |
| Max altitude Resistance & Protection                  | orage temperature                  | max<br>min<br>max     | °C<br>°C<br>°C | +70<br>-60<br>+80<br>3000 |
| Max altitude Resistance & Protection Pollution degree | 57<br>(2.24")<br>(2.24")<br>(2.57) | min max               | °C °C °C m     | +70<br>-60<br>+80<br>3000 |

**ENERGY AND AUTOMATION** 

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, AC COIL 60HZ, 24VAC, 1NO AUXILIARY CONTACT



#### 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