



Product designation

Power contactor

Product type designation

BG12

Contact characteristics

| | | |
|--|---|--------|
| Number of poles | Nr. | 3 |
| 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-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$) | A 12 |
| | AC-4 (400V) | A 4.8 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V | kW 3.2 |
| | 400V | kW 5.7 |
| | 415V | kW 6.2 |
| | 440V | kW 5.5 |
| | 500V | kW 5 |
| | 690V | kW 5 |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW 8 |
| | 400V | kW 14 |
| | 500V | kW 16 |
| | 690V | kW 22 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ | A 12 |
| | 48V | A 10 |
| | 75V | A 4 |
| | 110V | A 3 |
| | 220V | A — |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series | $\leq 24\text{V}$ | A 15 |
| | 48V | A 14 |
| | 75V | A 9 |
| | 110V | A 8 |
| | 220V | A — |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$ | A 16 |
| | 48V | A 16 |
| | 75V | A 10 |
| | 110V | A 10 |
| | 220V | A 2 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series | | |

| | | | |
|--|-----------------|------------------|------|
| | ≤24V | A | — |
| | 48V | A | — |
| | 75V | A | — |
| | 110V | A | — |
| | 220V | A | — |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | A | 7 |
| | 48V | A | 6 |
| | 75V | A | 2 |
| | 110V | A | 1 |
| | 220V | A | — |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | A | 8 |
| | 48V | A | 8 |
| | 75V | A | 5 |
| | 110V | A | 4 |
| | 220V | A | — |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 10 |
| | 48V | A | 10 |
| | 75V | A | 6 |
| | 110V | A | 5 |
| | 220V | A | 0,8 |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | — |
| | 48V | A | — |
| | 75V | A | — |
| | 110V | A | — |
| | 220V | A | — |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 96 |
| Protection fuse | | | |
| | gG (IEC) | A | 20 |
| | aM (IEC) | A | 16 |
| Making capacity (RMS value) | | A | 120 |
| Breaking capacity at voltage | | | |
| | 440V | A | 96 |
| | 500V | A | 72 |
| | 690V | A | 72 |
| Resistance per pole (average value) | | mΩ | 10 |
| Power dissipation per pole (average value) | | | |
| | I _{th} | W | 4 |
| | AC3 | W | 1.44 |
| Tightening torque for terminals | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |
| | min | I _{bin} | 7.1 |
| | max | I _{bin} | 8.8 |
| 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 ² 0.75 |
| | | max | mm ² 2.5 |
| Flexible c/w lug conductor section | | | |
| | | min | mm ² 1.5 |
| | | max | mm ² 2.5 |
| Flexible with insulated spade lug conductor section | | | |
| | | min | mm ² 1.5 |
| | | max | mm ² 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 | 183 |
| Conductor section | | | |
| AWG/kcmil conductor section | | max | 12 |
| Auxiliary contact characteristics | | | |
| Thermal current I _{th} | | A | 10 |
| IEC/EN 60947-5-1 designation | | | A600 - Q600 |
| Operating current AC15 | | | |
| | | 230V | A 3 |
| | | 400V | A 1.9 |
| | | 500V | A 1.4 |
| Operating current DC12 | | | |
| | | 110V | A 2.9 |
| Operating current DC13 | | | |
| | | 24V | A 2.9 |
| | | 48V | A 1.4 |
| | | 60V | A 1.2 |
| | | 110V | A 0.6 |
| | | 125V | A 0.55 |
| | | 220V | A 0.3 |
| | | 600V | A 0.1 |
| 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 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 |
|---|------|

Max cycles frequency

Mechanical operation

| | |
|----------|------|
| cycles/h | 3600 |
|----------|------|

Operating times

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 |

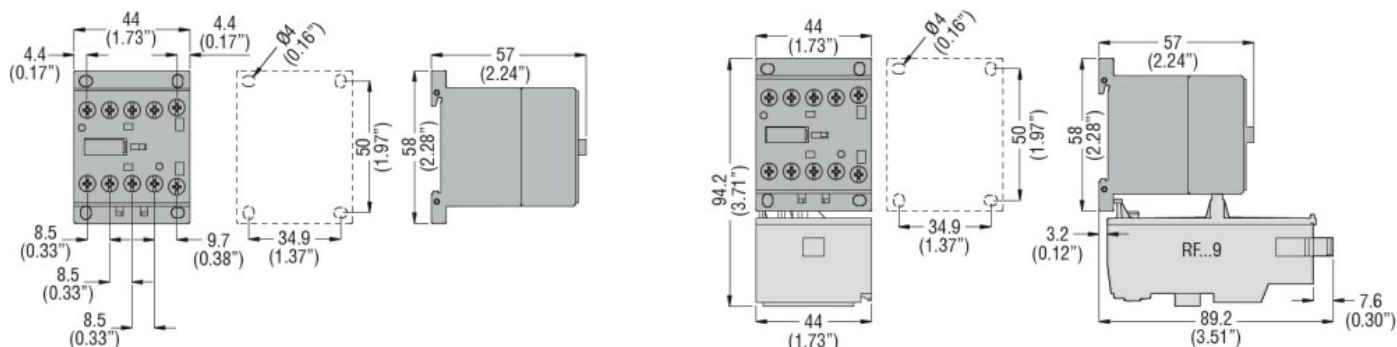
Closing NC

| | | |
|-----|----|---|
| min | ms | 3 |
| max | ms | 5 |

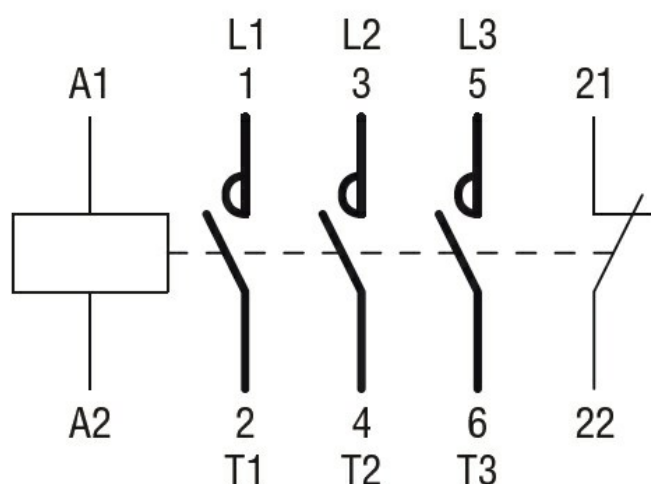
Opening NC

| | | |
|-----|----|----|
| min | ms | 11 |
|-----|----|----|

| | | | | |
|--|-----------------------|-----|----|-------------|
| | | max | ms | 17 |
| UL technical data | | | | |
| Full-load current (FLA) for three-phase AC motor | | | | |
| | at 480V | A | | 11 |
| | at 600V | A | | 11 |
| 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 | | 3 |
| | 220/230V | HP | | 3 |
| | 460/480V | HP | | 7.5 |
| | 575/600V | HP | | 10 |
| General USE | | | | |
| Contactor | | | | |
| | AC current | A | | 20 |
| Short-circuit protection fuse, 600V | | | | |
| High fault | | | | |
| | Short circuit current | kA | | 100 |
| | Fuse rating | A | | 30 |
| | Fuse class | J | | |
| Standard fault | | | | |
| | Short circuit current | kA | | 5 |
| | Fuse rating | A | | 30 |
| Contact rating of auxiliary 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 & 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