



| | | | |
|---|--------------------|-----|-----|
| Product designation | Power contactor | | |
| Product type designation | BG09 | | |
| 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 (≤40°C) | A | 20 |
| | AC-1 (≤55°C) | A | 18 |
| | AC-1 (≤70°C) | A | 15 |
| | AC-3 (≤440V ≤55°C) | A | 9 |
| | AC-4 (400V) | A | 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 I _e in DC1 with L/R ≤ 1ms with 1 poles in series | ≤24V | A | 12 |
| | 48V | A | 10 |
| | 75V | A | 4 |
| | 110V | A | 3 |
| | 220V | A | – |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 2 poles in series | ≤24V | A | 15 |
| | 48V | A | 14 |
| | 75V | A | 9 |
| | 110V | A | 8 |
| | 220V | A | – |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 3 poles in series | ≤24V | A | 16 |
| | 48V | A | 16 |
| | 75V | A | 10 |
| | 110V | A | 10 |

| | | | |
|--|-----------------|------------------|------|
| | 220V | A | 2 |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series | ≤24V | A | 16 |
| | 48V | A | 16 |
| | 75V | A | 10 |
| | 110V | A | 10 |
| | 220V | A | 2 |
| 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 | 10 |
| | 48V | A | 10 |
| | 75V | A | 6 |
| | 110V | A | 5 |
| | 220V | A | 0,8 |
| 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) | | mΩ | 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 | lbin | 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 | 203 |
| 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 |

DC coil operating

| | | | |
|--|----------|---------|---------|
| DC rated control voltage | | V | 24 |
| DC operating voltage | | | |
| | pick-up | min | %Us 75 |
| | | max | %Us 115 |
| | drop-out | min | %Us 10 |
| | | max | %Us 25 |
| Average coil consumption $\leq 20^{\circ}\text{C}$ | | in-rush | W 2.3 |
| | | holding | W 2.3 |

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 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

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
Fuse class RK5

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

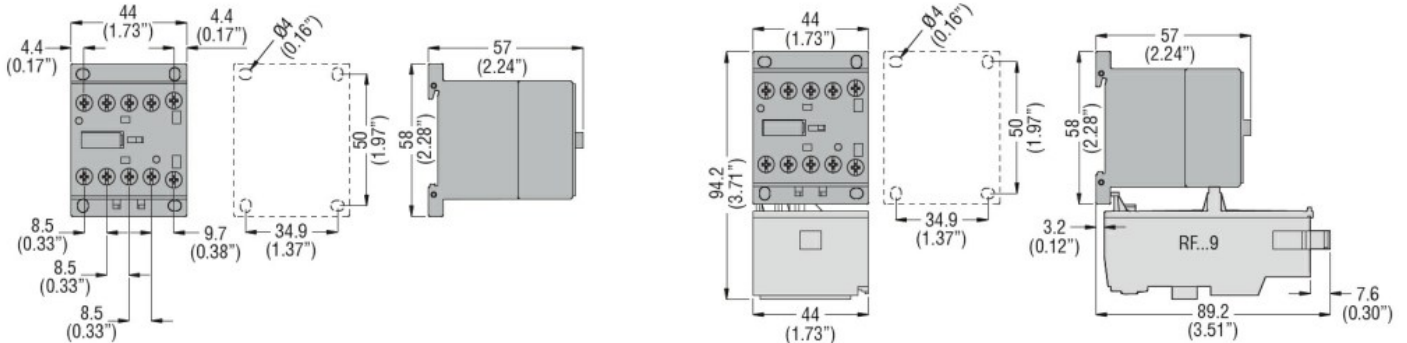
m 3000

Resistance & Protection

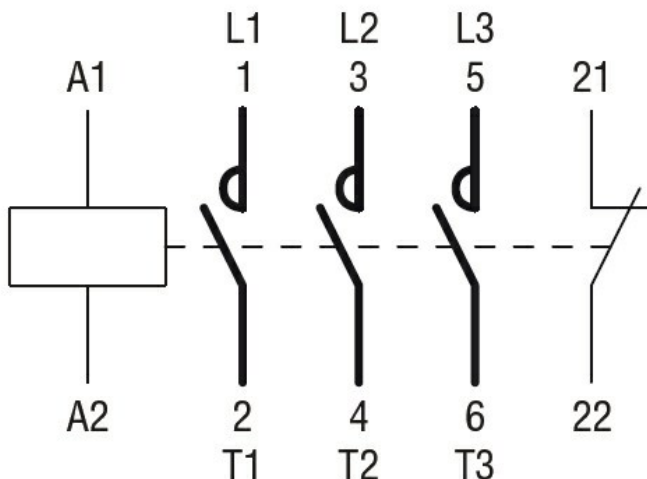
Pollution degree

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