



Power contactor
BG09

Product designation

Product type designation

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 |
| Conventional free air thermal current I_{th} IEC/EN | 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 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 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V | kW 2.2 |
| | 400V | kW 4 |
| | 415V | kW 4.3 |
| | 440V | kW 4.5 |
| | 500V | kW 5 |
| | 690V | kW 5 |
| 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 Ω | 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 0.59 |
| | max | lbin 0.74 |
| Tightening torque for coil terminal | | |

| | | | | |
|---|------|------------|-----------------|--------------------------|
| | | min | Nm | 0.8 |
| | | max | Nm | 1 |
| | | min | lbft | 0.8 |
| | | max | lbft | 0.74 |
| Max number of wires simultaneously connectable | | | nr. | 2 |
| Conductor section | | | | |
| AWG | | | | |
| | | /kcmil min | | 18 |
| | | /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 wired |
| Auxiliary contact characteristics | | | | |
| Type of contact | | | | 1 NO |
| Thermal current I _{th} | | | A | 10 |
| IEC/EN 60947-5-1 designation | | | | A600 - Q600 |
| Operational current I _e AC-1 (≤40°C) | | | A | 20 |
| 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 | | 1.1 |
| | 110V | A | | Screw / DIN rail 35mm |
| | 125V | A | | 0.3 |
| | 220V | A | | 0.1 |
| | 600V | A | | 0.6 |
| Ambient conditions | | | | |
| Temperature | | | | |
| Operating temperature | | | | |
| | | min | °C | -40 |
| | | max | °C | 60 |
| Storage temperature | | | | |
| | | min | °C | -55 |
| | | max | °C | 70 |
| Max altitude | | | m | 3000 |
| Operational position | | | | |
| Operating position normal | | | | Vertical plan |
| Operating position allowable | | | | ±30° |
| Fixing | | | | Screw / DIN rail 35mm |
| Weight | | | g | 0.178 |

Operations

| | | |
|-----------------|--------|----------|
| Mechanical life | Cycles | 20000000 |
| Electrical life | Cycles | 500000 |

Safety related data

Performance level B10d according to EN/ISO 13489-1

| | | | |
|---|-------------------------------|----------------|--------------------|
| | rated load mechanical load | Cicli Cicli | 500000 20000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | yes |
| EMC compatibility | | | yes |

AC coil operating

AC operating voltage

of 50/60Hz coil powered at 50Hz
pick-up

| | | |
|-----|-----|------|
| min | %Us | 0.75 |
| max | %Us | 1.15 |

drop-out

| | | |
|-----|-----|------|
| min | %Us | 0.2 |
| max | %Us | 0.55 |

of 50/60Hz coil powered at 60Hz
pick-up

| | | |
|-----|-----|------|
| min | %Us | 0.8 |
| max | %Us | 1.15 |

drop-out

| | | |
|-----|-----|------|
| min | %Us | 0.2 |
| max | %Us | 0.55 |

of 60Hz coil powered at 60Hz
pick-up

| | | |
|-----|-----|------|
| min | %Us | 0.75 |
| max | %Us | 1.15 |

drop-out

| | | |
|-----|-----|------|
| min | %Us | 0.2 |
| max | %Us | 0.55 |

AC operating voltage

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 $\leq 20^{\circ}\text{C}$ 50Hz

| | |
|---|------|
| W | 0.95 |
|---|------|

DC coil operating

DC operating voltage

Average coil consumption $\leq 20^{\circ}\text{C}$

| | | |
|--|---|-----|
| Average coil consumption $\leq 20^{\circ}\text{C}$ in-rush | W | 3.2 |
| Average coil consumption $\leq 20^{\circ}\text{C}$ holding | W | 3.2 |

Max cycles frequency

| | | |
|-----------------------|----------|------|
| Mechanical operations | Cycles/h | 3600 |
|-----------------------|----------|------|

Operating times

Average time for U_s control

in AC

Closing NO

| | | | |
|------------|-----|----|----|
| Opening NO | min | ms | 12 |
| | max | ms | 21 |
| Closing NC | min | ms | 9 |
| | max | ms | 18 |
| Opening NC | min | ms | 17 |
| | max | ms | 26 |
| | min | ms | 7 |
| | 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

for single-phase AC motor

| | | |
|---|----|-----|
| Yielded mechanical performance 110/120V | hp | 0.5 |
| Yielded mechanical performance 230V | hp | 1.5 |

for three-phase AC motor

| | | |
|---|----|---|
| Yielded mechanical performance 200/208V | hp | 2 |
| Yielded mechanical performance 220/230V | hp | 3 |
| Yielded mechanical performance 460/480V | hp | 5 |
| Yielded mechanical performance 575/600V | hp | 5 |

Contact rating of auxiliary contacts according to UL

A600 - Q600

General USE

Contactor

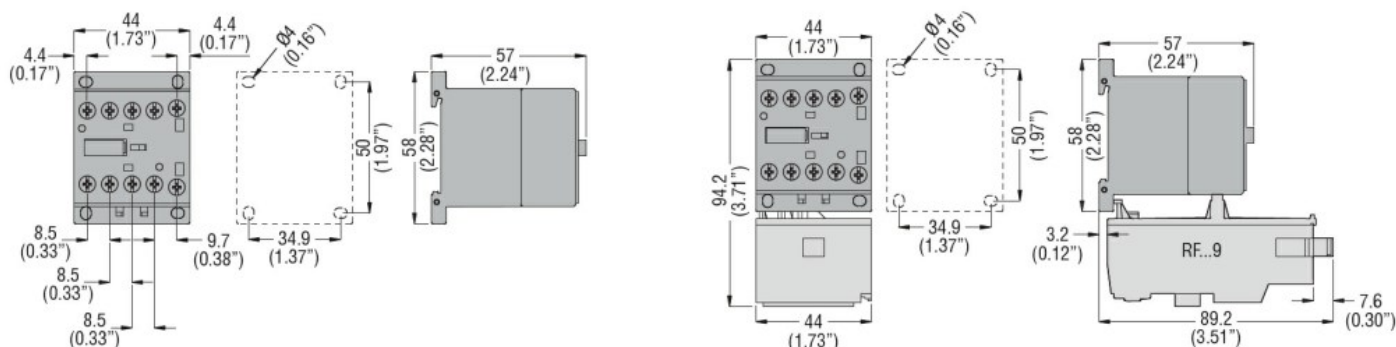
| | | |
|------------|---|----|
| AC current | A | 20 |
|------------|---|----|

Other features

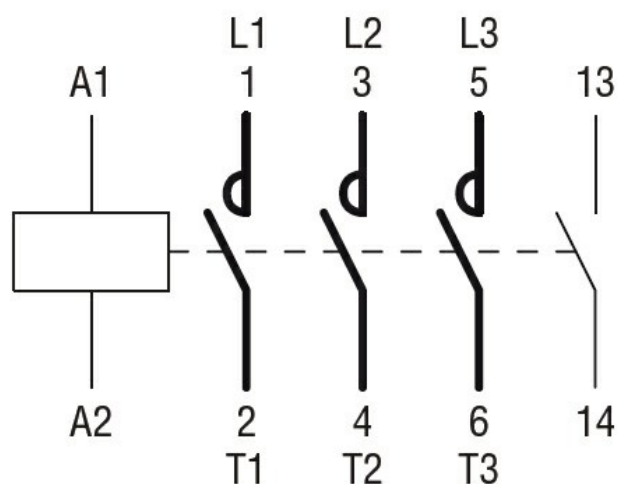
Pollution degree

3

Dimensions



Wiring diagrams



Certifications and compliance

Certifications

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

Compliance

CCC

cULus

EAC

ETIM 6 classification

EC000066 - Power contactor, AC switching