



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 |
| IEC Conventional free air thermal current I_{th} | A | 20 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A 20 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A 0 |
| | AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$) | A 9 |
| | AC-4 (400V) | A 4 |
| 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 |
| 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 | $\leq 24\text{V}$ |
| 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 | | $\leq 24\text{V}$ |
| | 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

| | | |
|-------------------|---|----|
| $\leq 24\text{V}$ | A | 16 |
| 48V | A | 16 |
| 75V | A | 10 |
| 110V | A | 10 |
| 220V | A | 2 |

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series

| | | |
|-------------------|---|---|
| $\leq 24\text{V}$ | A | 7 |
| 48V | A | 6 |
| 75V | A | 2 |
| 110V | A | 1 |
| 220V | A | – |

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series

| | | |
|-------------------|---|---|
| $\leq 24\text{V}$ | A | 8 |
| 48V | A | 8 |
| 75V | A | 5 |
| 110V | A | 4 |
| 220V | A | – |

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series

| | | |
|-------------------|---|-----|
| $\leq 24\text{V}$ | A | 10 |
| 48V | A | 10 |
| 75V | A | 6 |
| 110V | A | 5 |
| 220V | A | 0,8 |

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series

| | | |
|-------------------|---|-----|
| $\leq 24\text{V}$ | 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)

| | |
|------------------|----|
| $\text{m}\Omega$ | 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 | 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 | | |
| Mechanical features | | | |
| Operating position | normal allowable | Vertical plan ±30° | |
| Fixing | Screw / DIN rail 35mm | | |
| Weight | g | 182 | |
| Auxiliary contact characteristics | | | |
| Type of contact | 1 NC | | |
| 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 mechanical load | cycles | 500000 |
| | | cycles | 20000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | yes | | |
| EMC compatibility | Yes | | |
| AC coil operating | | | |
| Rated AC voltage at 50/60Hz, 60Hz | min | V | 12 |
| | max | V | 575 |
| 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 operating voltage 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 | 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 |

Contact rating of auxiliary contacts according to UL

A600 - Q600

General USE

Contactor

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

Ambient conditions

Temperature

Operating temperature

| | | |
|-----|----|-----|
| min | °C | -40 |
| max | °C | 60 |

Storage temperature

| | | |
|-----|----|-----|
| min | °C | -55 |
| max | °C | 70 |

Max altitude

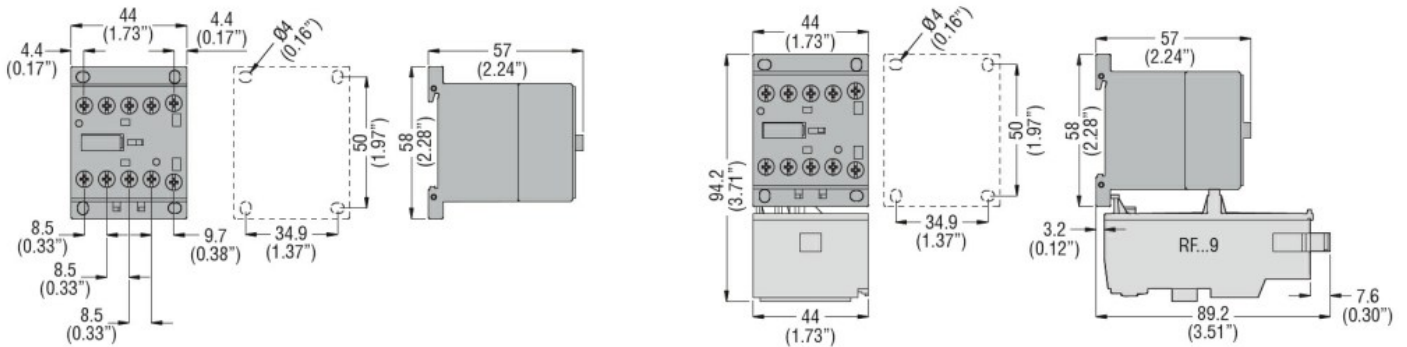
m 3000

Resistance & Protection

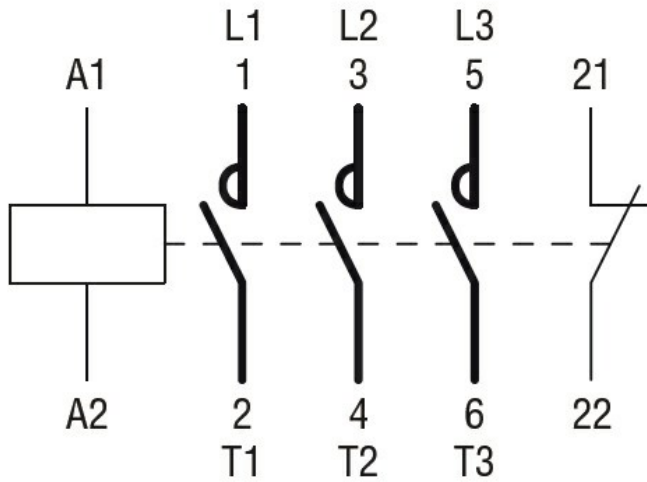
Pollution degree

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