



| | | | |
|---|---|-----|-----|
| Product designation | Power contactor | | |
| Product type designation | BGF09 | | |
| Contact characteristics | | | |
| Number of poles | Nr. | 4 | |
| Rated insulation voltage Ui IEC/EN | V | 690 | |
| Rated impulse withstand voltage $Uimp$ | kV | 6 | |
| Operational frequency | min | Hz | 25 |
| | max | Hz | 400 |
| IEC Conventional free air thermal current Ith | | A | 20 |
| Operational current Ie | | | |
| | AC-1 ($\leq 40^{\circ}\text{C}$) | A | 20 |
| | AC-1 ($\leq 55^{\circ}\text{C}$) | A | 18 |
| | AC-1 ($\leq 70^{\circ}\text{C}$) | A | 15 |
| | 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 |
| IEC max current Ie 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 Ie 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 Ie 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 Ie 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 |
| 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 | 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 | | Vertical plan ±30° |
| Fixing | | | Screw / DIN rail 35mm |
| Weight | g | | 181 |
| Auxiliary contact characteristics | | | |
| Thermal current I _{th} | A | | 10 |
| IEC/EN 60947-5-1 designation | | | A600 |
| 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 |
| 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 $\leq 20^{\circ}\text{C}$ 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 | | |
| Rated operational voltage AC (UL) | V | 600 |
| 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 |

Ambient conditions

Temperature

Operating temperature

| | | |
|-----|----|-----|
| min | °C | -50 |
| max | °C | +70 |

Storage temperature

| | | |
|-----|----|-----|
| min | °C | -60 |
| max | °C | +80 |

Max altitude

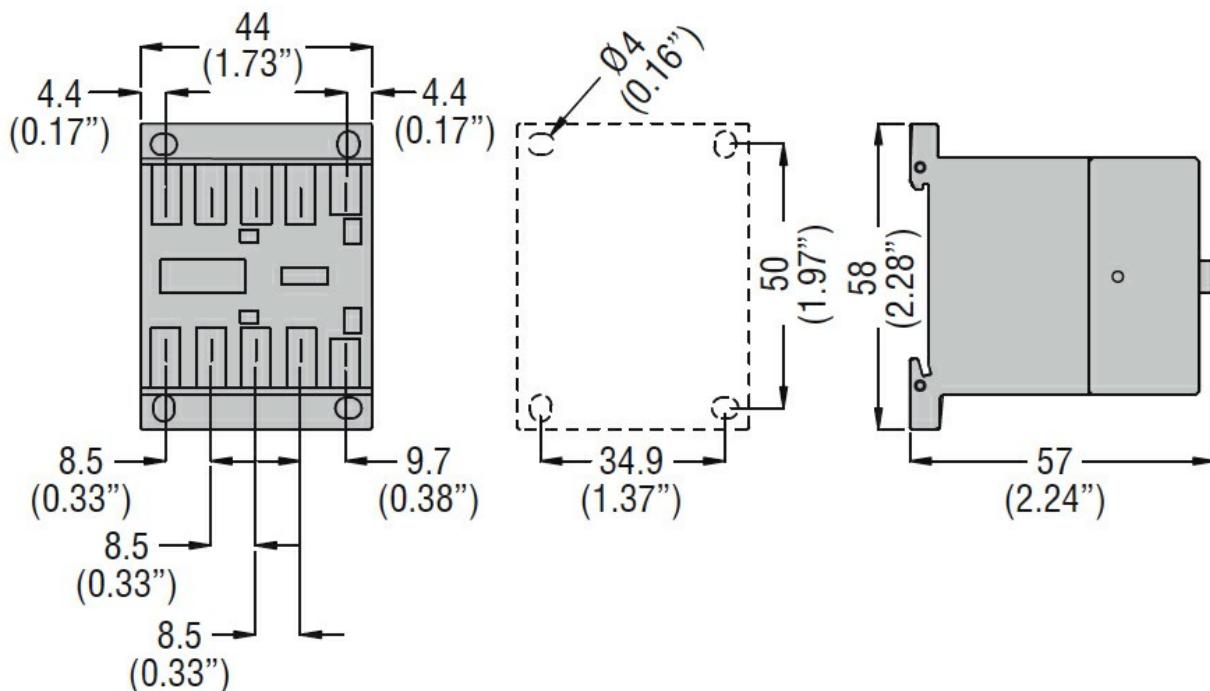
m 3000

Resistance & Protection

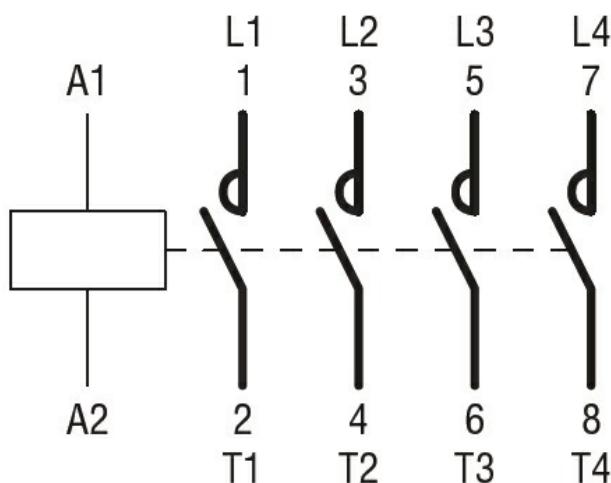
Pollution degree

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