

| | 9 | |
|---------|-----|---------|
| BGF0031 | | l de la |
| | 0 m | BGF0031 |

| Product designation Product type designation | | | Power contactor BGF09 |
|--|--------------------|-----|--------------------------|
| Contact characteristics | | | 2.0.00 |
| 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 | | А | 20 |
| Operational current le | | | |
| | AC-1 (≤40°C) | А | 20 |
| | AC-1 (≤55°C) | А | 18 |
| | AC-1 (≤70°C) | А | 15 |
| | AC-3 (≤440V ≤55°C) | А | 9 |
| | AC-4 (400V) | А | 4 |
| Rated operational power AC-1 (T≤40°C) | | | |
| | 230V | kW | 8 |
| | 400V | kW | 14 |
| | 500V | kW | 16 |
| | 690V | kW | 22 |
| IEC max current le in DC1 with $L/R \le 1$ ms with 1 poles in series | | | |
| | ≤24V | А | 12 |
| | 48V | А | 10 |
| | 75V | А | 4 |
| | 110V | А | 3 |
| | 220V | Α | _ |
| IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series | | | |
| | ≤24V | А | 15 |
| | 48V | А | 14 |
| | 75V | А | 9 |
| | 110V | А | 8 |
| | 220V | Α | _ |
| IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series | | | |
| | ≤24V | А | 16 |
| | 48V | А | 16 |
| | 75V | А | 10 |
| | 110V | А | 10 |
| | 220V | Α | 2 |
| IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series | | | |
| | ≤24V | А | 16 |
| | 48V | А | 16 |
| | 75V | А | 10 |
| | 110V | А | 10 |
| | 220V | А | 2 |

IEC max current le in DC3-DC5 with L/R \leq 15ms with 1 poles in series



| | | ≤24V | А | 7 |
|--------------------------|---|----------|------|------|
| | | 48V | А | 6 |
| | | 75V | А | 2 |
| | | 110V | А | 1 |
| | | 220V | А | _ |
| IEC max current le in D | DC3-DC5 with L/R \leq 15ms with 2 poles in series | | | |
| | ' | ≤24V | А | 8 |
| | | 48V | А | 8 |
| | | 75V | А | 5 |
| | | 110V | А | 4 |
| | | 220V | А | _ |
| IEC max current le in D | DC3-DC5 with L/R \leq 15ms with 3 poles in series | | | |
| | ' | ≤24V | А | 10 |
| | | 48V | А | 10 |
| | | 75V | А | 6 |
| | | 110V | А | 5 |
| | | 220V | А | 0,8 |
| IEC max current le in D | DC3-DC5 with L/R \leq 15ms with 4 poles in series | | | |
| | | ≤24V | А | 10 |
| | | 48V | A | 10 |
| | | 75V | A | 6 |
| | | 110V | A | 5 |
| | | 220V | A | 0,8 |
| Short-time allowable cu | urrent for 10s (IEC/EN60947-1) | | A | 96 |
| Protection fuse | | | | |
| | | gG (IEC) | А | 20 |
| | | aM (IEC) | A | 10 |
| Making capacity (RMS | value) | (| A | 92 |
| Breaking capacity at vo | | | | - |
| 5 1 5 | 5 | 440V | А | 72 |
| | | 500V | A | 72 |
| | | 690V | А | 72 |
| Resistance per pole (a | verage value) | | mΩ | 10 |
| Power dissipation per p | | | | |
| | | Ith | W | 4 |
| | | AC-3 | W | 0.81 |
| Tightening torque for te | erminals | | | |
| 5 8 | | min | Nm | 0.8 |
| | | max | Nm | 1 |
| | | min | lbin | 9 |
| | | max | Ibin | 9 |
| Tightening torque for co | pil terminal | | | |
| J J | | min | Nm | 0.8 |
| | | max | Nm | 1 |
| | | min | Ibin | 9 |
| | | max | Ibin | 9 |
| Max number of wires si | multaneously connectable | | Nr. | 2 |
| Conductor section | | | - | |
| | AWG/Kcmil | | | |
| | | max | | 12 |
| | Flexible w/o lug conductor section | max | | |
| | | min | mm² | 0.75 |
| | | max | mm² | 2.5 |
| | | max | | |



| | Flexible c/w lug conductor section | | | |
|---|---|-----------------|----------|------------------|
| | | min | mm² | 1.5 |
| | | max | mm² | 2.5 |
| | Flexible with insulated spade lug conductor section | l | | |
| | | min | mm² | 1.5 |
| | | max | mm² | 2.5 |
| Power terminal protoc | ction according to IEC/EN 60529 | | | IP20 when |
| | | | | properly wired |
| Mechanical features | | | | |
| Operating position | | | | |
| | | normal | | Vertical plan |
| | | allowable | | ±30° |
| Fixing | | | | Screw / DIN rail |
| | | | | 35mm |
| Weight | | | g | 210 |
| Conductor section | | | | |
| | AWG/kcmil conductor section | | | |
| | | max | | 12 |
| Auxiliary contact chara | acteristics | | | |
| Thermal current Ith | | | А | 10 |
| IEC/EN 60947-5-1 de | signation | | | Q600 |
| Operations | | | | |
| Mechanical life | | | cycles | 2000000 |
| Electrical life | | | cycles | 500000 |
| Safety related data | | | | |
| Performance level B1 | 0d according to EN/ISO 13489-1 | | | |
| | - | rated load | cycles | 500000 |
| | n | nechanical load | cycles | 20000000 |
| Mirror contats accordi | ing to IEC/EN 609474-4-1 | | , | yes |
| EMC compatibility | | | | yes |
| DC coil operating | | | | , |
| DC rated control volta | IGE | | V | 24 |
| DC operating voltage | | | | |
| 2 e eperanig renage | pick-up | | | |
| | Front of | min | %Us | 75 |
| | | max | %Us | 115 |
| | drop-out | тах | /000 | 110 |
| | | min | %Us | 10 |
| | | max | %Us | 25 |
| Average coil consump | ation <20°C | Пах | /000 | 20 |
| | | in-rush | W | 3.2 |
| | | holding | W | 3.2 |
| Max cycles frequency | | noiding | vv | 0.2 |
| Max cycles nequency Mechanical operation | | | cycles/h | 3600 |
| Operating times | | | 0,000/11 | |
| Average time for Us c | | | | |
| worage une ior 05 0 | in AC | | | |
| | IN AC Closing NO | | | |
| | | | me | 10 |
| | | min | ms | 12 |
| | | | | 04 |
| | | max | ms | 21 |
| | Opening NO | max | | |
| | Opening NO | max min | ms | 9 |
| | Opening NO Closing NC | max | | |

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11BGF09T4D024 FOUR-POLE CONTACTOR, DC COIL, 24VDC, FASTON TERMINALS

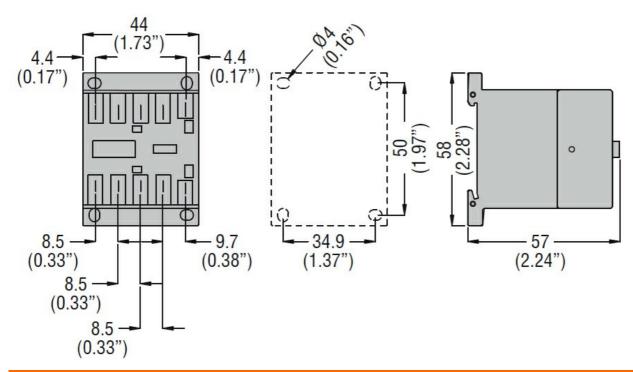
| | | | min | ms | 17 |
|--------------------------|-------------------------|------------|-----------------------|------------|------------|
| | | | max | ms | 26 |
| | | Opening NC | | | |
| | | | min | ms | 7 |
| | | | max | ms | 17 |
| | in DC | | | | |
| | | Closing NO | | | |
| | | | min | ms | 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 | A) for three-phase AC r | notor | | | |
| | | | at 480V | А | 7.6 |
| | | | at 600V | А | 6.1 |
| Yielded mechanical p | performance | | | | |
| | for single-phase AC | c motor | | | |
| | 5 1 | | 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 | | | 010,0001 | | • |
| | Contactor | | | | |
| | Contactor | | AC current | А | 20 |
| Short-circuit protection | on fuse 600V | | | <i>/</i> \ | |
| enore onour protoolic | High fault | | | | |
| | | | Short circuit current | kA | 100 |
| | | | Fuse rating | A | 30 |
| | | | Fuse class | | J |
| | Standard fault | | 1 435 61433 | | <u> </u> |
| | | | Short circuit current | kA | 5 |
| | | | Fuse rating | A | 30 |
| Ambient conditions | | | | ~ | |
| Temperature | | | | | |
| remperature | Operating temperat | | | | |
| | Operating temperat | | min | °C | -50 |
| | | | | °C | -50 +70 |
| | Storage tomperature | 0 | max | U | 710 |
| | Storage temperatur | C | min | °C | 60 |
| | | | min | °C °C | -60 +80 |
| Mox oltitude | | | max | | |
| Max altitude | | | | m | 3000 |

Max altitude Resistance & Protection Pollution degree Dimensions

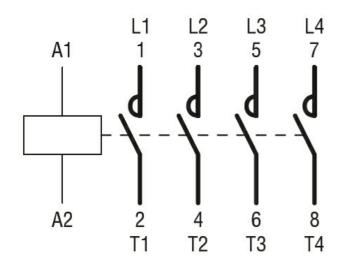
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Wiring diagrams



Certifications and compliance

| Continioutions and o | | |
|----------------------|------------------------|------------------|
| 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 | | |
| | | EC000066 - |
| ETIM 8.0 | | Power contactor, |
| | | AC switching |