



| Product designation Product type designation | | | Power contactor BF09 |
|--|--------------------|--------|-------------------------|
| Contact characteristics | | | 2. 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 | | Α | 25 |
| Operational current le | | | |
| | AC-1 (≤40°C) | Α | 25 |
| | AC-1 (≤55°C) | Α | 20 |
| | AC-1 (≤70°C) | Α | 18 |
| | AC-3 (≤440V ≤55°C) | Α | 9 |
| | AC-4 (400V) | Α | 4.9 |
| Rated operational power AC-1 (T≤40°C) | | | |
| | 230V | kW | 9.5 |
| | 400V | kW | 16 |
| | 500V | kW | 21 |
| | 690V | kW | 27 |
| IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series | | | |
| | ≤24V | Α | 15 |
| | 48V | Α | 13 |
| | 75V | Α | 12 |
| | 110V | Α | 6 |
| | 220V | Α | |
| IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series | | _ | |
| | ≤24V | Α | 18 |
| | 48V | Α | 18 |
| | 75V | A | 17 |
| | 110V | A | 12 |
| 150 | 220V | Α | |
| IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series | 40 AV | | 00 |
| | ≤24V | A | 20 |
| | 48V | A | 20 |
| | 75V 110V | A | 20 |
| | 220V | A | 15 10 |
| IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series | 220 V | Α | 10 |
| TEC THAN CUITETIC TE HT DCT WITH L/K > THIS WITH 4 POIES IN SERIES | -241 | ۸ | 20 |
| | ≤24V 48V | A A | 20 20 |
| | 48 V 75 V | A | 20 |
| | 75V 110V | A | 20 16 |
| | 220V | A | 12 |
| | 2201 | ^ | 14 |



| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
|--|----------|-------|------|
| · | ≤24V | Α | 10 |
| | 48V | Α | 9 |
| | 75V | Α | 8 |
| | 110V | Α | 2 |
| | 220V | Α | _ |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| The max surrent to in 200 200 mar 2/10 Follow mar 2 police in conce | ≤24V | Α | 13 |
| | 48V | A | 11 |
| | 75V | A | 10 |
| | 110V | A | 7 |
| | 220V | A | 2 |
| IEC may current to in DC2 DC5 with L/D < 15mg with 2 notes in series | 220 V | | |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | <0.4) / | ^ | 4.5 |
| | ≤24V | A | 15 |
| | 48V | A | 15 |
| | 75V | Α | 13 |
| | 110V | Α | 11 |
| | 220V | Α | 6 |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | Α | 15 |
| | 48V | Α | 15 |
| | 75V | Α | 15 |
| | 110V | Α | 12 |
| | 220V | Α | 7 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | Α | 150 |
| Protection fuse | | | |
| | gG (IEC) | Α | 25 |
| | aM (IEC) | Α | 10 |
| Making capacity (RMS value) | | Α | 90 |
| Breaking capacity at voltage | | | |
| | 440V | Α | 72 |
| | 500V | Α | 72 |
| | 690V | A | 71 |
| Resistance per pole (average value) | 000 V | mΩ | 2.5 |
| Power dissipation per pole (average value) | | 11122 | 2.0 |
| Tower dissipation per pole (average value) | Ith | W | 1.6 |
| | | W | |
| Tightoning torque for terminals | AC-3 | VV | 0.2 |
| Tightening torque for terminals | | N 1 | 4.5 |
| | min | Nm | 1.5 |
| | max | Nm | 1.8 |
| | min | Ibin | 1.1 |
| | max | Ibin | 1.5 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |
| | min | Ibin | 0.8 |
| | max | Ibin | 0.74 |
| Max number of wires simultaneously connectable | | Nr. | 2 |
| Conductor section | | | |
| AWG/Kcmil | | | |
| | max | | 10 |
| Flexible w/o lug conductor section | | | |
| | min | mm² | 1 |
| | · | | |





| | | | | • |
|----------------------------|---|-------------------|----------------|------------------|
| | Elevible a horizon a andreada a catica | max | mm² | 6 |
| | Flexible c/w lug conductor section | min | mm² | 1 |
| | | min | mm² | 1 4 |
| | Flexible with insulated spade lug conductor | max | mm² | 4 |
| | The sibile with insulated space lug conductor | min | mm² | 1 |
| | | max | mm² | 4 |
| | | - Indx | | IP20 when |
| Power terminal protect | ction according to IEC/EN 60529 | | | properly wired |
| Mechanical features | | | | |
| Operating position | | | | |
| | | normal | | Vertical plan |
| | | allowable | | ±30° |
| Fixing | | | | Screw / DIN rail |
| | | | | 35mm |
| Weight | | | g | 356 |
| Conductor section | ANA/O/I | | | |
| | AWG/kcmil conductor section | | | 10 |
| Operations | | max | | 10 |
| Operations Mechanical life | | | cycles | 20000000 |
| Electrical life | · | | cycles | 2000000 |
| Safety related data | | | Cycles | 2000000 |
| | 0d according to EN/ISO 13489-1 | | | |
| i onomianos ievei bi | od decorating to 2.14.166 To 166 T | rated load | cycles | 2000000 |
| | | mechanical load | cycles | 20000000 |
| Mirror contats accordi | ng to IEC/EN 609474-4-1 | | | yes |
| EMC compatibility | | | | yes |
| AC coil operating | | | | |
| Rated AC voltage at 6 | 0Hz | | V | 230 |
| AC operating voltage | | | | |
| | of 60Hz coil powered at 60Hz | | | |
| | pick-up | | | |
| | | min | %Us | 80 |
| | | max | %Us | 110 |
| | drop-out | | 0/11- | 20 |
| | | min max | %Us %Us | 20 55 |
| AC average coil consu | umption at 20°C | ıııax | /oUS | JJ |
| AS average coll collst | of 60Hz coil powered at 60Hz | | | |
| | 3. 301 12 3011 poworod at 301 12 | in-rush | VA | 75 |
| | | holding | VA | 9 |
| Dissipation at holding | | | W | 2.5 |
| Max cycles frequency | | | | |
| Mechanical operation | | | cycles/h | 3600 |
| Operating times | | | | |
| Average time for Us c | ontrol | | | |
| | in AC | | | |
| | Closing NO | | | |
| | | min | ms | 8 |
| | | | | 0.4 |
| | _ | max | ms | 24 |
| | Opening NO | | | |
| | Opening NO | max min max | ms ms ms | 10 20 |

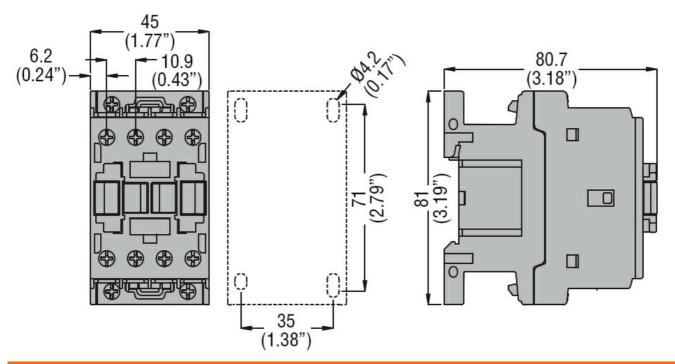




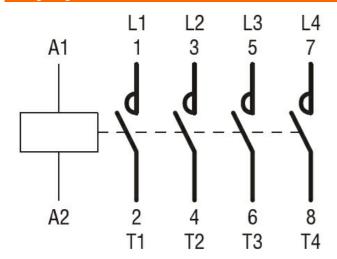
| | Closing NC | | | |
|-----------------------------|---------------------------|-----------------------|----|------------|
| | · · | min | ms | 14 |
| | | max | ms | 28 |
| | Opening NC | | | |
| | | min | ms | 7 |
| | | max | ms | 18 |
| UL technical data | | | | |
| Full-load current (FLA) | for three-phase AC motor | | | |
| | | at 480V | Α | 7.6 |
| | | at 600V | Α | 0.375 |
| Yielded mechanical pe | rformance | | | |
| | for single-phase AC motor | | | |
| | | 110/120V | HP | 0.75 |
| | | 230V | HP | 2 |
| | for three-phase AC motor | | | |
| | | 200/208V | HP | 3 |
| | | 220/230V | HP | 3 |
| | | 460/480V | HP | 5 |
| | | 575/600V | HP | 7.5 |
| General USE | | | | |
| | Contactor | | | |
| | | AC current | Α | 25 |
| Short-circuit protection | | | | |
| | High fault | | | |
| | | Short circuit current | kA | 100 |
| | | Fuse rating | Α | 30 |
| | | Fuse class | | J |
| | Standard fault | | | _ |
| | | Short circuit current | kA | 5 |
| A malais not a smallition | | Fuse rating | Α | 60 |
| Ambient conditions | | | | |
| Temperature | O confirmation and | | | |
| | Operating temperature | | ۰. | 50 |
| | | min | °C | -50 -70 |
| | Ctoro as to man anatura | max | °C | 70 |
| | Storage temperature | | °C | 60 |
| | | min | °C | -60 80 |
| Max altitude | | max | | |
| Resistance & Protection | ND | | m | 3000 |
| | , | | | 3 |
| Pollution degree Dimensions | | | | J |
| Difficions | | | | |

ENERGY AND AUTOMATION

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 25A, AC COIL 50/60HZ, 230VAC - IEC/EN/BS 60335-1



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60335-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching