



| Number of poles | Product designation Product type designation | | | Power contactor BF09 |
|---|---|-------------|-----|-------------------------|
| Number of poles Nr. 4 Rated insulation voltage Ui IEC/EN V 690 Rated insulation voltage Uimp kV 6 Operational frequency min Hz 25 max Hz 400 IEC Conventional frequency min Hz 25 max Hz 400 IEC Conventional free air thermal current lth A 25 Operational current le AC-1 (≤40°C) A 25 AC-1 (≤55°C) A 20 AC-1 (≤55°C) A 20 AC-1 (≤55°C) A 9 A 26 AC-1 (≤40°V) A 4.9 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 A00V kW 16 500V kW 21 A00V kW 16 500V kW 27 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 A8V A 13 A10 | Ţ, Ţ | | | 2. 00 |
| Rated insulation voltage Ui IEC/EN V 690 Rated impulse withstand voltage Uimp kV 6 Operational frequency min Hz 25 IEC Conventional free air thermal current lth A 25 Operational current le AC-1 (≤40°C) A 25 AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 9.5 400V kW 9.5 400V kW 16 500V kW 21 690V kW 20 40 40 40< | | | Nr. | 4 |
| Rated impulse withstand voltage Ulimp | | | V | 690 |
| Min Hz 25 max Min Hz 400 EC Conventional free air thermal current lth | | | kV | 6 |
| EC Conventional free air thermal current Ith | Operational frequency | | | |
| EC Conventional free air thermal current Ith | | min | Hz | 25 |
| Operational current le AC-1 (≤40°C) A 25 AC-1 (≤50°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤4400 ∨ 55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 16 500V kW 21 500V kW 27 690V kW 27 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A - - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 17 110V A 12 220V A 1 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 20 A 48V A 20 A 75V A 20 110V A 15 220V A 10 IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series | | max | Hz | 400 |
| AC-1 (≤40°C) | | | Α | 25 |
| AC-1 (≤55°C) | Operational current le | | | |
| AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 16 500V kW 27 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 18 48V A 18 75V A 17 110V A 12 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 20 48V A 20 75V A 20 110V A 15 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series | | , | Α | |
| AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 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 A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 17 110V A 18 48V A 18 75V A 17 110V A 12 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 18 48V A 20 75V A 17 110V A 12 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 20 48V A 20 75V A 20 110V A 15 220V A 10 IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series | | | Α | |
| AC-4 (400V) | | | Α | 18 |
| 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 A 15 48V A 13 75V A 12 110V A 6 220V A − IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 75V A 18 75V A 17 110V A 18 75V A 17 110V A 12 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 20 48V A 20 75V A 20 110V A 15 220V A 10 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 20 48V A 20 75V A 20 110V A 15 220V A 10 IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series | | • | Α | |
| 230V kW 9.5 400V kW 16 500V kW 21 690V kW 27 | | AC-4 (400V) | Α | 4.9 |
| A00V kW 16 500V kW 21 690V kW 27 | Rated operational power AC-1 (T≤40°C) | | | |
| Soov kW 21 690V kW 27 | | | | |
| EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series | | | | |
| Section Sec | | | | |
| \$\leq 24V | | 690V | kW | 27 |
| | IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series | | | |
| T5V | | | Α | |
| 110V A 6 220V A − | | | Α | |
| EC max current le in DC1 with L/R ≤ 1ms with 2 poles in series | | | | |
| Section Sec | | | | 6 |
| | | 220V | A | |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series | | | |
| T5V A 17 110V A 12 220V A 1 | | | | |
| 110V A 12 220V A 1 | | | | |
| EC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V | | | | |
| Section Sec | | | | |
| ≤24V A 20 48V A 20 75V A 20 110V A 15 220V A 10 10 10 10 10 10 10 | 150 H. J. BOA W. J. B. J. W. J. B. J. | 220V | А | |
| | IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series | .0.43.4 | | |
| | | | | |
| | | | | |
| 220V A 10 IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series ≤24V A 20 48V A 20 75V A 20 110V A 16 | | | | |
| IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series ≤24V A 20 48V A 20 75V A 20 110V A 16 | | | | |
| ≤24V A 20 48V A 20 75V A 20 110V A 16 | 150 | 220V | А | 10 |
| 48V A 20 75V A 20 110V A 16 | IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series | -0.07 | | 00 |
| 75V A 20 110V A 16 | | | | |
| 110V A 16 | | | | |
| | | | | |
| 22UV A 12 | | | | |
| | | 2207 | А | 14 |



FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 25A, DC COIL, 60VDC

| 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 2/11 - Tomo mar 2 poice 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 |
| | · | | |





FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 25A, DC COIL, 60VDC

| | max | mm² | 6 |
|--|--|---------------------------|--|
| | Flexible c/w lug conductor section | | |
| | min | mm² | 1 |
| | max | mm² | 4 |
| | Flexible with insulated spade lug conductor section | • | |
| | min | mm² | 1 |
| | max | mm² | IP20 when |
| Power terminal prote | ction according to IEC/EN 60529 | | properly wired |
| Mechanical features | | | property who |
| Operating position | | | |
| | normal | | Vertical plan |
| | allowable | | ±30° |
| Fixing | | | Screw / DIN rail 35mm |
| Weight | | g | 495 |
| Operations | | | |
| Mechanical life | | cycles | 20000000 |
| Electrical life | | cycles | 2000000 |
| Safety related data | | | |
| Performance level B | 10d according to EN/ISO 13489-1 | _ | |
| | rated load | cycles | 2000000 |
| EMC composibilists | mechanical load | cycles | 20000000 |
| EMC compatibility DC coil operating | | | yes |
| DC rated control volta | ane | V | 60 |
| DC operating voltage | | v | |
| Do operating vertage | pick-up | | |
| | min | %Us | 70 |
| | max | %Us | 125 |
| | drop-out | | |
| | min | %Us | 10 |
| | max | %Us | 40 |
| Average coil consum | • | | |
| | in-rush | W | |
| | | | 5.4 |
| | holding | W | 5.4 5.4 |
| | holding | W | 5.4 |
| Mechanical operation | holding | | 5.4 |
| Mechanical operation Operating times | holding / | W | 5.4 |
| Mechanical operation Operating times | holding / control | W | 5.4 |
| Mechanical operation Operating times | holding / control in AC | W | 5.4 |
| Mechanical operation Operating times | holding control in AC Closing NO | W cycles/h | 3600 |
| Mechanical operation Operating times | holding control in AC Closing NO min | W cycles/h ms | 5.4 3600 8 |
| Mechanical operation Operating times | holding control in AC Closing NO min max | W cycles/h | 3600 |
| Mechanical operation Operating times | holding control in AC Closing NO min | W cycles/h ms | 5.4 3600 8 |
| Mechanical operation Operating times | control in AC Closing NO min max Opening NO | W cycles/h ms ms | 5.4 3600 8 24 |
| Mechanical operation Operating times | control in AC Closing NO min max Opening NO min | W cycles/h ms ms | 5.4 3600 8 24 10 |
| Mechanical operation Operating times | control in AC Closing NO min max Opening NO min max | W cycles/h ms ms | 5.4 3600 8 24 10 20 |
| Mechanical operation Operating times | control in AC Closing NO min max Opening NO min max Closing NC min max | w cycles/h ms ms | 5.4 3600 8 24 10 20 |
| Mechanical operation Operating times | control in AC Closing NO min max Opening NO min max Closing NC min max Opening NC | W cycles/h ms ms ms ms | 5.4 3600 8 24 10 20 14 28 |
| Max cycles frequency Mechanical operation Operating times Average time for Us of | control in AC Closing NO min max Opening NO min max Closing NC min max | W cycles/h ms ms ms ms | 5.4 3600 8 24 10 20 |





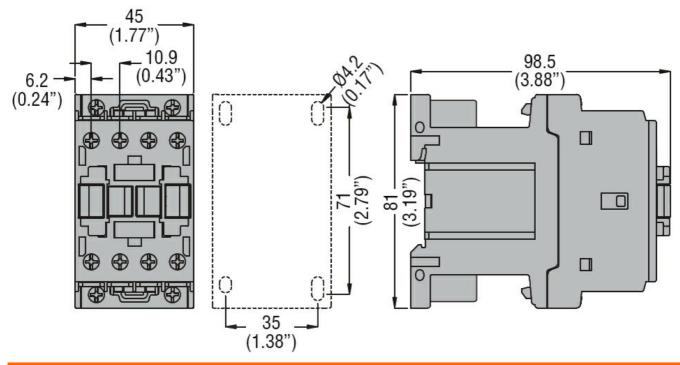
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FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 25A, DC COIL, 60VDC

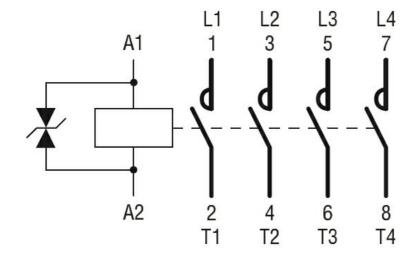
| | Closing NO | | | |
|---|---|-----------------------|---------------|----------|
| | ŭ | min | ms | 54 |
| | | max | ms | 66 |
| | Opening NO | | | |
| | -1-3 | min | ms | 14 |
| | | max | ms | 17 |
| UL technical data | | | | |
| Rated operational volta | age AC (UL) | | V | 600 |
| | for three-phase AC motor | | | |
| , | · | at 480V | Α | 7.6 |
| | | at 600V | Α | 9 |
| Yielded mechanical pe | erformance | | | |
| , | for single-phase AC motor | | | |
| | and a product of the control of the | 110/120V | HP | 0.75 |
| | | 230V | HP | 2 |
| | for three-phase AC motor | 2001 | | |
| | .s. and pridocorio motor | 200/208V | HP | 3 |
| | | 220/230V | HP | 3 |
| | | 460/480V | HP | 5 |
| | | 575/600V | HP | 7.5 |
| General USE | | 010/0001 | | 1.0 |
| Ochoral OOL | Contactor | | | |
| | Contactor | AC current | Α | 25 |
| Short-circuit protection | fuse 600V | AO cuitoni | | 20 |
| Orion circuit protection | High fault | | | |
| | riigiriadit | Short circuit current | kA | 100 |
| | | Fuse rating | A | 30 |
| | | Fuse class | ^ | J |
| | Standard fault | 1 436 61433 | | <u> </u> |
| | Gianuaru fault | Short circuit current | kA | 5 |
| | | Fuse rating | A | 60 |
| Ambient conditions | | 1 use rating | $\overline{}$ | |
| Temperature | | | | |
| Tomporature | Operating temperature | | | |
| | Operating temperature | min | °C | -50 |
| | | | °C | 70 |
| | Storage temperature | max | | 10 |
| | Storage temperature | min | °C | -60 |
| | | max | °C | 80 |
| Max altitude | | IIIdX | | 3000 |
| Resistance & Protection | an | | m | 3000 |
| | <u> </u> | | | 3 |
| Pollution degree Dimensions | | | | J |
| Hensions | | | | |







Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

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