



| | | | | |
|--|---|------|-----|-----------------|
| Product designation | | | | Power contactor |
| Product type designation | | | | BF09 |
| 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 | |
| Conventional free air thermal current I_{th} IEC/EN | A | | | 25 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A | 25 | |
| | AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$) | A | 9 | |
| | AC-4 (400V) | A | 4.9 | |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW | 9.5 | |
| | 400V | kW | 16 | |
| | 500V | kW | 21 | |
| | 690V | kW | 27 | |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V | kW | 2.2 | |
| | 400V | kW | 4.2 | |
| | 415V | kW | 4.5 | |
| | 440V | kW | 4.8 | |
| | 500V | kW | 5.5 | |
| | 690V | kW | 7.5 | |
| Short-time allowable current for 10s (IEC/EN60947-1) | A | | | 150 |
| Protection fuse | gG (IEC) | A | 25 | |
| | aM (IEC) | A | 10 | |
| Making capacity (RMS value) | A | | | 90 |
| Breaking capacity at voltage | 440V | A | 72 | |
| | 500V | A | 72 | |
| | 690V | A | 71 | |
| Resistance per pole (average value) | m Ω | | | 2.5 |
| Power dissipation per pole (average value) | Power dissipation pole (average value) I_{th} | W | 1.6 | |
| | AC3 | W | 0.2 | |
| Tightening torque for terminals | min | Nm | 1.5 | |
| | max | Nm | 1.8 | |
| | min | lbft | 1.1 | |
| | max | lbft | 1.5 | |
| 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 | AWG | | |
| | min | | 16 |
| | max | | 10 |
| Flexible w/o lug conductor section | min | mm ² | 1 |
| | max | mm ² | 6 |
| Flexible c/w lug conductor section | min | mm ² | 1 |
| | max | mm ² | 4 |
| Flexible with insulated spade lug conductor section | min | mm ² | 1 |
| | max | mm ² | 4 |
| Power terminal protection according to IEC/EN 60529 | IP20 when wired | | |
| Auxiliary contact characteristics | | | |
| Type of contact | 1 NO | | |
| Thermal current I _{th} | A | 10 | |
| IEC/EN 60947-5-1 designation | A600 - P600 | | |
| Operational current I _e AC-1 (≤40°C) | A | 25 | |
| Operating current AC15 | 230V | A | 3 |
| | 400V | A | 1.9 |
| | 500V | A | 1.4 |
| Operating current DC12 | 110V | A | 5.7 |
| Operating current DC13 | 24V | A | 5.7 |
| | 48V | A | 2.9 |
| | 60V | A | 2.3 |
| | 110V | A | Screw / DIN rail 35mm |
| | 125V | A | 0.6 |
| | 220V | A | 0.2 |
| | 600V | A | 1.2 |
| Ambient conditions | | | |
| Temperature | Operating temperature | | |
| | min | °C | -50 |
| | max | °C | 70 |
| | Storage temperature | | |
| | min | °C | -60 |
| | max | °C | 80 |
| Max altitude | | m | 3000 |
| Operational position | Operating position normal Operating position allowable | | Vertical plan ±30° |
| Mounting | Screw / DIN rail 35mm | | |
| Weight | | g | 0.358 |

Operations

| | | |
|-----------------|--------|----------|
| Mechanical life | Cycles | 20000000 |
| Electrical life | Cycles | 2000000 |

Safety related data

Performance level B10d according to EN/ISO 13489-1

| | | | |
|---|-------------------------------|----------------|---------------------|
| | rated load mechanical load | Cicli Cicli | 2000000 20000000 |
| Mirror contats according to IEC/EN 609474-4-1 | | | yes |
| EMC compatibility | | | yes |

AC coil operating

AC operating voltage

| | | | | |
|---------------------------------|-----|-----|------|--|
| of 50/60Hz coil powered at 50Hz | | | | |
| pick-up | min | %Us | 0.8 | |
| | max | %Us | 1.1 | |
| drop-out | min | %Us | 0.2 | |
| | max | %Us | 0.55 | |
| of 50/60Hz coil powered at 60Hz | | | | |
| pick-up | min | %Us | 0.85 | |
| | max | %Us | 1.1 | |
| drop-out | min | %Us | 0.2 | |
| | max | %Us | 0.55 | |
| of 60Hz coil powered at 60Hz | | | | |
| pick-up | min | %Us | 0.8 | |
| | max | %Us | 1.1 | |
| drop-out | min | %Us | 0.2 | |
| | max | %Us | 0.55 | |

AC operating voltage

| | | | |
|-----------------------------------|---------|----|-----|
| of 50/60Hz coil powered at 50Hz | in-rush | VA | 75 |
| | holding | VA | 9 |
| of 50/60Hz coil powered at 60Hz | in-rush | VA | 70 |
| | holding | VA | 6.5 |
| of 60Hz coil powered at 60Hz | in-rush | VA | 75 |
| | holding | VA | 9 |
| Dissipation at holding ≤20°C 50Hz | | W | 2.5 |

DC coil operating

DC rated control voltage

| | | |
|-----|---|-----|
| max | V | 250 |
|-----|---|-----|

Max cycles frequency

| | | |
|-----------------------|----------|------|
| Mechanical operations | Cycles/h | 3600 |
|-----------------------|----------|------|

Operating times

Average time for Us control

in AC

Closing NO

| | | |
|-----|----|----|
| min | ms | 8 |
| max | ms | 24 |

| | | | |
|------------|-----|----|----|
| Opening NO | min | ms | 10 |
| | max | ms | 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 | A | 7.6 |
| | at 600V | A | 0.375 |

| | | | |
|--|----|--|------|
| Yielded mechanical performance for | | | |
| for single-phase AC motor | | | |
| Yielded mechanical performance at 110/120V | hp | | 0.75 |
| Yielded mechanical performance at 230V | hp | | 2 |
| for three-phase AC motor | | | |
| Yielded mechanical performance at 200/208V | hp | | 3 |
| Yielded mechanical performance at 220/230V | hp | | 3 |
| Yielded mechanical performance at 460/480V | hp | | 5 |
| Yielded mechanical performance at 575/600V | hp | | 7.5 |

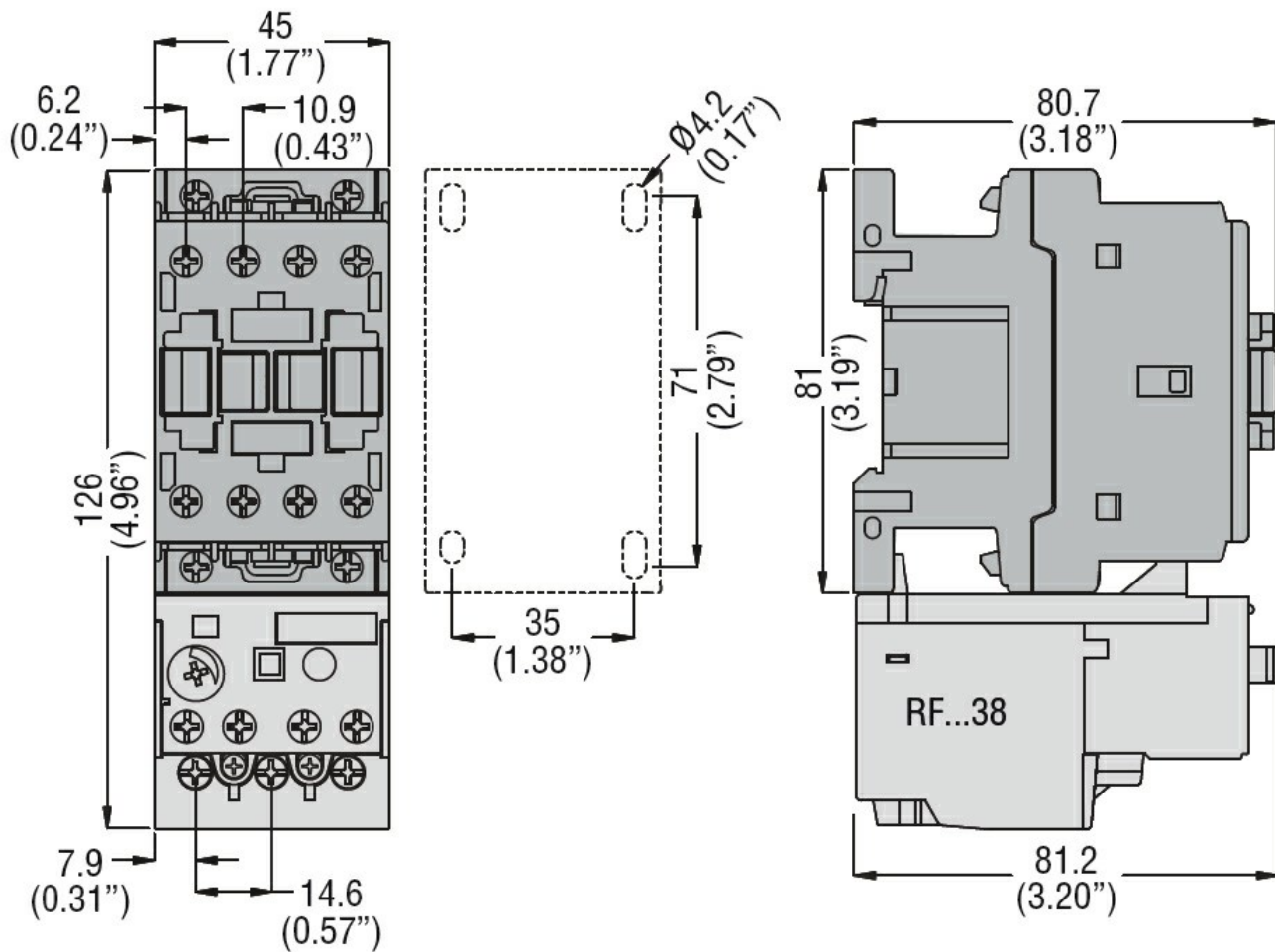
| | | | |
|--|-------------|--|--|
| Contact rating of auxiliary contacts according to UL | A600 - P600 | | |
|--|-------------|--|--|

| | | | |
|-------------|------------|---|----|
| General USE | | | |
| Contactor | AC current | A | 25 |

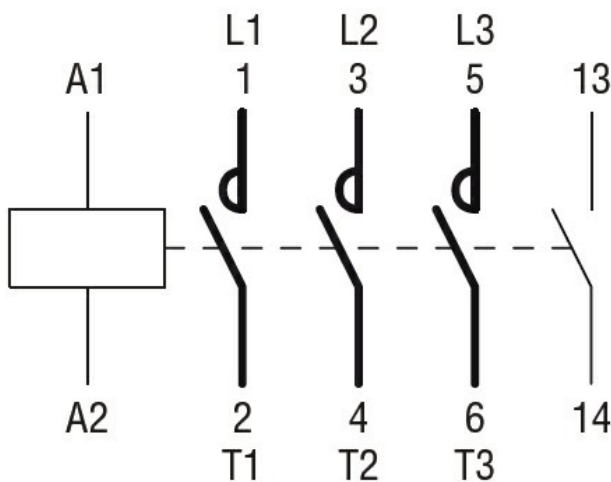
Other features

| | | | |
|------------------|---|--|--|
| Pollution degree | 3 | | |
|------------------|---|--|--|

Dimensions



Wiring diagrams



Certifications and compliance

Certifications

| |
|------------------------|
| 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 |

Compliance

CCC

cULus

EAC

ETIM 6 classification

EC000066 - Power contactor, AC switching