



| | | | | |
|---|--------------------|------------------|--|-----------------|
| Product designation | | | | Power contactor |
| Product type designation | | | | BF09 |
| Contact characteristics | | | | |
| Number of poles | Nr. | | | 4 |
| 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 |
| IEC Conventional free air thermal current I _{th} | A | | | 25 |
| Operational current I _e | 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 | | 16 |
| | 500V | kW | | 21 |
| | 690V | kW | | 27 |
| 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) | mΩ | | | 2.5 |
| Power dissipation per pole (average value) | I _{th} | W | | 1.6 |
| | AC-3 | W | | 0.2 |
| Tightening torque for terminals | min | Nm | | 1.5 |
| | max | Nm | | 1.8 |
| | min | I _{bin} | | 1.1 |
| | max | I _{bin} | | 1.5 |
| Tightening torque for coil terminal | min | Nm | | 0.8 |
| | max | Nm | | 1 |
| | min | I _{bin} | | 0.8 |
| | max | I _{bin} | | 0.74 |
| Max number of wires simultaneously connectable | Nr. | | | 2 |

| | | | |
|---|--|------------------|--------------------------|
| Conductor section | | | |
| AWG/Kcmil | | 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 properly wired |
| Mechanical features | | | |
| Operating position | | | |
| | | normal allowable | Vertical plan ±30° |
| Fixing | | | Screw / DIN rail 35mm |
| Weight | | | g 360 |
| Conductor section | | | |
| AWG/kcmil conductor section | | max | 10 |
| Operations | | | |
| Mechanical life | | cycles | 20000000 |
| Electrical life | | cycles | 2000000 |
| Safety related data | | | |
| Performance level B10d according to EN/ISO 13489-1 | | | |
| | | rated load | cycles 2000000 |
| | | mechanical load | cycles 20000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | YES |
| EMC compatibility | | | yes |
| AC coil operating | | | |
| Rated AC voltage at 50/60Hz | | V | 48 |
| AC operating voltage | | | |
| of 50/60Hz coil powered at 50Hz | | | |
| pick-up | | | |
| | | min | %Us 80 |
| | | max | %Us 110 |
| drop-out | | | |
| | | min | %Us 20 |
| | | max | %Us 55 |
| of 50/60Hz coil powered at 60Hz | | | |
| pick-up | | | |
| | | min | %Us 85 |
| | | max | %Us 110 |
| 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 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 $\leq 20^{\circ}\text{C}$ 50Hz

| | |
|---|-----|
| W | 2.5 |
|---|-----|

Max cycles frequency

Mechanical operation

| | |
|----------|------|
| 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 | 9 |

Yielded mechanical performance

for single-phase AC motor

| | | |
|----------|----|-----|
| 110/120V | HP | 0.8 |
| 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 | A | 25 |
|------------|---|----|

Ambient conditions

Temperature

Operating temperature

| | | |
|-----|--------------------|-----|
| min | $^{\circ}\text{C}$ | -50 |
| max | $^{\circ}\text{C}$ | 70 |

Storage temperature

| | | |
|-----|--------------------|-----|
| min | $^{\circ}\text{C}$ | -60 |
| max | $^{\circ}\text{C}$ | 80 |

Max altitude

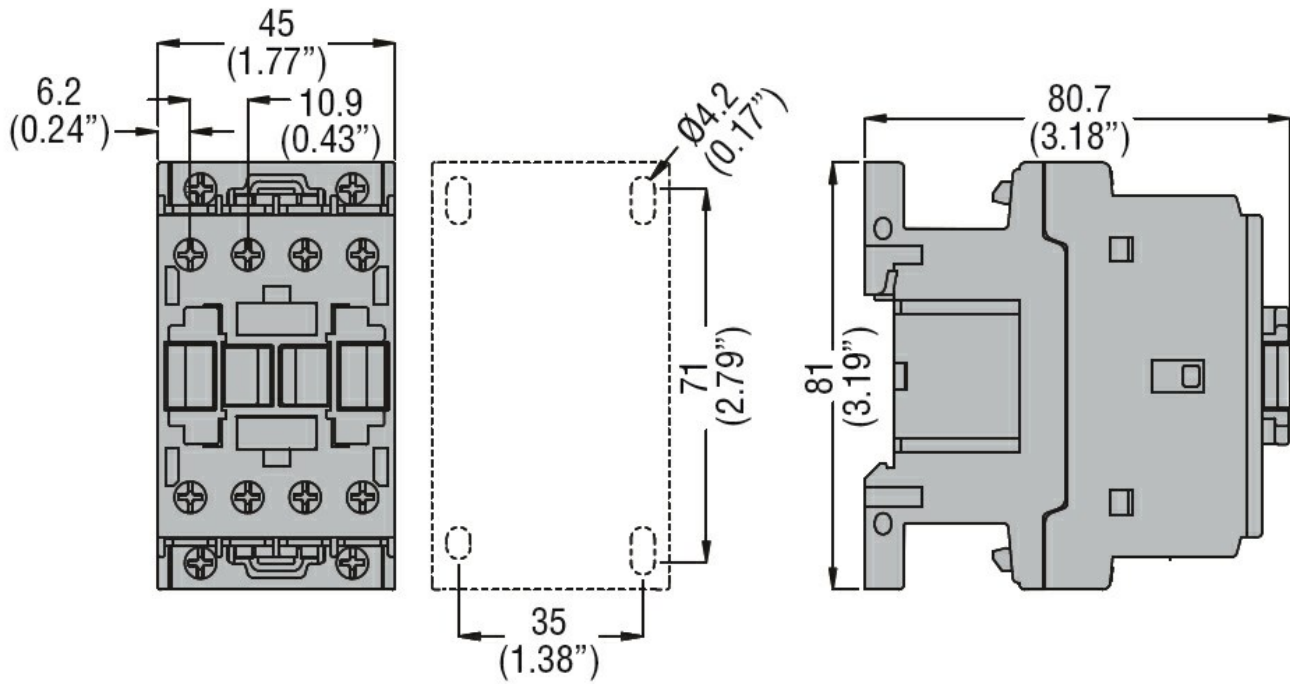
| | |
|---|------|
| m | 3000 |
|---|------|

Resistance & Protection

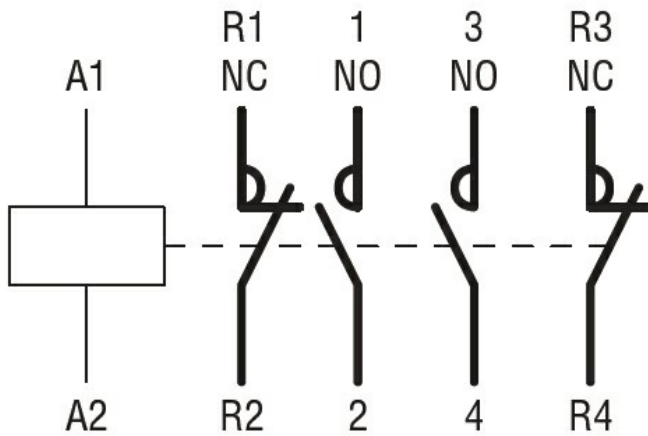
Pollution degree

| |
|---|
| 3 |
|---|

Dimensions



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1
CSA C22.2 n° 60947-4-1
IEC/EN/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