



Product designation
Product type designation

Power contactor
BF18

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 | 32 |
| Operational current I _e | AC-1 (=40°C) | A 32 |
| | AC-1 (=55°C) | A 26 |
| | AC-1 (=70°C) | A 23 |
| | AC-3 (=440V =55°C) | A 18 |
| | AC-4 (400V) | A 8.5 |
| Rated operational power AC-1 (T=40°C) | 230V | kW 12 |
| | 400V | kW 21 |
| | 500V | kW 26 |
| | 690V | kW 36 |
| IEC max current I _e in DC1 with L/R = 1ms with 1 poles in series | =24V | A 17 |
| | 48V | A 15 |
| | 75V | A 15 |
| | 110V | A 6 |
| | 220V | A – |
| IEC max current I _e in DC1 with L/R = 1ms with 2 poles in series | =24V | A 20 |
| | 48V | A 20 |
| | 75V | A 20 |
| | 110V | A 13 |
| | 220V | A 1 |
| IEC max current I _e in DC1 with L/R = 1ms with 3 poles in series | =24V | A 22 |
| | 48V | A 22 |
| | 75V | A 20 |
| | 110V | A 16 |
| | 220V | A 11 |
| IEC max current I _e in DC1 with L/R = 1ms with 4 poles in series | =24V | A 22 |
| | 48V | A 22 |
| | 75V | A 20 |
| | 110V | A 18 |
| | 220V | A 13 |

| | | | |
|--|--|------------------|------|
| IEC max current I _e in DC3-DC5 with L/R = 15ms with 1 poles in series | =24V | A | 12 |
| | 48V | A | 11 |
| | 75V | A | 11 |
| | 110V | A | 2 |
| | 220V | A | – |
| | IEC max current I _e in DC3-DC5 with L/R = 15ms with 2 poles in series | =24V | A |
| 48V | | A | 13 |
| 75V | | A | 13 |
| 110V | | A | 8 |
| 220V | | A | 2 |
| IEC max current I _e in DC3-DC5 with L/R = 15ms with 3 poles in series | | =24V | A |
| | 48V | A | 18 |
| | 75V | A | 16 |
| | 110V | A | 12 |
| | 220V | A | 6 |
| | IEC max current I _e in DC3-DC5 with L/R = 15ms with 4 poles in series | =24V | A |
| 48V | | A | 18 |
| 75V | | A | 16 |
| 110V | | A | 13 |
| 220V | | A | 8 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | | A |
| Protection fuse | gG (IEC) | A | 32 |
| | aM (IEC) | A | 20 |
| Making capacity (RMS value) | | A | 180 |
| Breaking capacity at voltage | 440V | A | 144 |
| | 500V | A | 120 |
| | 690V | A | 94 |
| | | | |
| Resistance per pole (average value) | | m ² | 2.5 |
| Power dissipation per pole (average value) | I _{th} | W | 2.6 |
| | AC3 | W | 0.8 |
| 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 wired |
| Mechanical features | | | |
| Operating position | normal allowable | | Vertical plan ±30° |
| Fixing | | | Screw / DIN rail 35mm |
| Weight | | g | 366 |
| Conductor section | | | |
| AWG/kcmil conductor section | max | | 10 |
| Operations | | | |
| Mechanical life | | cycles | 20000000 |
| Electrical life | | cycles | 1600000 |
| Safety related data | | | |
| Performance level B10d according to EN/ISO 13489-1 | rated load mechanical load | cycles | 1600000 |
| | | cycles | 20000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | yes |
| EMC compatibility | | | yes |
| AC coil operating | | | |
| Rated AC voltage at 60Hz | | V | 24 |
| AC operating voltage | | | |
| of 60Hz coil powered at 60Hz | | | |
| pick-up | min | %Us | 80 |
| | max | %Us | 110 |
| drop-out | min | %Us | 20 |
| | max | %Us | 55 |
| AC average coil consumption at 20°C | | | |
| of 60Hz coil powered at 60Hz | in-rush holding | VA | 75 |
| | | VA | 9 |
| Dissipation at holding =20°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 | 14 |
| at 600V | A | 17 |

Yielded mechanical performance

for single-phase AC motor

| | | |
|----------|----|---|
| 110/120V | HP | 1 |
| 230V | HP | 3 |

for three-phase AC motor

| | | |
|----------|----|----|
| 200/208V | HP | 5 |
| 220/230V | HP | 5 |
| 460/480V | HP | 10 |
| 575/600V | HP | 15 |

General USE

Contactor

| | | |
|------------|---|----|
| AC current | A | 32 |
|------------|---|----|

Short-circuit protection fuse, 600V

High fault

| | | |
|-----------------------|----|-----|
| Short circuit current | kA | 100 |
| Fuse rating | A | 60 |
| Fuse class | | J |

Standard fault

| | | |
|-----------------------|----|----|
| Short circuit current | kA | 5 |
| Fuse rating | A | 80 |

Ambient conditions

Temperature

Operating temperature

| | | |
|-----|----|-----|
| min | °C | -50 |
| max | °C | 70 |

Storage temperature

| | | |
|-----|----|-----|
| min | °C | -60 |
| max | °C | 80 |

Max altitude

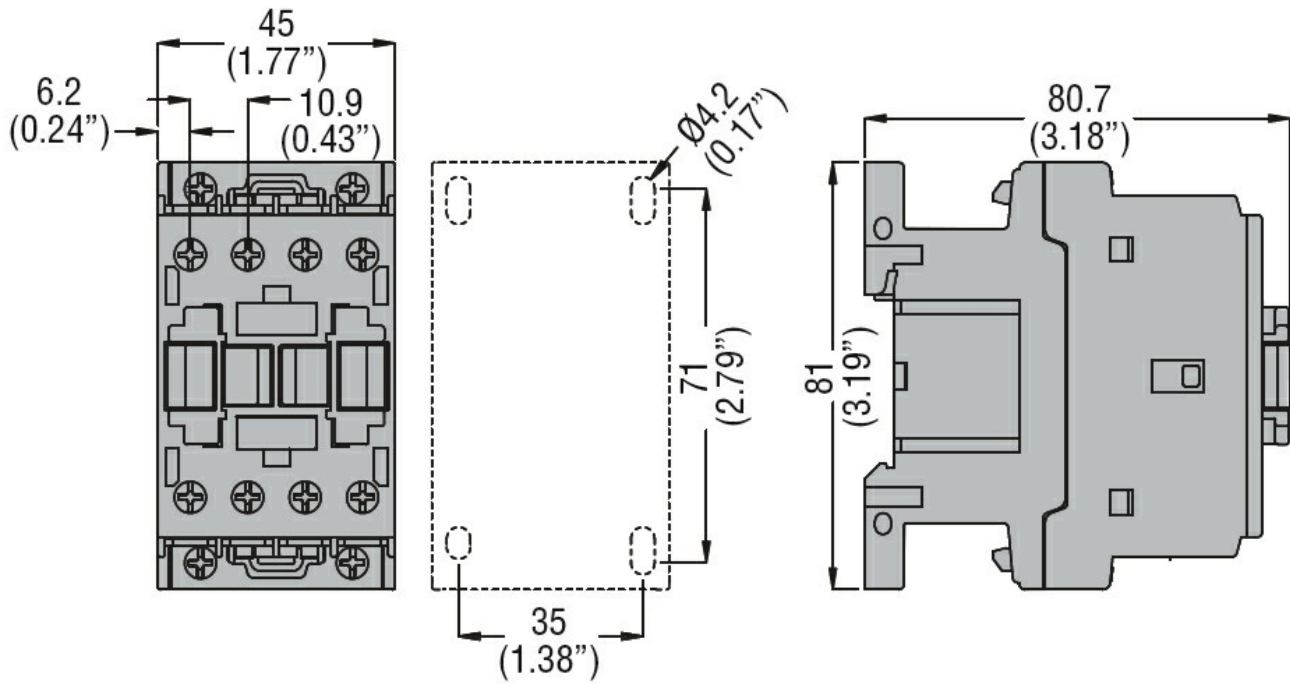
| | |
|---|------|
| m | 3000 |
|---|------|

Resistance & Protection

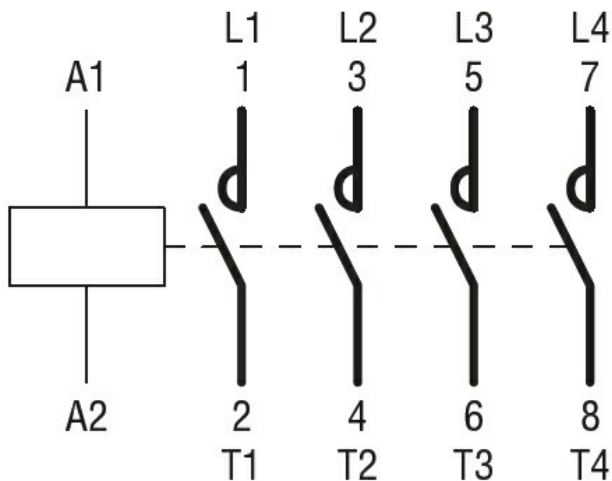
Pollution degree

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