



Product designation
Product type designation

Power contactor
BF18

Contact characteristics

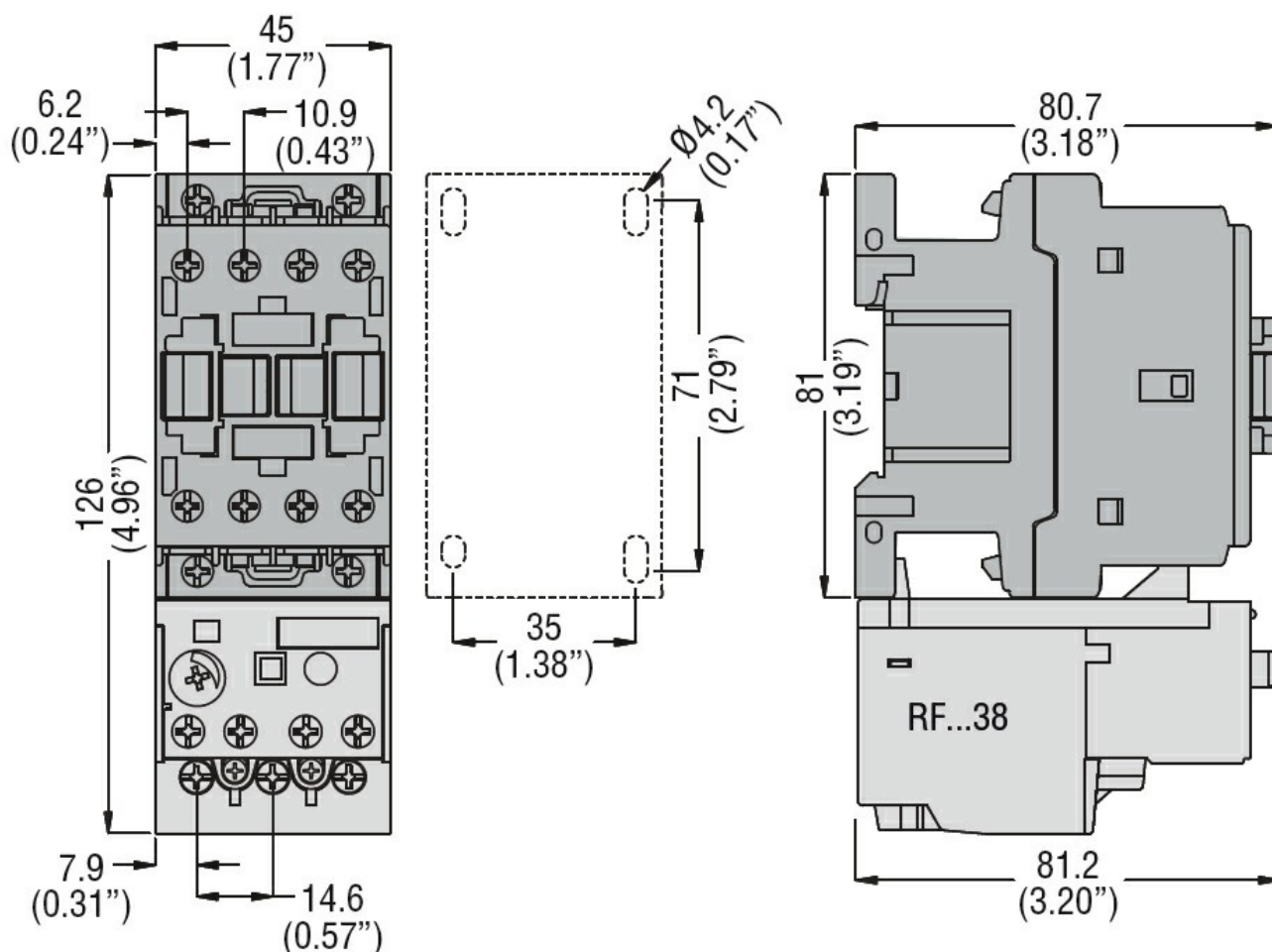
| | | |
|--|--|-------|
| Number of poles | Nr. | 3 |
| Rated insulation voltage U_i IEC/EN | V | 690 |
| Rated impulse withstand voltage U_{imp} | kV | 6 |
| Operational frequency | min Hz | 25 |
| | max Hz | 400 |
| IEC Conventional free air thermal current I_{th} | A | 32 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A 32 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A 26 |
| | AC-1 ($\leq 70^\circ\text{C}$) | A 23 |
| | AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$) | A 18 |
| | AC-4 (400V) | A 8.5 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V kW | 4 |
| | 400V kW | 7.5 |
| | 415V kW | 9 |
| | 440V kW | 9 |
| | 500V kW | 10 |
| | 690V kW | 10 |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V kW | 12 |
| | 400V kW | 21 |
| | 500V kW | 26 |
| | 690V kW | 36 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ A | 17 |
| | 48V A | 15 |
| | 75V A | 15 |
| | 110V A | 6 |
| | 220V A | — |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series | $\leq 24\text{V}$ A | 20 |
| | 48V A | 20 |
| | 75V A | 20 |
| | 110V A | 13 |
| | 220V A | 1 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$ A | 22 |
| | 48V A | 22 |
| | 75V A | 20 |
| | 110V A | 16 |

| | | | |
|---|-------------------|------|-----|
| | 220V | A | 11 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series | | | |
| | $\leq 24\text{V}$ | A | 22 |
| | 48V | A | 22 |
| | 75V | A | 20 |
| | 110V | A | 18 |
| | 220V | A | 13 |
| IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series | | | |
| | $\leq 24\text{V}$ | A | 12 |
| | 48V | A | 11 |
| | 75V | A | 11 |
| | 110V | A | 2 |
| | 220V | A | – |
| IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series | | | |
| | $\leq 24\text{V}$ | A | 15 |
| | 48V | A | 13 |
| | 75V | A | 13 |
| | 110V | A | 8 |
| | 220V | A | 2 |
| IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series | | | |
| | $\leq 24\text{V}$ | A | 18 |
| | 48V | A | 18 |
| | 75V | A | 16 |
| | 110V | A | 12 |
| | 220V | A | 6 |
| IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series | | | |
| | $\leq 24\text{V}$ | A | 18 |
| | 48V | A | 18 |
| | 75V | A | 16 |
| | 110V | A | 13 |
| | 220V | A | 8 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 200 |
| 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) | | mΩ | 2.5 |
| Power dissipation per pole (average value) | | | |
| | I_{th} | W | 2.6 |
| | AC-3 | W | 0.8 |
| Tightening torque for terminals | | | |
| | min | Nm | 1.5 |
| | max | Nm | 1.8 |
| | min | lbin | 1.1 |
| | max | lbin | 1.5 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |
| | max | Nm | 1 |
| | min | lbin | 0.8 |

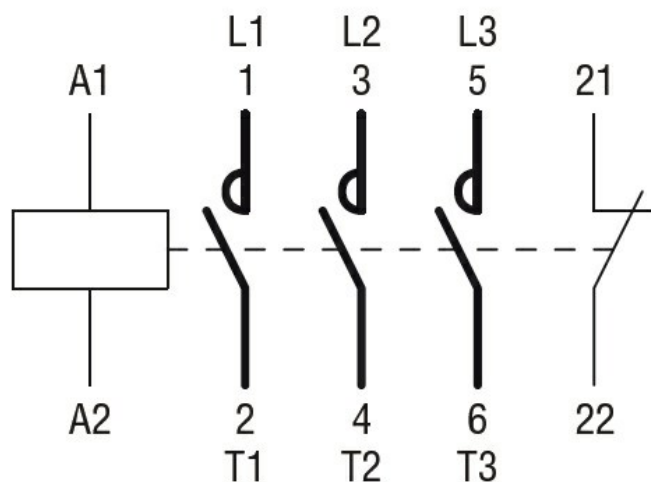
| | | | |
|---|------------------|------------------|--------------------------|
| | max | I _{bin} | 0.74 |
| Max number of wires simultaneously connectable | | Nr. | 2 |
| Conductor section | | | |
| AWG/Kcmil | max | | 10 |
| Flexible w/o lug conductor section | min | mm ² | 1 |
| | max | mm ² | 6 |
| 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 | 358 |
| Conductor section | | | |
| AWG/kcmil conductor section | max | | 10 |
| Auxiliary contact characteristics | | | |
| Thermal current I _{th} | | A | 10 |
| IEC/EN 60947-5-1 designation | | | A600 - P600 |
| 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 | 1.25 |
| | 125V | A | 1.1 |
| | 220V | A | 0.55 |
| | 600V | A | 0.2 |
| Operations | | | |
| Mechanical life | | cycles | 20000000 |
| Electrical life | | cycles | 1600000 |
| Safety related data | | | |
| Performance level B10d according to EN/ISO 13489-1 | rated load | cycles | 1600000 |
| | 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 | 230 |
| 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 ≤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 |
| | Auxiliary contacts | | | |
| | | AC voltage | V | 600 |
| | | AC current | A | 10 |
| | | DC voltage | V | 250 |
| | | DC current | A | 1 |
| 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 |
| Contact rating of auxiliary contacts according to UL | | | | A600 - P600 |
| 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