

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 70A, AC COIL 60HZ,



Product designation Power contactor Product type designation **BF40**

| Product type designation | | | BF40 |
|--|--------------------|--------|----------|
| Contact characteristics | | | |
| Number of poles | | Nr. | 4 |
| Rated insulation voltage Ui IEC/EN | | V | 1000 |
| Rated impulse withstand voltage Uimp | | kV | 8 |
| Operational frequency | | | |
| | min | Hz | 25 |
| | max | Hz | 400 |
| IEC Conventional free air thermal current Ith | | Α | 70 |
| Operational current le | | | |
| | AC-1 (≤40°C) | Α | 70 |
| | AC-1 (≤55°C) | Α | 60 |
| | AC-1 (≤70°C) | Α | 50 |
| | AC-3 (≤440V ≤55°C) | Α | 40 |
| | AC-4 (400V) | Α | 24 |
| Rated operational current AC-3 (T≤55°C) | , | | |
| | 230V | Α | 40 |
| | 400V | Α | 40 |
| | 415V | Α | 40 |
| | 440V | Α | 40 |
| | 500V | Α | 33 |
| | 690V | Α | 32 |
| | 1000V | Α | 21 |
| Rated operational power AC-1 (T≤40°C) | | | |
| | 230V | kW | 26 |
| | 400V | kW | 46 |
| | 500V | kW | 58 |
| | 690V | kW | 79 |
| IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series | | | |
| | ≤24V | Α | 40 |
| | 48V | A | 35 |
| | 75V | Α | 30 |
| | 110V | Α | 8 |
| | 220V | Α | _ |
| IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series | 2201 | - / \ | |
| TEO max current to in BOT with E/TC = mis with 2 poics in series | ≤24V | Α | 48 |
| | 48V | A | 48 |
| | 75V | A | 46 45 |
| | 110V | A | 43 |
| | 220V | A | 5 |
| IEC may current to in DC1 with L/D < 1 mg with 2 polog in corios | ZZUV | А | ິນ |
| IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series | ≤24V | ٨ | 10 |
| | <241/ | Α | 48 |
| | | ٨ | 40 |
| | 48V 75V | A A | 48 48 |





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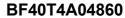
| | 110V | Α | 44 |
|--|--------------|--------|----------|
| | 220V | Α | 56 |
| IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | Α | _ |
| | 48V | Α | _ |
| | 75V | Α | _ |
| | 110V | Α | _ |
| | 220V | Α | 70 |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | Α | 27 |
| | 48V | Α | 23 |
| | 75V | Α | 19 |
| | 110V | Α | 3 |
| | 220V | Α | |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | Α | 32 |
| | 48V | A | 30 |
| | 75V | A | 27 |
| | 110V | A | 22 |
| 150 DOS DOS 111 L/D 4.45 111 0 1 1 1 | 220V | Α | 5 |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | -0.43.4 | | 40 |
| | ≤24V | A | 40 |
| | 48V | A | 40 |
| | 75V | A | 38 |
| | 110V 220V | A A | 27 32 |
| IEC may current to in DC2 DC5 with L/D < 15mg with 4 poles in series | 220 V | A | 32 |
| IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | <04)/ | ۸ | |
| | ≤24V 48V | A A | _ |
| | 46 V 75 V | A | _ |
| | 110V | A | _ _ |
| | 220V | A | 40 |
| Short-time allowable current for 10s (IEC/EN60947-1) | 220 V | | 400 |
| Protection fuse | | | 400 |
| 1 Totection ruse | gG (IEC) | Α | 100 |
| | aM (IEC) | A | 50 |
| Making capacity (RMS value) | aivi (ILO) | A | 400 |
| Breaking capacity at voltage | | | +00 |
| Distantly supusity at voltage | 440V | Α | 320 |
| | 500V | A | 265 |
| | 690V | A | 256 |
| Resistance per pole (average value) | | mΩ | 0.8 |
| Power dissipation per pole (average value) | | 22 | 0.0 |
| . The shorpeston por polo (avorago valuo) | Ith | W | 3.9 |
| | AC-3 | W | 1.3 |
| Tightening torque for terminals | ,,,,, | | |
| | min | Nm | 4 |
| | max | Nm | 5 |
| | min | lbin | 2.95 |
| | max | lbin | 3.69 |
| Tightening torque for coil terminal | | | |
| 5 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | min | Nm | 0.8 |
| | max | Nm | 1 |
| | | | |





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| | | | min | Ibin | 0.8 |
|--|---|----------------------------------|--|---|--|
| | | | max | Ibin | 0.74 |
| | imultaneously connectabl | e | | Nr. | 2 |
| Conductor section | | | | | |
| | AWG/Kcmil | | | | |
| | | | max | | 2 |
| | Flexible w/o lug conduc | tor section | | | |
| | | | min | mm² | 1.5 |
| | - | | max | mm² | 35 |
| | Flexible c/w lug conduct | tor section | | | |
| | | | min | mm² | 1.5 |
| · | | | max | mm² | 35 |
| | tion according to IEC/EN | 60529 | | | IP20 front |
| Mechanical features | | | | | |
| Operating position | | | | | |
| | | | normal | | Vertical plan |
| | | | allowable | | ±30° |
| Fiving | | | | | Screw / DIN rail |
| Fixing | | | | | 35mm |
| Weight | | | | g | 1240 |
| Operations | | | | | |
| Mechanical life | | | | cycles | 15000000 |
| Electrical life | | | | cycles | 1500000 |
| Safety related data | | | | • | |
| - | od according to EN/ISO 1 | 3489-1 | | | |
| | · · | | rated load | cycles | 1500000 |
| | | | | - | |
| | | | mechanical load | cycles | 15000000 |
| EMC compatibility | | | mechanical load | cycles | _ |
| EMC compatibility AC coil operating | | | mechanical load | cycles | yes |
| AC coil operating | OHz | | mechanical load | cycles | _ |
| AC coil operating Rated AC voltage at 60 | OHz | | mechanical load | - | yes |
| AC coil operating | | 60Hz | mechanical load | - | yes |
| AC coil operating Rated AC voltage at 60 | OHz of 60Hz coil powered at | | mechanical load | - | yes |
| AC coil operating Rated AC voltage at 60 | | 60Hz pick-up | | V | yes 48 |
| AC coil operating Rated AC voltage at 60 | | | min | V %Us | yes 48 |
| AC coil operating Rated AC voltage at 60 | of 60Hz coil powered at | pick-up | | V | yes 48 |
| AC coil operating Rated AC voltage at 60 | of 60Hz coil powered at | | min max | V %Us %Us | yes 48 80 110 |
| AC coil operating Rated AC voltage at 60 | of 60Hz coil powered at | pick-up | min max min | V %Us %Us %Us | yes 48 80 110 20 |
| AC coil operating Rated AC voltage at 60 AC operating voltage | of 60Hz coil powered at | pick-up | min max | V %Us %Us | yes 48 80 110 |
| AC coil operating Rated AC voltage at 60 | of 60Hz coil powered at | pick-up drop-out | min max min | V %Us %Us %Us | yes 48 80 110 20 |
| AC coil operating Rated AC voltage at 60 AC operating voltage | of 60Hz coil powered at | pick-up drop-out | min max min max | V %Us %Us %Us %Us | yes 48 80 110 20 55 |
| AC coil operating Rated AC voltage at 60 AC operating voltage | of 60Hz coil powered at | pick-up drop-out | min max min max in-rush | V %Us %Us %Us %Us %Us | yes 48 80 110 20 55 |
| AC coil operating Rated AC voltage at 60 AC operating voltage AC average coil consu | of 60Hz coil powered at imption at 20°C of 60Hz coil powered at | pick-up drop-out | min max min max | V %Us %Us %Us %Us VA VA | yes 48 80 110 20 55 210 15 |
| AC coil operating Rated AC voltage at 60 AC operating voltage AC average coil consul Dissipation at holding s | of 60Hz coil powered at imption at 20°C of 60Hz coil powered at | pick-up drop-out | min max min max in-rush | V %Us %Us %Us %Us %Us | yes 48 80 110 20 55 |
| AC coil operating Rated AC voltage at 60 AC operating voltage AC average coil consul Dissipation at holding s Max cycles frequency | of 60Hz coil powered at imption at 20°C of 60Hz coil powered at | pick-up drop-out | min max min max in-rush | V %Us %Us %Us %Us VA VA VA | yes 48 80 110 20 55 210 15 5 |
| AC coil operating Rated AC voltage at 60 AC operating voltage AC average coil consul Dissipation at holding s Max cycles frequency Mechanical operation | of 60Hz coil powered at imption at 20°C of 60Hz coil powered at | pick-up drop-out | min max min max in-rush | V %Us %Us %Us %Us VA VA | yes 48 80 110 20 55 210 15 5 |
| AC coil operating Rated AC voltage at 60 AC operating voltage AC average coil consult Dissipation at holding: Max cycles frequency Mechanical operation Operating times | of 60Hz coil powered at imption at 20°C of 60Hz coil powered at ≤20°C 50Hz | pick-up drop-out | min max min max in-rush | V %Us %Us %Us %Us VA VA VA | yes 48 80 110 20 55 210 15 5 |
| AC coil operating Rated AC voltage at 60 AC operating voltage AC average coil consul Dissipation at holding s Max cycles frequency Mechanical operation | of 60Hz coil powered at mption at 20°C of 60Hz coil powered at ≤20°C 50Hz | pick-up drop-out | min max min max in-rush | V %Us %Us %Us %Us VA VA VA | yes 48 80 110 20 55 210 15 5 |
| AC coil operating Rated AC voltage at 60 AC operating voltage AC average coil consult Dissipation at holding: Max cycles frequency Mechanical operation Operating times | of 60Hz coil powered at imption at 20°C of 60Hz coil powered at ≤20°C 50Hz | pick-up drop-out 60Hz | min max min max in-rush | V %Us %Us %Us %Us VA VA VA | yes 48 80 110 20 55 210 15 5 |
| AC coil operating Rated AC voltage at 60 AC operating voltage AC average coil consult Dissipation at holding: Max cycles frequency Mechanical operation Operating times | of 60Hz coil powered at mption at 20°C of 60Hz coil powered at ≤20°C 50Hz | pick-up drop-out | min max min max in-rush holding | V %Us %Us %Us %Us VA VA VA VA Cycles/h | yes 48 80 110 20 55 210 15 5 3600 |
| AC coil operating Rated AC voltage at 60 AC operating voltage AC average coil consult Dissipation at holding: Max cycles frequency Mechanical operation Operating times | of 60Hz coil powered at mption at 20°C of 60Hz coil powered at ≤20°C 50Hz | pick-up drop-out 60Hz | min max min max in-rush holding | V %Us %Us %Us %Us VA VA VA w cycles/h | yes 48 80 110 20 55 210 15 5 3600 |
| AC coil operating Rated AC voltage at 60 AC operating voltage AC average coil consult Dissipation at holding: Max cycles frequency Mechanical operation Operating times | of 60Hz coil powered at mption at 20°C of 60Hz coil powered at ≤20°C 50Hz | pick-up drop-out 60Hz Closing NO | min max min max in-rush holding | V %Us %Us %Us %Us VA VA VA VA Cycles/h | yes 48 80 110 20 55 210 15 5 3600 |
| AC coil operating Rated AC voltage at 60 AC operating voltage AC average coil consult Dissipation at holding: Max cycles frequency Mechanical operation Operating times | of 60Hz coil powered at mption at 20°C of 60Hz coil powered at ≤20°C 50Hz | pick-up drop-out 60Hz | min max min max in-rush holding min max | V %Us %Us %Us %Us VA VA VA w cycles/h | yes 48 80 110 20 55 210 15 5 3600 |
| AC coil operating Rated AC voltage at 60 AC operating voltage AC average coil consult Dissipation at holding: Max cycles frequency Mechanical operation Operating times | of 60Hz coil powered at mption at 20°C of 60Hz coil powered at ≤20°C 50Hz | pick-up drop-out 60Hz Closing NO | min max min max in-rush holding | V %Us %Us %Us %Us VA VA VA w cycles/h | yes 48 80 110 20 55 210 15 5 3600 |



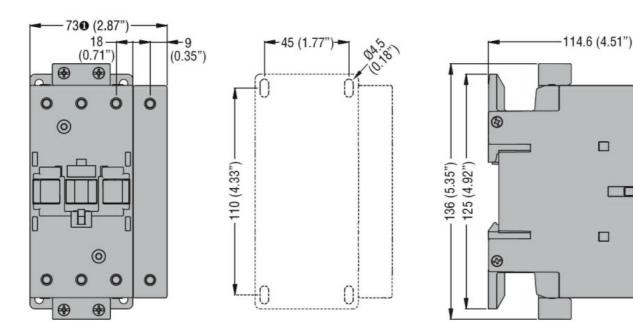


FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 70A, AC COIL 60HZ,

| | | | |
|--|-----------------------|-----|------|
| in DC | | | |
| Closing NO | | | 40 |
| | min | ms | 40 |
| 0 : 110 | max | ms | 85 |
| Opening NO | | | 22 |
| | min | ms | 20 |
| | max | ms | 55 |
| UL technical data | | , , | |
| Rated operational voltage AC (UL) | | V | 600 |
| Full-load current (FLA) for three-phase AC motor | | | |
| | at 480V | Α | 40 |
| | at 600V | Α | 32 |
| Yielded mechanical performance | | | |
| for single-phase AC motor | | | |
| | 110/120V | HP | 3 |
| | 230V | HP | 7.5 |
| for three-phase AC motor | | | |
| | 200/208V | HP | 10 |
| | 220/230V | HP | 15 |
| | 460/480V | HP | 30 |
| | 575/600V | HP | 30 |
| General USE | | | |
| Contactor | | | |
| | AC current | Α | 70 |
| Short-circuit protection fuse, 600V | | | |
| High fault | | | |
| | Short circuit current | kA | 100 |
| | Fuse rating | Α | 150 |
| | Fuse class | | J |
| Standard fault | | | |
| | Short circuit current | kA | 5 |
| | Fuse rating | Α | 150 |
| | Fuse class | | RK5 |
| 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 | | | |

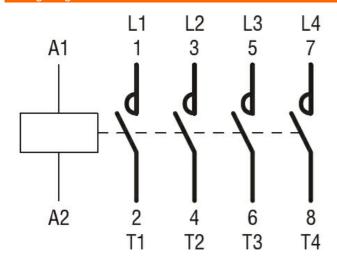
ENERGY AND AUTOMATION

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 70A, AC COIL 60HZ, 48VAC



BF80T2 82mm/3.23"

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

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching