

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 115A, AC COIL 50/60HZ, 230VAC



| Product designation | | Power contactor |
|--|----------------|-----------------|
| Product type designation | | BF80 |
| Contact characteristics | | |
| Number of poles | nr. | 4 |
| Rated insulation voltage Ui | V | 1000 |
| Rated impulse withstand voltage Uimp | kV | 8 |
| Operating frequency | IX V | 0 |
| Operating frequency Operational frequency mir | ⊔ - | 25 |
| · · · · · · · · · · · · · · · · · · · | | 400 |
| Operational frequency max Conventional free air thermal current Ith | | |
| | A | 115 |
| Operating current | ۸ | 445 |
| Operational current AC1 (≤40°C | | 115 |
| Operational current AC3 (≤440V ≤55°C | | 80 |
| Operational current AC4 (400V | A | 38 |
| Rated operational power AC1 (T≤40°C) | | |
| 230\ | | 43 |
| 400\ | | 76 |
| 500\ | | 95 |
| 690\ | kW | 120 |
| Rated operational power AC3 (T≤55°C) | | |
| 230\ | kW | 22 |
| 400\ | kW | 45 |
| 415\ | kW | 45 |
| 440\ | kW | 45 |
| 500\ | kW | 55 |
| 690\ | kW | 55 |
| 1000\ | kW | 37 |
| Short-time allowable current for 10s (IEC/EN60947-1) | Α | 640 |
| Protection fuse | | |
| gG (IEC | Α | 125 |
| aM (IEC | | 80 |
| Making capacity (RMS value) | Α | 800 |
| Breaking capacity at voltage | | |
| Breaking capacity 440\ | Α | 640 |
| Breaking capacity 500\ | | 625 |
| Breaking capacity 690\ | | 456 |
| Resistance per pole (average value) | mΩ | 0.6 |
| Power dissipation per pole (average value) | 11122 | 0.0 |
| Power dissipation pole (average value) | W | 7.9 |
| AC3 | | 3.8 |
| Fightening torque for terminals | VV | 3.0 |
| | Nima | 4 |
| mir | | 4 |
| ma) | | 5 |
| mir | | 2.95 |
| max | Ibft | 3.69 |

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| Tightening torque for c | oil terminal | | | |
|-------------------------|--------------------------------------|-----------------|--------|------------------|
| | | min | Nm | 0.8 |
| | | max | Nm | 1 |
| | | min | lbft | 0.8 |
| | | max | lbft | 0.74 |
| max number of wires s | imultaneously connectable | | nr. | 2 |
| Conductor section | , , , , , , , , , , , , , , , , | | | |
| | AWG | | | |
| | 7.1110 | min | | 14 |
| | | max | | 2 |
| | Flexible w/o lug conductor section | max | | |
| | r lexible w/o lug corludctor section | min | mm² | 1.5 |
| | | max | mm² | 35 |
| | Florible also lug conductor acction | IIIdX | 111111 | 33 |
| | Flexible c/w lug conductor section | | | 4 5 |
| | | min | mm² | 1.5 |
| | | max | mm² | 35 |
| <u> </u> | tion according to IEC/EN 60529 | | | IP20 front |
| Auxiliary contact chara | | | | 4.45 |
| Operational current AC | | | A | 115 |
| Operating current DC1 | 3 | | | |
| | | 110V | Α | Screw / DIN rail |
| | | 1101 | ,, | 35mm |
| Ambient conditions | | | | |
| Temperature | | | | |
| | Operating temperature | | | |
| | | min | °C | -50 |
| | | max | °C | 70 |
| | Storage temperature | | | |
| | | min | °C | -60 |
| | | max | °C | 80 |
| Max altitude | | | m | 3000 |
| Operating position | | | | |
| 51 51 | | normal | | Vertical plan |
| | | allowable | | ±30° |
| | | anowasio | | Screw / DIN rail |
| Mounting | | | | 35mm |
| Weight | | | g | 1.24 |
| Operations | | | 9 | 1.21 |
| Mechanical life | | | Cycles | 15000000 |
| Electrical life | | | | 13000000 |
| | | | Cycles | 1300000 |
| Safety related data | 2d according to EN/ISO 42400 4 | | | |
| remormance level B10 | od according to EN/ISO 13489-1 | | 01.41 | 4000000 |
| | | rated load | Cicli | 1300000 |
| | | mechanical load | Cicli | 15000000 |
| | ng 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 | max | | |
| | arop out | | | |
| | | | | |

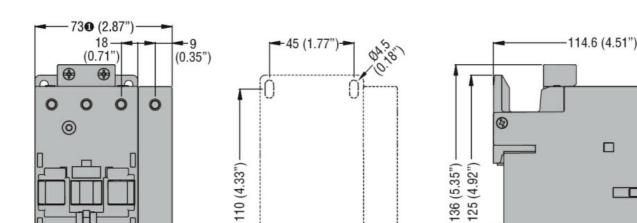


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| | | min | %Us | 0.2 |
|---|---|---|--------------------------|---|
| | | max | %Us | 0.55 |
| | of 50/60Hz coil powered at 60Hz | | | _ |
| | pick-up | | | |
| | | min | %Us | 0.85 |
| | | max | %Us | 1.1 |
| | drop-out | | | |
| | | min | %Us | 0.4 |
| | | max | %Us | 0.55 |
| | of 60Hz coil powered at 60Hz | | | |
| | pick-up | | 0/11- | 0.0 |
| | | min | %Us | 0.8 |
| | duam aut | max | %Us | 1.1 |
| | drop-out | min | 0/110 | 0.2 |
| | | min | %Us | 0.2 |
| AC operation voltage | | max | %Us | 0.55 |
| AC operating voltage | of 50/60Hz coil powered at 50Hz | | | |
| | of 50/60Hz coil powered at 50Hz | in-rush | VA | 210 |
| | | holding | VA VA | 15 |
| | of 50/60Hz coil powered at 60Hz | Holding | VA | 10 |
| | of 50/60Hz coil powered at 60Hz | in-rush | VA | 195 |
| | | holding | VA | 13 |
| | of 60Hz coil powered at 60Hz | Holding | ٧٨ | 13 |
| | of doffiz con powered at doffiz | in-rush | VA | 210 |
| | | holding | VA | 15 |
| Dissipation at holding | <20°C 50Hz | notaling | W | 5.0 |
| | -20 0 00112 | | * * | 0.0 |
| Max cycles frequency | | | | |
| Max cycles frequency Mechanical operations | | | Cycles/h | 3600 |
| Mechanical operations | | | Cycles/h | 3600 |
| | | | Cycles/h | 3600 |
| Mechanical operations Operating times | | | Cycles/h | 3600 |
| Mechanical operations Operating times | ontrol | | Cycles/h | 3600 |
| Mechanical operations Operating times | ontrol in AC | min | Cycles/h | 3600 12 |
| Mechanical operations Operating times | ontrol in AC | | | |
| Mechanical operations Operating times | ontrol in AC | min | ms | 12 |
| Mechanical operations Operating times | ontrol in AC Closing NO | min | ms | 12 |
| Mechanical operations Operating times Average time for Us co | ontrol in AC Closing NO | min max | ms ms | 12 28 |
| Mechanical operations Operating times Average time for Us co | ontrol in AC Closing NO Opening NO | min max min | ms ms | 12 28 8 |
| Mechanical operations Operating times Average time for Us co | ontrol in AC Closing NO | min max min max | ms ms | 12 28 8 22 |
| Mechanical operations Operating times Average time for Us co | ontrol in AC Closing NO Opening NO | min max min max at 480V | ms ms ms ms | 12 28 8 22 |
| Mechanical operations Operating times Average time for Us co | ontrol in AC Closing NO Opening NO ofor three-phase AC motor | min max min max | ms ms ms | 12 28 8 22 |
| Mechanical operations Operating times Average time for Us co | ontrol in AC Closing NO Opening NO of for three-phase AC motor | min max min max at 480V | ms ms ms ms | 12 28 8 22 |
| Mechanical operations Operating times Average time for Us co | ontrol in AC Closing NO Opening NO ofor three-phase AC motor | min max min max at 480V at 600V | ms ms ms ms | 12 28 8 22 77 77 |
| Mechanical operations Operating times Average time for Us co | ontrol in AC Closing NO Opening NO of for three-phase AC motor | min max min max at 480V at 600V | ms ms ms A A | 12 28 8 22 77 77 |
| Mechanical operations Operating times Average time for Us co | ontrol in AC Closing NO Opening NO of for three-phase AC motor | min max min max at 480V at 600V at 200/208V at 220/230V | ms ms ms A A | 12 28 8 22 77 77 77 |
| Mechanical operations Operating times Average time for Us co | ontrol in AC Closing NO Opening NO of for three-phase AC motor | min max min max at 480V at 600V at 220/230V at 220/230V at 460/480V | ms ms ms A A | 12 28 8 22 77 77 77 |
| Mechanical operations Operating times Average time for Us co | ontrol in AC Closing NO Opening NO of for three-phase AC motor | min max min max at 480V at 600V at 200/208V at 220/230V | ms ms ms A A | 12 28 8 22 77 77 77 |
| Mechanical operations Operating times Average time for Us co | ontrol in AC Closing NO Opening NO for three-phase AC motor erformance for three-phase AC motor | min max min max at 480V at 600V at 220/230V at 220/230V at 460/480V | ms ms ms A A | 12 28 8 22 77 77 77 |
| Mechanical operations Operating times Average time for Us co | ontrol in AC Closing NO Opening NO of for three-phase AC motor | min max min max at 480V at 600V at 200/208V at 220/230V at 460/480V at 575/600V | ms ms ms A A | 12 28 8 22 77 77 77 25 30 60 75 |
| Mechanical operations Operating times Average time for Us co | ontrol in AC Closing NO Opening NO for three-phase AC motor erformance for three-phase AC motor | min max min max at 480V at 600V at 220/230V at 220/230V at 460/480V | ms ms ms A A | 12 28 8 22 77 77 77 |
| Mechanical operations Operating times Average time for Us of UL technical data Full-load current (FLA) Yielded mechanical per General USE Other features | ontrol in AC Closing NO Opening NO for three-phase AC motor erformance for three-phase AC motor | min max min max at 480V at 600V at 200/208V at 220/230V at 460/480V at 575/600V | ms ms ms A A | 12 28 8 22 77 77 77 25 30 60 75 |
| Mechanical operations Operating times Average time for Us co | ontrol in AC Closing NO Opening NO for three-phase AC motor erformance for three-phase AC motor | min max min max at 480V at 600V at 200/208V at 220/230V at 460/480V at 575/600V | ms ms ms A A | 12 28 8 22 77 77 77 25 30 60 75 |

ENERGY AND AUTOMATION

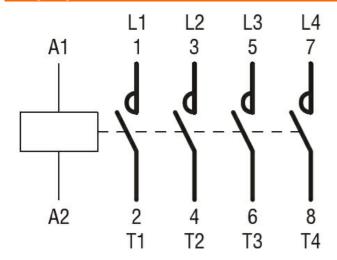
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① BF80T2 82mm/3.23"

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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

cULus

ETIM 6 classification

EC000066 - Power contactor, AC switching