# BF4000A230

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 40A, AC COIL 50/60HZ, 230VAC

| | | | |
|---|---|---|---|
| Product designation | | | Power contactor |
| Product type designation | | | BF40 |
| **Contact characteristics** | | | |
| Number of poles | | nr. | 3 |
| Rated insulation voltage Ui | | V | 1000 |
| Rated impulse withstand voltage Uimp | | kV | 8 |
| Operating frequency | | | |
| | Operational frequency min | Hz | 25 |
| | Operational frequency max | Hz | 400 |
| Conventional free air thermal current Ith | | A | 70 |
| Operating current | | | |
| | Operational current AC1 (≤40°C) | A | 70 |
| | Operational current AC3 (≤440V ≤55°C) | A | 40 |
| | Operational current AC4 (400V) | A | 24 |
| Rated operational power AC1 (T≤40°C) | | | |
| | 230V | kW | 26 |
| | 400V | kW | 46 |
| | 500V | kW | 58 |
| | 690V | kW | 79 |
| Rated operational power AC3 (T≤55°C) | | | |
| | 230V | kW | 11 |
| | 400V | kW | 18.5 |
| | 415V | kW | 22 |
| | 440V | kW | 22 |
| | 500V | kW | 22 |
| | 690V | kW | 30 |
| | 1000V | kW | 18.5 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 400 |
| Protection fuse | | | |
| | gG (IEC) | A | 100 |
| | aM (IEC) | A | 50 |
| Making capacity (RMS value) | | A | 400 |
| Breaking capacity at voltage | | | |
| | Breaking capacity 440V | A | 320 |
| | Breaking capacity 500V | A | 265 |
| | Breaking capacity 690V | A | 256 |
| Resistance per pole (average value) | | mΩ | 0.8 |
| Power dissipation per pole (average value) | | | |
| | Power dissipation pole (average value) Ith | W | 3.9 |
| | AC3 | W | 1.3 |
| Tightening torque for terminals | | | |
| | min | Nm | 4 |
| | max | Nm | 5 |
| | min | lbft | 2.95 |
| | max | lbft | 3.69 |

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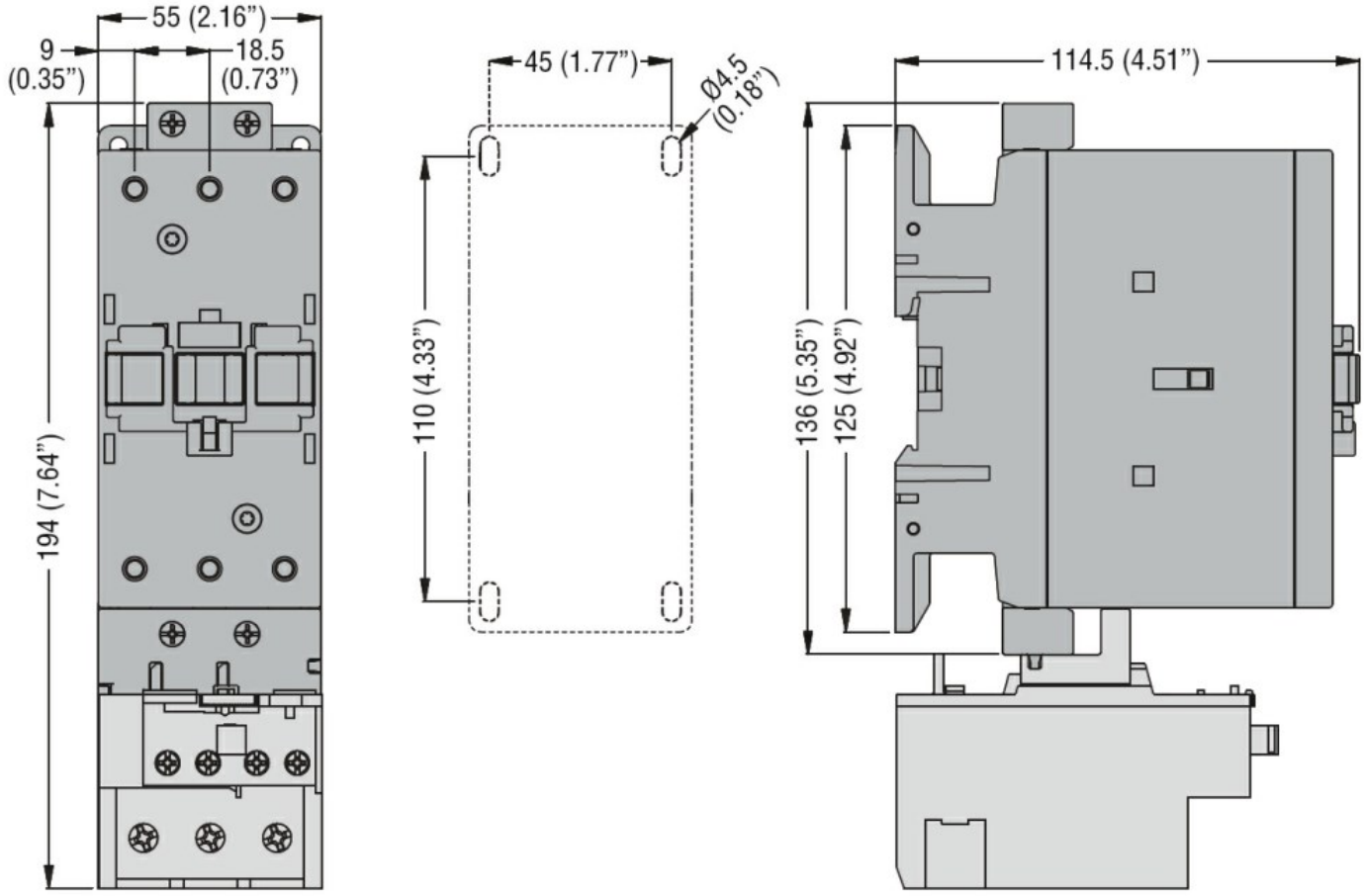
|---|---|---|---|---|
| Tightening torque for coil terminal | | | | |
| | | min | Nm | 0.8 |
| | | max | Nm | 1 |
| | | min | lbft | 0.8 |
| | | max | lbft | 0.74 |
| max number of wires simultaneously connectable | | | nr. | 2 |
| Conductor section | | | | |
| | AWG | | | |
| | | min | | 14 |
| | | max | | 2 |
| | Flexible w/o lug conductor section | | | |
| | | min | mm² | 1.5 |
| | | max | mm² | 35 |
| | Flexible c/w lug conductor section | | | |
| | | min | mm² | 1.5 |
| | | max | mm² | 35 |
| Power terminal protection according to IEC/EN 60529 | | | | IP20 front |
| **Auxiliary contact characteristics** | | | | |
| Operational current AC1 (≤40°C) | | | A | 70 |
| Operating current DC13 | | | | |
| | | 110V | A | Screw / DIN rail 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 | | | | |
| | | normal | | Vertical plan |
| | | allowable | | ±30° |
| Mounting | | | | Screw / DIN rail 35mm |
| Weight | | | g | 1.02 |
| **Operations** | | | | |
| Mechanical life | | | Cycles | 15000000 |
| Electrical life | | | Cycles | 1500000 |
| **Safety related data** | | | | |
| Performance level B10d according to EN/ISO 13489-1 | | | | |
| | | rated load | Cicli | 1500000 |
| | | mechanical load | Cicli | 15000000 |
| Mirror contats according 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 | | |

| | | | | | |
|---|---|---|---|---|---|
| | | | 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 | | | |
| | | | min | %Us | 0.8 |
| | | | max | %Us | 1.1 |
| | | drop-out | | | |
| | | | min | %Us | 0.2 |
| | | | max | %Us | 0.55 |
| AC operating voltage | | | | | |
| | of 50/60Hz coil powered at 50Hz | | | | |
| | | | in-rush | VA | 210 |
| | | | holding | VA | 15 |
| | of 50/60Hz coil powered at 60Hz | | | | |
| | | | in-rush | VA | 195 |
| | | | holding | VA | 13 |
| | of 60Hz coil powered at 60Hz | | | | |
| | | | in-rush | VA | 210 |
| | | | holding | VA | 15 |
| Dissipation at holding ≤20°C 50Hz | | | | W | 5.0 |
| **Max cycles frequency** | | | | | |
| Mechanical operations | | | | Cycles/h | 3600 |
| **Operating times** | | | | | |
| Average time for Us control | | | | | |
| | in AC | | | | |
| | | Closing NO | | | |
| | | | min | ms | 12 |
| | | | max | ms | 28 |
| | | Opening NO | | | |
| | | | min | ms | 8 |
| | | | max | ms | 22 |
| **UL technical data** | | | | | |
| Full-load current (FLA) for three-phase AC motor | | | | | |
| | | | at 480V | A | 40 |
| | | | at 600V | A | 32 |
| Yielded mechanical performance | | | | | |
| | for single-phase AC motor | | | | |
| | | | at 110/120V | hp | 3 |
| | | | at 230V | hp | 7.5 |
| | for three-phase AC motor | | | | |
| | | | at 200/208V | hp | 10 |
| | | | at 220/230V | hp | 15 |
| | | | at 460/480V | hp | 30 |
| | | | at 575/600V | hp | 30 |
| General USE | | | | | |
| | Contactor | | | | |
| | | | AC current | A | 32 |

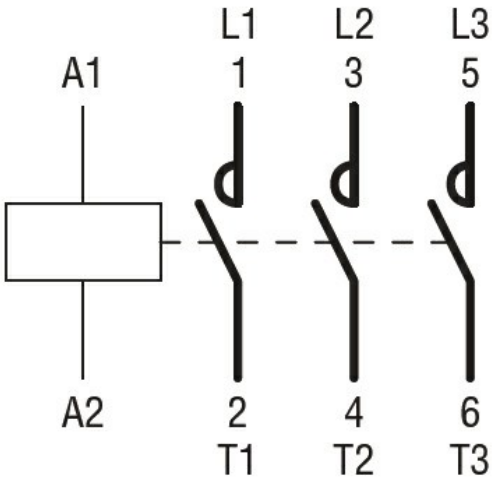
## Other features

| | |
|---|---|
| Pollution degree | 3 |

## Dimensions




## Wiring diagrams




## Certifications and compliance

Certifications

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|---|
| 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 |

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|---|---|
| | UL 60947-4-1 |
| Compliance | |
| | cULus |

## ETIM 6 classification

EC000066 - Power contactor, AC switching