# 11B180L0048C48

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 185A, AC/DC COIL, ALREADY FITTED WITH MECHANICAL LATCH (G495), 48VAC/DC, MECHANICAL LATCH 48VDC

| | | | |
|---|---|---|---|
| Product designation | | | Power contactor |
| Product type designation | | | B180 |
| **Contact characteristics** | | | |
| Number of poles | | Nr. | 3 |
| 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 | | A | 275 |
| Operational current Ie | | | |
| | AC-1 (≤40°C) | A | 275 |
| | AC-1 (≤55°C) | A | 250 |
| | AC-1 (≤70°C) | A | 200 |
| | AC-3 (≤440V ≤55°C) | A | 185 |
| | AC-4 (400V) | A | 65 |
| Rated operational power AC-3 (T≤55°C) | | | |
| | 400V | kW | 100 |
| Rated operational power AC-1 (T≤40°C) | | | |
| | 230V | kW | 95 |
| | 400V | kW | 160 |
| | 500V | kW | 213 |
| | 690V | kW | 298 |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 1 poles in series | | | |
| | 75V | A | 260 |
| | 110V | A | 120 |
| | 220V | A | – |
| | 330V | A | – |
| | 460V | A | – |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 2 poles in series | | | |
| | 75V | A | 260 |
| | 110V | A | 170 |
| | 220V | A | 150 |
| | 330V | A | – |
| | 460V | A | – |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 3 poles in series | | | |
| | 75V | A | 260 |
| | 110V | A | 170 |
| | 220V | A | 170 |
| | 330V | A | 150 |
| | 460V | A | – |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | 75V | A | 260 |
| | 110V | A | 170 |
| | 220V | A | 170 |

| | | | |
|---|---|---|---|
| | 330V | A | 170 |
| | 460V | A | 150 |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | 75V | A | 180 |
| | 110V | A | 90 |
| | 220V | A | – |
| | 330V | A | – |
| | 460V | A | – |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | 75V | A | 180 |
| | 110V | A | 140 |
| | 220V | A | 100 |
| | 330V | A | – |
| | 460V | A | – |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | 75V | A | 180 |
| | 110V | A | 160 |
| | 220V | A | 140 |
| | 330V | A | 100 |
| | 460V | A | – |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | 75V | A | 180 |
| | 110V | A | 160 |
| | 220V | A | 160 |
| | 330V | A | 160 |
| | 460V | A | 100 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 1500 |
| Protection fuse | | | |
| | gG (IEC) | A | 315 |
| | aM (IEC) | A | 200 |
| Making capacity (RMS value) | | A | 1850 |
| Breaking capacity at voltage | | | |
| | 440V | A | 1850 |
| | 500V | A | 1600 |
| | 690V | A | 1480 |
| Resistance per pole (average value) | | mΩ | 0.3 |
| Power dissipation per pole (average value) | | | |
| | Ith | W | 20.3 |
| | AC-3 | W | 9.7 |
| Tightening torque for terminals | | | |
| | min | Nm | 18 |
| | max | Nm | 18 |
| | min | lbin | 13.3 |
| | max | lbin | 13.3 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 1 |
| | max | Nm | 1 |
| | min | lbin | 0.74 |
| | max | lbin | 0.74 |
| Max number of wires simultaneously connectable | | Nr. | 2 |
| Conductor section | | | |
| AWG/Kcmil | | | |
| | max | | 300 kcmil |

| | | | |
|---|---|---|---|
| Power terminal protection according to IEC/EN 60529 | | | IP00 |
| **Mechanical features** | | | |
| Operating position | | | |
| | normal | | Vertical plan |
| | allowable | | ±30° |
| Fixing | | | Screw |
| Weight | | g | 6090 |
| Conductor section | | | |
| AWG/kcmil conductor section | | | |
| | max | | 300 kcmil |
| **Operations** | | | |
| Mechanical life | | cycles | 10000000 |
| Electrical life | | cycles | 1000000 |
| **Safety related data** | | | |
| Performance level B10d according to EN/ISO 13489-1 | | | |
| | rated load | cycles | 1000000 |
| | mechanical load | cycles | 10000000 |
| Mirror contats according to IEC/EN 609474-4-1 | | | yes |
| EMC compatibility | | | yes |
| **AC coil operating** | | | |
| Rated AC voltage at 50/60Hz, 60Hz | | | |
| | min | V | 220 |
| | max | V | 240 |
| 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 | 60 |
| of 50/60Hz coil powered at 60Hz | | | |
| pick-up | | | |
| | min | %Us | 80 |
| | max | %Us | 110 |
| drop-out | | | |
| | min | %Us | 20 |
| | max | %Us | 60 |
| of 60Hz coil powered at 60Hz | | | |
| pick-up | | | |
| | min | %Us | 80 |
| | max | %Us | 110 |
| drop-out | | | |
| | min | %Us | 20 |
| | max | %Us | 60 |
| AC average coil consumption at 20°C | | | |
| of 50/60Hz coil powered at 50Hz | | | |
| | in-rush | VA | 300 |
| | holding | VA | 10 |
| of 50/60Hz coil powered at 60Hz | | | |
| | in-rush | VA | 300 |
| | holding | VA | 10 |
| Dissipation at holding ≤20°C 50Hz | | W | 10 |

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## DC coil operating

| | | | | |
|---|---|---|---|---|
| DC rated control voltage | | | | |
| | | min | V | 220 |
| | | max | V | 240 |
| DC operating voltage | | | | |
| | pick-up | | | |
| | | min | %Us | 80 |
| | | max | %Us | 110 |
| | drop-out | | | |
| | | min | %Us | 20 |
| | | max | %Us | 60 |
| Average coil consumption ≤20°C | | | | |
| | | in-rush | W | 300 |
| | | holding | W | 10 |

## Max cycles frequency

| | | | | |
|---|---|---|---|---|
| Mechanical operation | | | cycles/h | 2400 |

## Operating times

| | | | | | |
|---|---|---|---|---|---|
| Average time for Us control | | | | | |
| | in AC | | | | |
| | | Closing NO | | | |
| | | | min | ms | 60 |
| | | | max | ms | 100 |
| | | Opening NO | | | |
| | | | min | ms | 25 |
| | | | max | ms | 60 |
| | in DC | | | | |
| | | Closing NO | | | |
| | | | min | ms | 60 |
| | | | max | ms | 100 |
| | | Opening NO | | | |
| | | | min | ms | 25 |
| | | | max | ms | 60 |

## UL technical data

| | | | | |
|---|---|---|---|---|
| Full-load current (FLA) for three-phase AC motor | | | | |
| | | at 480V | A | 180 |
| | | at 600V | A | 144 |
| Yielded mechanical performance | | | | |
| | for three-phase AC motor | | | |
| | | 200/208V | HP | 60 |
| | | 220/230V | HP | 75 |
| | | 575/600V | HP | 150 |
| General USE | | | | |
| | Contactor | | | |
| | | AC current | A | 275 |
| Short-circuit protection fuse, 600V | | | | |
| | Standard fault | | | |
| | | Short circuit current | kA | 10 |
| | | Fuse rating | A | 500 |
| | | Fuse class | | RK5 |

## Ambient conditions

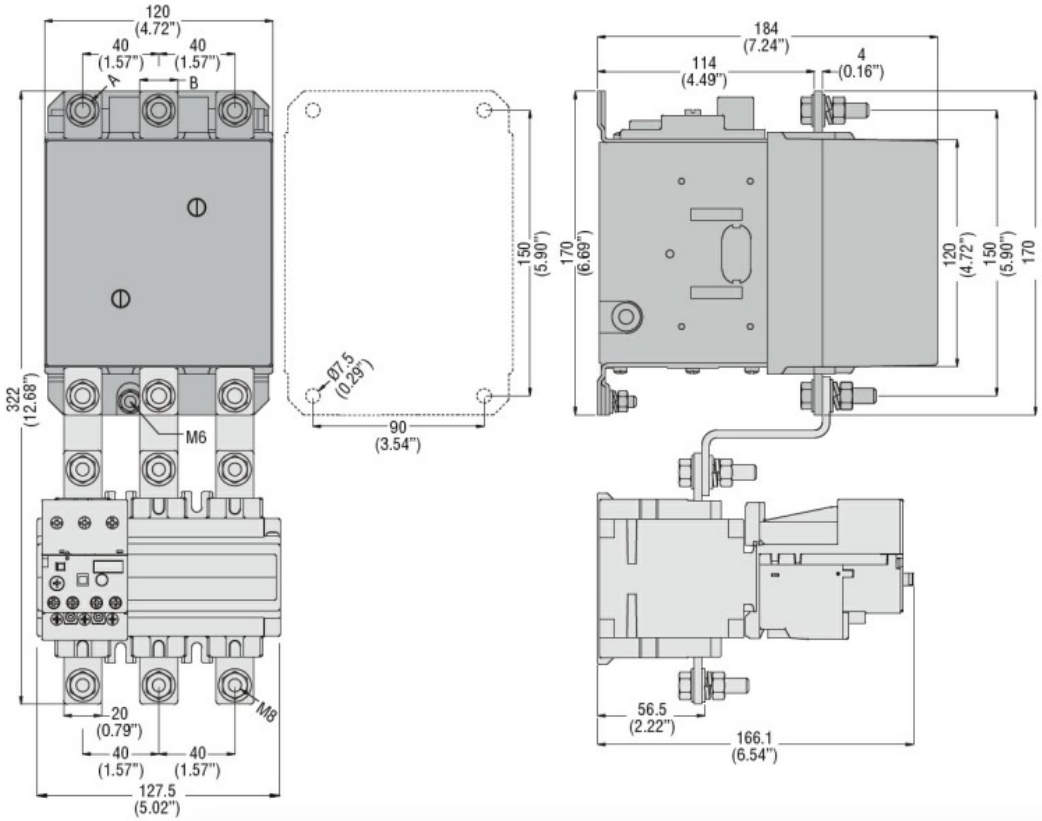
| | | | | |
|---|---|---|---|---|
| Temperature | | | | |
| | Operating temperature | | | |
| | | min | °C | -50 |
| | | max | °C | 70 |

| | | | |
|---|---|---|---|
| Storage temperature | | | |
| | min | °C | -60 |
| | max | °C | 80 |
| Max altitude | | m | 3000 |

## Resistance & Protection

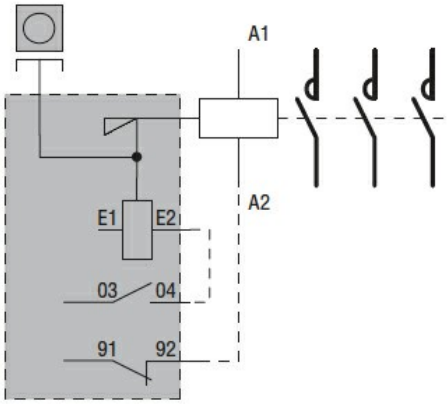
| | |
|---|---|
| Pollution degree | 3 |

## Dimensions




| CONTACTOR TYPE | A | B |
|---|---|---|
| B115 | M6 | 15 (0.59") |
| B145 | M8 | 20 (0.79") |
| B180 | M8 | 20 (0.79") |

## Wiring diagrams




## Certifications and compliance

Compliance

| |
|---|
| 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 |

Certificates

| |
|---|
| CCC |
| cULus |
| EAC |

## ETIM classification

| | |
|---|---|
| ETIM 8.0 | EC000066 - Power contactor, AC switching |