



| | | | |
|--|---|------|-----|
| Product designation | Power contactor | | |
| Product type designation | B180 | | |
| Contact characteristics | | | |
| Number of poles | Nr. | 3 | |
| Rated insulation voltage U_i IEC/EN | V | 1000 | |
| Rated impulse withstand voltage U_{imp} | kV | 8 | |
| Operational frequency | min | Hz | 25 |
| | max | Hz | 400 |
| IEC Conventional free air thermal current I_{th} | A | 275 | |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A | 275 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A | 250 |
| | AC-1 ($\leq 70^\circ\text{C}$) | A | 200 |
| | AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$) | A | 185 |
| | AC-4 (400V) | A | 65 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 400V | kW | 100 |
| | | | |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW | 95 |
| | 400V | kW | 160 |
| | 500V | kW | 213 |
| | 690V | kW | 298 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | 75V | A | 260 |
| | 110V | A | 120 |
| | 220V | A | – |
| | 330V | A | – |
| | 460V | A | – |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series | 75V | A | 260 |
| | 110V | A | 170 |
| | 220V | A | 150 |
| | 330V | A | – |
| | 460V | A | – |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | 75V | A | 260 |
| | 110V | A | 170 |
| | 220V | A | 170 |
| | 330V | A | 150 |
| | 460V | A | – |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series | 75V | A | 260 |
| | 110V | A | 170 |
| | 220V | A | 170 |

| | | | |
|--|-----------------|------------------|------|
| | 330V | A | 170 |
| | 460V | A | 150 |
| IEC max current I _e 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 I _e 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 I _e 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 I _e 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) | | | |
| | I _{th} | W | 20.3 |
| | AC-3 | W | 9.7 |
| Tightening torque for terminals | | | |
| | min | Nm | 18 |
| | max | Nm | 18 |
| | min | I _{bin} | 13.3 |
| | max | I _{bin} | 13.3 |
| Tightening torque for coil terminal | | | |
| | min | Nm | 1 |
| | max | Nm | 1 |
| | min | I _{bin} | 0.74 |
| | max | I _{bin} | 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 allowable | Vertical plan ±30° | |
| Fixing | Screw | | |
| Weight | g | 6100 | |
| 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 mechanical load | cycles | 1000000 |
| | | cycles | 10000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | yes | | |
| EMC compatibility | yes | | |
| AC coil operating | | | |
| Rated AC voltage at 50/60Hz, 60Hz | min | V | 380 |
| | max | V | 415 |
| 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 |

DC coil operating

DC rated control voltage

| | | |
|-----|---|-----|
| min | V | 380 |
| max | V | 415 |

DC operating voltage

pick-up

| | | |
|-----|-----|-----|
| min | %Us | 80 |
| max | %Us | 110 |

drop-out

| | | |
|-----|-----|----|
| min | %Us | 20 |
| max | %Us | 60 |

Average coil consumption $\leq 20^{\circ}\text{C}$

| | | |
|---------|---|-----|
| 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 | $^{\circ}\text{C}$ | -50 |
| max | $^{\circ}\text{C}$ | 70 |

Storage temperature

| | | |
|-----|----|-----|
| min | °C | -60 |
| max | °C | 80 |

Max altitude

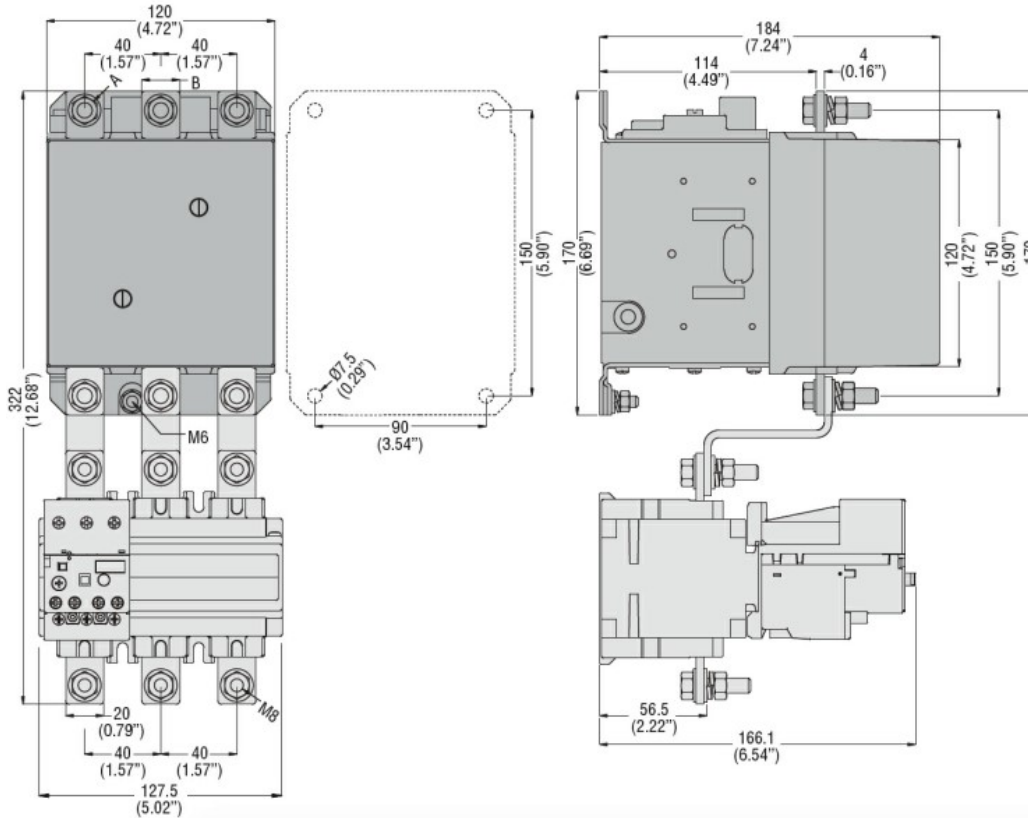
| | |
|---|------|
| m | 3000 |
|---|------|

Resistance & Protection

Pollution degree

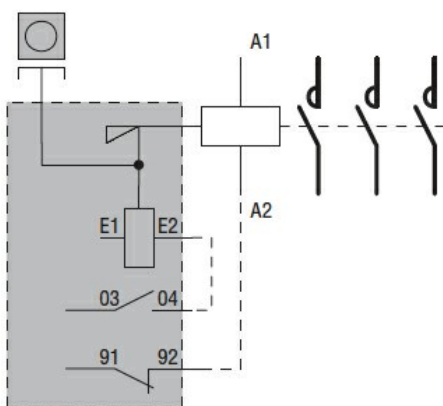
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Dimensions



| 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