



Product designation Power contactor
Product type designation B500

Contact characteristics

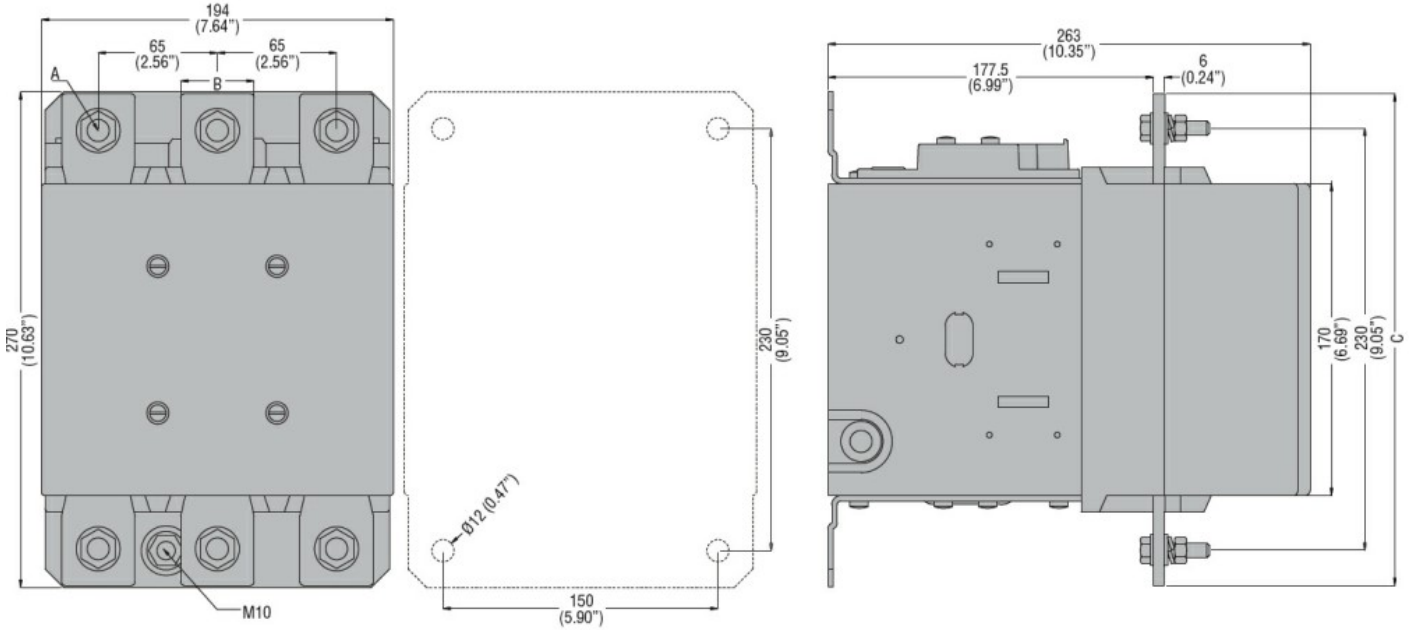
| | | |
|--|---|--------|
| Number of poles | Nr. | 3 |
| Rated insulation voltage U_i IEC/EN | V | 1000 |
| Rated impulse withstand voltage U_{imp} | kV | 8 |
| Operational frequency | min | Hz 25 |
| | max | Hz 400 |
| IEC Conventional free air thermal current I_{th} | A | 700 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A 700 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A 550 |
| | AC-1 ($\leq 70^\circ\text{C}$) | A 500 |
| | AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$) | A 520 |
| | AC-4 (400V) | A 240 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V | kW 156 |
| | 400V | kW 290 |
| | 415V | kW 306 |
| | 440V | kW 328 |
| | 500V | kW 367 |
| | 690V | kW 416 |
| | 1000V | kW 312 |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW 252 |
| | 400V | kW 438 |
| | 500V | kW 575 |
| | 690V | kW 755 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | 75V | A 650 |
| | 110V | A 320 |
| | 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 650 |
| | 110V | A 550 |
| | 220V | A 450 |
| | 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 650 |
| | 110V | A 600 |
| | 220V | A 600 |

| | | | |
|--|-----------------|------------------|------|
| | 330V | A | 450 |
| | 460V | A | -- |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | 75V | A | 650 |
| | 110V | A | 600 |
| | 220V | A | 600 |
| | 330V | A | 600 |
| | 460V | A | 450 |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | 75V | A | 550 |
| | 110V | A | 320 |
| | 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 | 550 |
| | 110V | A | 550 |
| | 220V | A | 450 |
| | 330V | A | -- |
| | 460V | A | -- |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | 75V | A | 550 |
| | 110V | A | 550 |
| | 220V | A | 550 |
| | 330V | A | 450 |
| | 460V | A | -- |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | 75V | A | 550 |
| | 110V | A | 550 |
| | 220V | A | 550 |
| | 330V | A | 450 |
| | 460V | A | 450 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 4050 |
| Protection fuse | | | |
| | gG (IEC) | A | 800 |
| | aM (IEC) | A | 500 |
| Making capacity (RMS value) | | A | 5000 |
| Breaking capacity at voltage | | | |
| | 440V | A | 5000 |
| | 500V | A | 4500 |
| | 690V | A | 4000 |
| Resistance per pole (average value) | | mΩ | 0.14 |
| Power dissipation per pole (average value) | | | |
| | I _{th} | W | 68.6 |
| | AC-3 | W | 35 |
| Tightening torque for terminals | | | |
| | min | Nm | 35 |
| | max | Nm | 35 |
| | min | I _{bin} | 25.8 |
| | max | I _{bin} | 25.8 |
| 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 | | 2x 500 kcmil |
| Power terminal protection according to IEC/EN 60529 | | | IP00 |
| Mechanical features | | | |
| Operating position | | normal allowable | Vertical plan ±30° |
| Fixing | | | Screw |
| Weight | | g | 1806 |
| Conductor section | | | |
| | | AWG/kcmil conductor section | |
| | max | | 2x 500 kcmil |
| Operations | | | |
| Mechanical life | | cycles | 5000000 |
| Electrical life | | cycles | 700000 |
| Safety related data | | | |
| Performance level B10d according to EN/ISO 13489-1 | | rated load mechanical load | cycles 700000 cycles 5000000 |
| 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 | 110 |
| | max | V | 125 |
| 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 | |

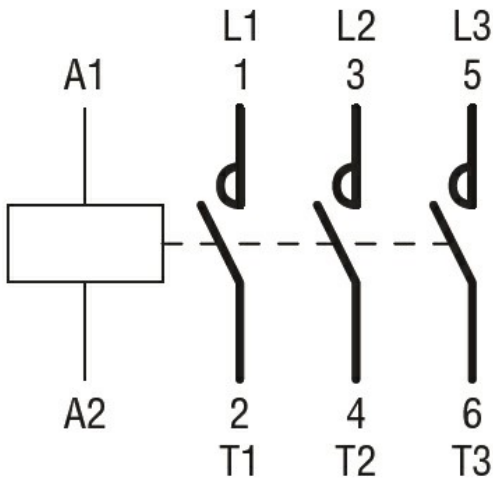
| | | | |
|---|-----------------------|--------------------|------|
| | in-rush | VA | 400 |
| | holding | VA | 18 |
| of 50/60Hz coil powered at 60Hz | | | |
| | in-rush | VA | 400 |
| | holding | VA | 18 |
| Dissipation at holding $\leq 20^{\circ}\text{C}$ 50Hz | | W | 18 |
| DC coil operating | | | |
| DC rated control voltage | | | |
| | min | V | 110 |
| | max | V | 125 |
| 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 | 400 |
| | holding | W | 18 |
| Max cycles frequency | | | |
| Mechanical operation | | cycles/h | 1200 |
| Operating times | | | |
| Average time for Us control | | | |
| in AC | | | |
| Closing NO | min | ms | 110 |
| | max | ms | 180 |
| Opening NO | min | ms | 60 |
| | max | ms | 100 |
| in DC | | | |
| Closing NO | min | ms | 110 |
| | max | ms | 180 |
| Opening NO | min | ms | 60 |
| | max | ms | 100 |
| UL technical data | | | |
| General USE | | | |
| Contactor | | | |
| | AC current | A | 700 |
| Short-circuit protection fuse, 600V | | | |
| Standard fault | | | |
| | Short circuit current | kA | 18 |
| | Fuse rating | A | 1200 |
| | Fuse class | | L |
| Ambient conditions | | | |
| Temperature | | | |
| Operating temperature | | | |
| | min | $^{\circ}\text{C}$ | -50 |
| | max | $^{\circ}\text{C}$ | 70 |
| Storage temperature | | | |
| | min | $^{\circ}\text{C}$ | -60 |

| | | | |
|------------------------------------|-----|----|------|
| | max | °C | 80 |
| Max altitude | | m | 3000 |
| Resistance & Protection | | | |
| Pollution degree | | | 3 |
| Dimensions | | | |



| CONTACTOR TYPE | A | B | C |
|----------------|-----|------------|--------------|
| B500 | M10 | 35 (1.38") | 265 (10.43") |
| B630 | M12 | 40 (1.57") | 270 (10.63") |

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