



| Product designation | | | Power contactor |
|--|--------------------|-----|-----------------|
| Product type designation | | | B310 |
| Contact characteristics | | | |
| Number of poles | | Nr. | 4 |
| 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 | | А | 450 |
| Operational current le | | | |
| | AC-1 (≤40°C) | А | 450 |
| | AC-1 (≤55°C) | А | 370 |
| | AC-1 (≤70°C) | А | 300 |
| | AC-3 (≤440V ≤55°C) | А | 320 |
| | AC-4 (400V) | Α | 150 |
| Rated operational power AC-1 (T≤40°C) | | | |
| | 230V | kW | 158 |
| | 400V | kW | 270 |
| | 500V | kW | 350 |
| | 690V | kW | 488 |
| IEC max current le in DC1 with $L/R \le 1$ ms with 1 poles in series | | | |
| | 75V | A | 375 |
| | 110V | A | 195 |
| | 220V | A | |
| | 330V | A | |
| | 460V | A | |
| IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series | | | |
| | 75V | A | 375 |
| | 110V | A | 350 |
| | 220V | A | 300 |
| | 330V | A | |
| | 460V | A | |
| IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series | | | 075 |
| | 75V | A | 375 |
| | 110V | A | 350 |
| | 220V | A | 350 |
| | 330V | A | 300 |
| IFC may autrant to in DC1 with 1/D < 1mg with 1 nation in action | 460V | A | |
| IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series | 751/ | ^ | 075 |
| | 75V | A | 375 |
| | 110V | A | 350 |
| | 220V 330V | A | 350 350 |
| | 330V 460V | A | 350 |
| | 40UV | A | 300 |

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| IEC max current le in DC3-DC5 with L/R \leq 15ms with 1 poles in series | | | |
|--|----------|------|----------------|
| | 75V | А | 310 |
| | 110V | А | 170 |
| | 220V | А | |
| | 330V | А | |
| | 460V | Α | |
| EC max current le in DC3-DC5 with $L/R \le 15$ ms with 2 poles in series | | | |
| | 75V | А | 310 |
| | 110V | А | 290 |
| | 220V | А | 230 |
| | 330V | А | |
| | 460V | А | |
| EC max current le in DC3-DC5 with L/R \leq 15ms with 3 poles in series | | | |
| | 75V | А | 310 |
| | 110V | А | 310 |
| | 220V | А | 290 |
| | 330V | А | 230 |
| | 460V | А | |
| EC max current le in DC3-DC5 with L/R \leq 15ms with 4 poles in series | | | |
| | 75V | А | 310 |
| | 110V | А | 310 |
| | 220V | А | 310 |
| | 330V | А | 230 |
| | 460V | А | 230 |
| Short-time allowable current for 10s (IEC/EN60947-1) | | А | 2900 |
| Protection fuse | | | |
| | gG (IEC) | А | 500 |
| | aM (IEC) | A | 400 |
| Making capacity (RMS value) | (| A | 3150 |
| Breaking capacity at voltage | | | |
| | 440V | А | 3000 |
| | 500V | A | 2700 |
| | 690V | A | 2520 |
| Resistance per pole (average value) | | mΩ | 0.2 |
| Power dissipation per pole (average value) | | | 0.2 |
| | lth | W | 40.5 |
| | AC-3 | Ŵ | 20 |
| Tightening torque for terminals | //0/0 | •• | 20 |
| | min | Nm | 35 |
| | max | Nm | 35 |
| | min | Ibin | 25.8 |
| | max | Ibin | 25.8 |
| Tightening torque for coil terminal | Παλ | 1011 | 20.0 |
| | min | Nm | 1 |
| | max | Nm | 1 |
| | min | Ibin | 0.74 |
| | max | Ibin | 0.74 |
| Max number of wires simultaneously connectable | Παλ | Nr. | 2 |
| • | | INI. | ۷ |
| Conductor costion | | | |
| | | | |
| Conductor section AWG/Kcmil | | | 0x 0/0 |
| AWG/Kcmil | max | | 2x 3/0 |
| Conductor section AWG/Kcmil Power terminal protection according to IEC/EN 60529 Mechanical features | max | | 2x 3/0 IP00 |

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11B31040048 FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 48VAC/DC

Operating position

| Operating position | normal allowable | | Vertical plan ±30° |
|--|---------------------|------------|-----------------------|
| Fixing | | | Screw |
| Weight | | g | 1110 |
| Conductor section | | | |
| AWG/kcmil conductor section | | | |
| | max | | 2x 3/0 |
| Operations | | | |
| Mechanical life | | cycles | 1000000 |
| Electrical life | | cycles | 700000 |
| Safety related data | | | |
| Performance level B10d according to EN/ISO 13489-1 | | | |
| | rated load | cycles | 700000 |
| | mechanical load | cycles | 1000000 |
| Mirror contats according to IEC/EN 609474-4-1 | | | yes |
| EMC compatibility | | | yes |
| AC coil operating | | | |
| Rated AC voltage at 50/60Hz | | V | 48 |
| AC operating voltage | | | |
| of 50/60Hz coil powered at 50Hz | | | |
| pick-up | | | |
| | min | %Us | 80 |
| | max | %Us | 110 |
| drop-out | | | |
| | min | %Us | 20 |
| (50/0011 - 1 - 0011 | max | %Us | 60 |
| of 50/60Hz coil powered at 60Hz | | | |
| pick-up | | 0/11- | 00 |
| | min | %Us | 80 |
| | max | %Us | 110 |
| drop-out | min | %Us | 20 |
| | min | %Us %Us | 60 |
| of 60Hz and noward at 60Hz | max | /005 | 00 |
| of 60Hz coil powered at 60Hz pick-up | | | |
| ρισκ-αρ | min | %Us | 80 |
| | max | %Us | 110 |
| drop-out | Шал | /003 | 110 |
| | min | %Us | 20 |
| | max | %Us | 60 |
| AC average coil consumption at 20°C | Пах | , | |
| 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 | | V | 48 |
| DC operating voltage | | | |

pick-up

ENERGY AND AUTOMATION

Resistance & Protection

11B31040048 FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 48VAC/DC

| | | | min | %Us | 80 |
|--|-----------------------|------------|-----------------------|---------------|-------------------|
| | | | max | %Us | 110 |
| | drop-out | | | | |
| | | | min | %Us | 20 |
| | | | max | %Us | 60 |
| Average coil consum | ption ≤20°C | | | | |
| | | | in-rush | W | 300 |
| Max avalas fraguesa | , | | holding | W | 10 |
| Max cycles frequency Mechanical operation | | | | cycles/h | 2400 |
| Operating times | | | | Cycles/II | 2400 |
| Average time for Us of | control | | | | |
| , wordge time for 00 v | in AC | | | | |
| | | Closing NO | | | |
| | | 0 | min | ms | 80 |
| | | | max | ms | 120 |
| | | Opening NO | | | |
| | | | min | ms | 30 |
| | | | max | ms | 75 |
| | in DC | | | | |
| | | Closing NO | | | |
| | | | min | ms | 80 |
| | | | max | ms | 120 |
| | | Opening NO | min | ma | 20 |
| | | | min max | ms ms | 30 75 |
| UL technical data | | | max | 1113 | 13 |
| | A) for three-phase AC | motor | | | |
| Υ. | / | | at 480V | А | 301 |
| | | | at 600V | А | 289 |
| Yielded mechanical p | performance | | | | |
| | for three-phase AC | motor | | | |
| | | | 200/208V | HP | 100 |
| | | | 220/230V | HP | 125 |
| | | | 460/480V | HP | 250 |
| | | | 575/600V | HP | 300 |
| General USE | Operational | | | | |
| | Contactor | | | ۸ | 450 |
| Short airquit protoction | ~ 600 | | AC current | A | 450 |
| Short-circuit protection | Standard fault | | | | |
| | Stanuaru iault | | Short circuit current | kA | 18 |
| | | | Fuse rating | A | 800 |
| | | | Fuse class | | L |
| Ambient conditions | | | | | |
| Temperature | | | | | |
| | Operating temperat | ture | | | |
| | | | min | °C | -50 |
| | | | max | °C | 70 |
| | | | | | |
| | Storage temperatur | re | | | |
| | Storage temperatur | re | min | °C | -60 |
| Max altitude | Storage temperatur | re | min max | °C °C m | -60 80 3000 |

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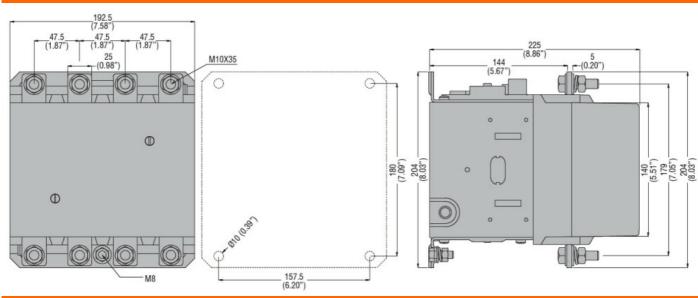


ENERGY AND AUTOMATION

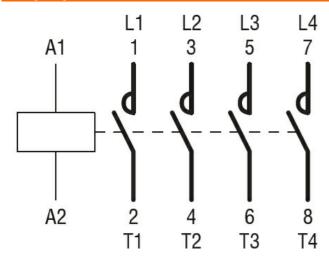
11B31040048 FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 450A, AC/DC COIL, 48VAC/DC

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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 |

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