



| | | | | |
|--|---|----|-----|-----------------|
| Product designation | | | | Power contactor |
| Product type designation | | | | B310 |
| Contact characteristics | | | | |
| Number of poles | Nr. | | | 4 |
| 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 | | | 450 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A | 450 | |
| | AC-1 ($\leq 55^\circ\text{C}$) | A | 370 | |
| | AC-1 ($\leq 70^\circ\text{C}$) | A | 300 | |
| | AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$) | A | 320 | |
| | AC-4 (400V) | A | 150 | |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW | 158 | |
| | 400V | kW | 270 | |
| | 500V | kW | 350 | |
| | 690V | kW | 488 | |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | 75V | A | 375 | |
| | 110V | A | 195 | |
| | 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 | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 300 | |
| | 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 | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 350 | |
| | 330V | A | 300 | |
| | 460V | A | -- | |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series | 75V | A | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 350 | |
| | 330V | A | 350 | |
| | 460V | A | 300 | |

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 170 |
| 220V | A | -- |
| 330V | A | -- |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 290 |
| 220V | A | 230 |
| 330V | A | -- |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 310 |
| 220V | A | 290 |
| 330V | A | 230 |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 310 |
| 220V | A | 310 |
| 330V | A | 230 |
| 460V | A | 230 |

Short-time allowable current for 10s (IEC/EN60947-1)

| | |
|---|------|
| A | 2900 |
|---|------|

Protection fuse

| | | |
|----------|---|-----|
| gG (IEC) | A | 500 |
| aM (IEC) | A | 400 |

Making capacity (RMS value)

| | |
|---|------|
| A | 3150 |
|---|------|

Breaking capacity at voltage

| | | |
|------|---|------|
| 440V | A | 3000 |
| 500V | A | 2700 |
| 690V | A | 2520 |

Resistance per pole (average value)

| | |
|----|-----|
| mΩ | 0.2 |
|----|-----|

Power dissipation per pole (average value)

| | | |
|-----------------|---|------|
| I _{th} | W | 40.5 |
| AC3 | W | 20 |

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 3/0 |
|-----|--------|

Power terminal protection according to IEC/EN 60529

| |
|------|
| IP00 |
|------|

Mechanical features

Operating position

| | normal allowable | Vertical plan ±30° |
|-------------------|-----------------------------|-----------------------|
| Fixing | | Screw |
| Weight | | g 1136 |
| Conductor section | | |
| | AWG/kcmil conductor section | |
| | max | 2x 3/0 |

Operations

| | | |
|-----------------|--------|----------|
| Mechanical life | cycles | 10000000 |
| Electrical life | cycles | 700000 |

Safety related data

Performance level B10d according to EN/ISO 13489-1

| | | | |
|--|-----------------|--------|----------|
| | rated load | cycles | 700000 |
| | mechanical load | cycles | 10000000 |

Mirror contacts according to IEC/EN 60947-4-1

EMC compatibility

yes

yes

AC coil operating

Rated AC voltage at 50/60Hz

V 24

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

V 24

DC operating voltage

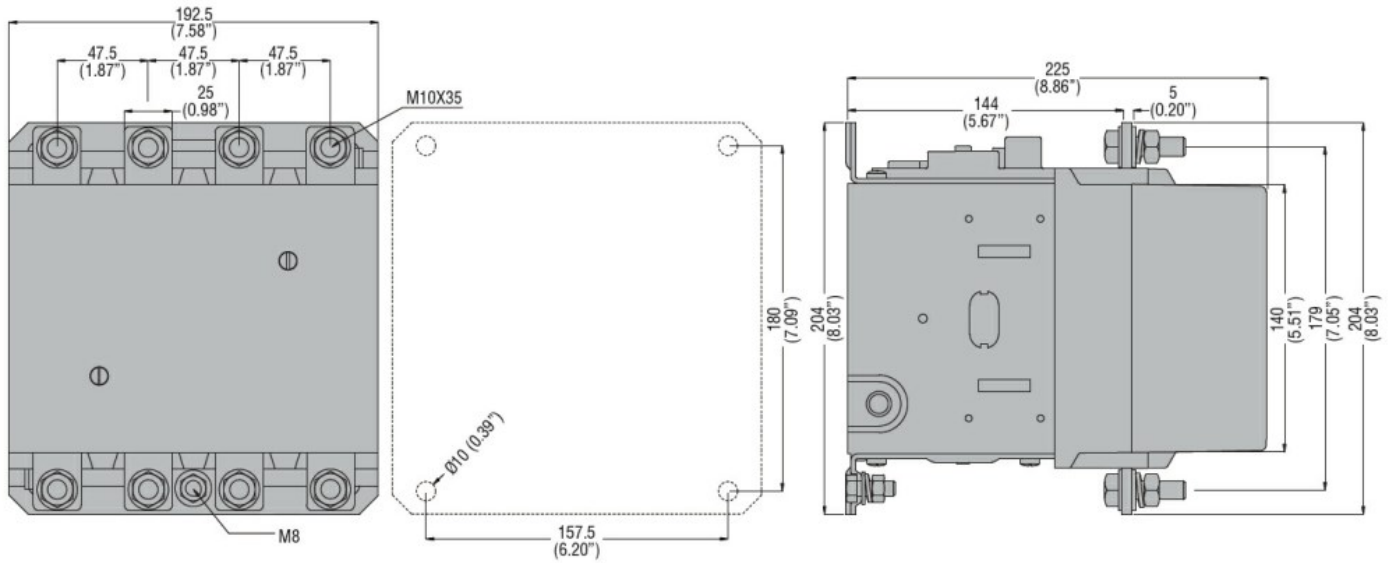
pick-up

| | | | | |
|--|-----------------------|-----------------------|-----|---------------|
| | | 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 | 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 | ms | 30 |
| | | max | ms | 75 |
| UL technical data | | | | |
| Full-load current (FLA) for three-phase AC motor | | | | |
| | | at 480V | A | 301 |
| | | at 600V | A | 289 |
| Yielded mechanical performance | | | | |
| for three-phase AC motor | | | | |
| | | 200/208V | HP | 100 |
| | | 220/230V | HP | 125 |
| | | 460/480V | HP | 250 |
| | | 575/600V | HP | 300 |
| General USE | | | | |
| | Contactor | AC current | A | 450 |
| Short-circuit protection fuse, 600V | | | | |
| | Standard fault | Short circuit current | kA | 18 |
| | | Fuse rating | A | 800 |
| | | Fuse class | L | |
| 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 | | | | |

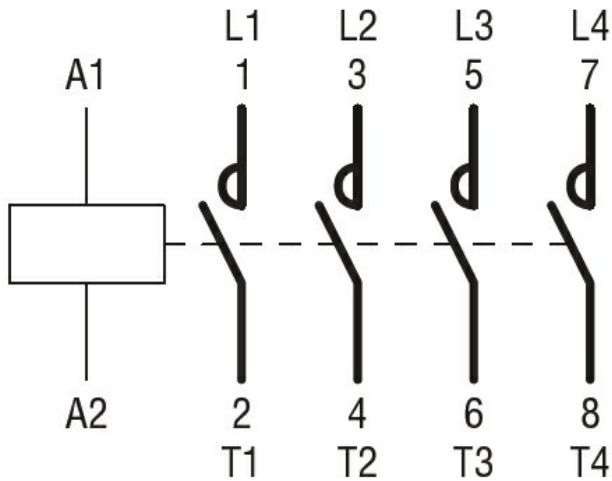
Pollution degree

3

Dimensions [mm (in)]



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



| | | | | |
|---|--------------------|----|-----|-----------------|
| Product designation | | | | Power contactor |
| Product type designation | | | | B310 |
| Contact characteristics | | | | |
| Number of poles | Nr. | | | 4 |
| 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 | | | 450 |
| Operational current I _e | AC-1 (≤40°C) | A | 450 | |
| | AC-1 (≤55°C) | A | 370 | |
| | AC-1 (≤70°C) | A | 300 | |
| | AC-3 (≤440V ≤55°C) | A | 320 | |
| | AC-4 (400V) | A | 150 | |
| Rated operational power AC-1 (T≤40°C) | 230V | kW | 158 | |
| | 400V | kW | 270 | |
| | 500V | kW | 350 | |
| | 690V | kW | 488 | |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 1 poles in series | 75V | A | 375 | |
| | 110V | A | 195 | |
| | 220V | A | -- | |
| | 330V | A | -- | |
| | 460V | A | -- | |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 2 poles in series | 75V | A | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 300 | |
| | 330V | A | -- | |
| | 460V | A | -- | |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 3 poles in series | 75V | A | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 350 | |
| | 330V | A | 300 | |
| | 460V | A | -- | |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series | 75V | A | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 350 | |
| | 330V | A | 350 | |
| | 460V | A | 300 | |

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 170 |
| 220V | A | -- |
| 330V | A | -- |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 290 |
| 220V | A | 230 |
| 330V | A | -- |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 310 |
| 220V | A | 290 |
| 330V | A | 230 |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 310 |
| 220V | A | 310 |
| 330V | A | 230 |
| 460V | A | 230 |

Short-time allowable current for 10s (IEC/EN60947-1)

| | |
|---|------|
| A | 2900 |
|---|------|

Protection fuse

| | | |
|----------|---|-----|
| gG (IEC) | A | 500 |
| aM (IEC) | A | 400 |

Making capacity (RMS value)

| | |
|---|------|
| A | 3150 |
|---|------|

Breaking capacity at voltage

| | | |
|------|---|------|
| 440V | A | 3000 |
| 500V | A | 2700 |
| 690V | A | 2520 |

Resistance per pole (average value)

| | |
|----|-----|
| mΩ | 0.2 |
|----|-----|

Power dissipation per pole (average value)

| | | |
|-----------------|---|------|
| I _{th} | W | 40.5 |
| AC3 | W | 20 |

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 3/0 |
|-----|--------|

Power terminal protection according to IEC/EN 60529

| |
|------|
| IP00 |
|------|

Mechanical features

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 | 10000000 |
| Electrical life | cycles | 700000 |

Safety related data

| | | | |
|--|----------------------------|--------|----------|
| Performance level B10d according to EN/ISO 13489-1 | rated load mechanical load | cycles | 700000 |
| | | cycles | 10000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | 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 |
| | 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 | V | 48 |
|--------------------------|---|----|

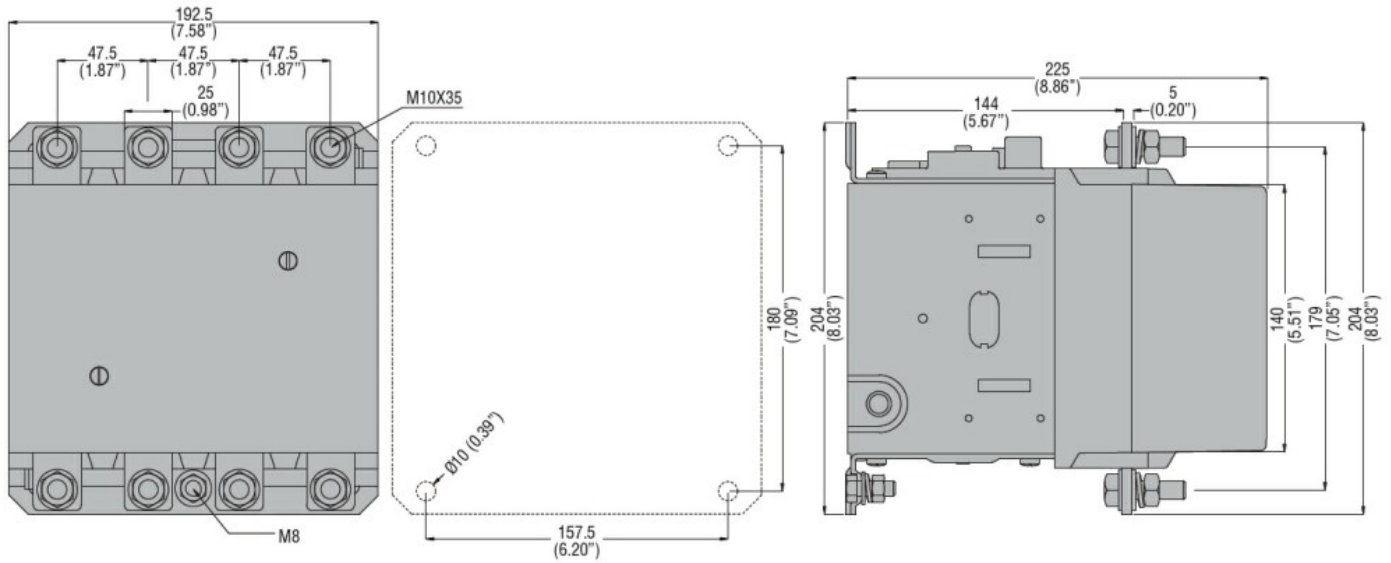
| | | |
|----------------------|--|--|
| DC operating voltage | | |
| pick-up | | |

| | | | | |
|--|--------------------------|-----------------------|--------------------|---------------|
| | | 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 | 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 | ms | 30 |
| | | max | ms | 75 |
| UL technical data | | | | |
| Full-load current (FLA) for three-phase AC motor | | | | |
| | | at 480V | A | 301 |
| | | at 600V | A | 289 |
| Yielded mechanical performance | | | | |
| | for three-phase AC motor | | | |
| | | 200/208V | HP | 100 |
| | | 220/230V | HP | 125 |
| | | 460/480V | HP | 250 |
| | | 575/600V | HP | 300 |
| General USE | | | | |
| | Contactor | | | |
| | | AC current | A | 450 |
| Short-circuit protection fuse, 600V | | | | |
| | Standard fault | | | |
| | | Short circuit current | kA | 18 |
| | | Fuse rating | A | 800 |
| | | 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 | $^{\circ}\text{C}$ | 80 |
| Max altitude | | | | m 3000 |
| Resistance & Protection | | | | |

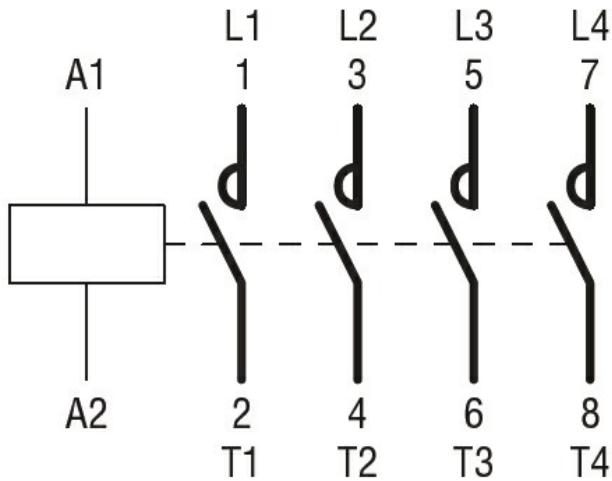
Pollution degree

3

Dimensions [mm (in)]



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



| | | | | |
|---|--------------------|----|-----|-----------------|
| Product designation | | | | Power contactor |
| Product type designation | | | | B310 |
| Contact characteristics | | | | |
| Number of poles | Nr. | | | 4 |
| 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 | | | 450 |
| Operational current I _e | AC-1 (≤40°C) | A | 450 | |
| | AC-1 (≤55°C) | A | 370 | |
| | AC-1 (≤70°C) | A | 300 | |
| | AC-3 (≤440V ≤55°C) | A | 320 | |
| | AC-4 (400V) | A | 150 | |
| Rated operational power AC-1 (T≤40°C) | 230V | kW | 158 | |
| | 400V | kW | 270 | |
| | 500V | kW | 350 | |
| | 690V | kW | 488 | |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 1 poles in series | 75V | A | 375 | |
| | 110V | A | 195 | |
| | 220V | A | -- | |
| | 330V | A | -- | |
| | 460V | A | -- | |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 2 poles in series | 75V | A | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 300 | |
| | 330V | A | -- | |
| | 460V | A | -- | |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 3 poles in series | 75V | A | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 350 | |
| | 330V | A | 300 | |
| | 460V | A | -- | |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series | 75V | A | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 350 | |
| | 330V | A | 350 | |
| | 460V | A | 300 | |

IEC max current I_e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 170 |
| 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 | 310 |
| 110V | A | 290 |
| 220V | A | 230 |
| 330V | A | -- |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 310 |
| 220V | A | 290 |
| 330V | A | 230 |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 310 |
| 220V | A | 310 |
| 330V | A | 230 |
| 460V | A | 230 |

Short-time allowable current for 10s (IEC/EN60947-1)

| | |
|---|------|
| A | 2900 |
|---|------|

Protection fuse

| | | |
|----------|---|-----|
| gG (IEC) | A | 500 |
| aM (IEC) | A | 400 |

Making capacity (RMS value)

| | |
|---|------|
| A | 3150 |
|---|------|

Breaking capacity at voltage

| | | |
|------|---|------|
| 440V | A | 3000 |
| 500V | A | 2700 |
| 690V | A | 2520 |

Resistance per pole (average value)

| | |
|----|-----|
| mΩ | 0.2 |
|----|-----|

Power dissipation per pole (average value)

| | | |
|-----------------|---|------|
| I _{th} | W | 40.5 |
| AC3 | W | 20 |

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 3/0 |
|-----|--------|

Power terminal protection according to IEC/EN 60529

| |
|------|
| IP00 |
|------|

Mechanical features

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 | 10000000 |
| Electrical life | cycles | 700000 |

Safety related data

| | | | |
|--|----------------------------|--------|----------|
| Performance level B10d according to EN/ISO 13489-1 | rated load mechanical load | cycles | 700000 |
| | | cycles | 10000000 |
| Mirror contacts according to IEC/EN 60947-4-1 | | | yes |
| EMC compatibility | | | yes |

AC coil operating

| | | |
|-----------------------------|---|----|
| Rated AC voltage at 50/60Hz | V | 60 |
|-----------------------------|---|----|

| | | | |
|---------------------------------|-----|-----|-----|
| 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 | V | 60 |
|--------------------------|---|----|

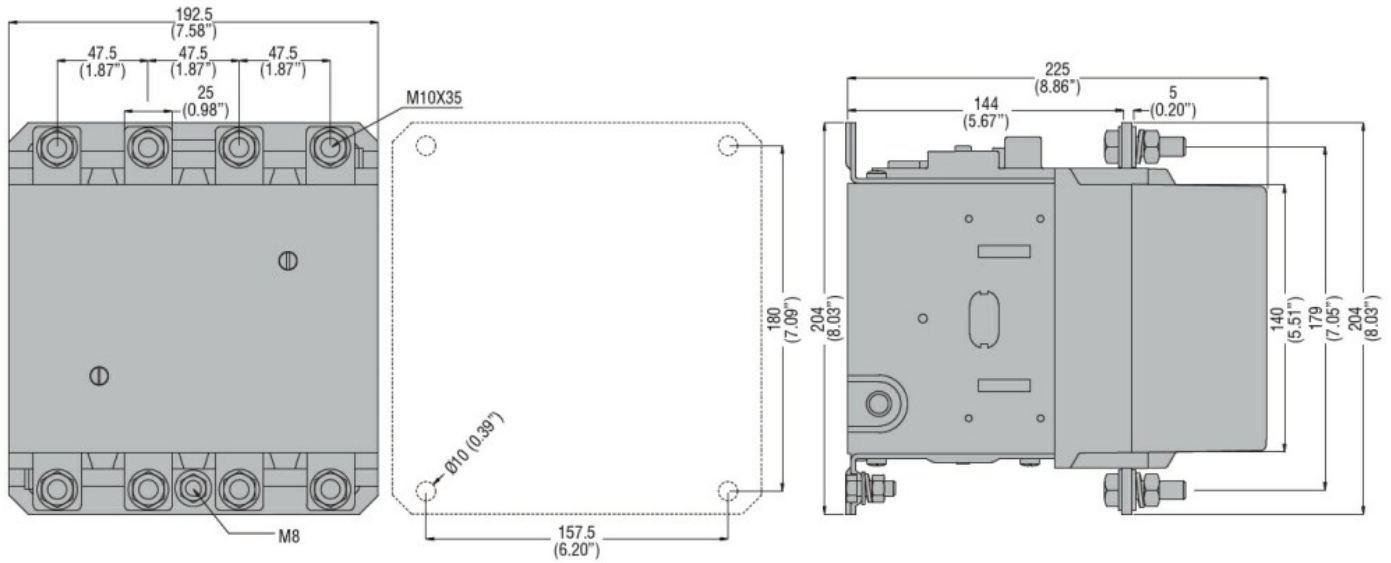
| | | |
|----------------------|--|--|
| DC operating voltage | | |
| pick-up | | |

| | | | | |
|--|--|-----------------------|-----|---------------|
| | | 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 | 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 | ms | 30 |
| | | max | ms | 75 |
| UL technical data | | | | |
| Full-load current (FLA) for three-phase AC motor | | | | |
| | | at 480V | A | 301 |
| | | at 600V | A | 289 |
| Yielded mechanical performance | | | | |
| for three-phase AC motor | | | | |
| | | 200/208V | HP | 100 |
| | | 220/230V | HP | 125 |
| | | 460/480V | HP | 250 |
| | | 575/600V | HP | 300 |
| General USE | | | | |
| Contactor | | | | |
| | | AC current | A | 450 |
| Short-circuit protection fuse, 600V | | | | |
| Standard fault | | | | |
| | | Short circuit current | kA | 18 |
| | | Fuse rating | A | 800 |
| | | Fuse class | L | |
| 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 | | | | |

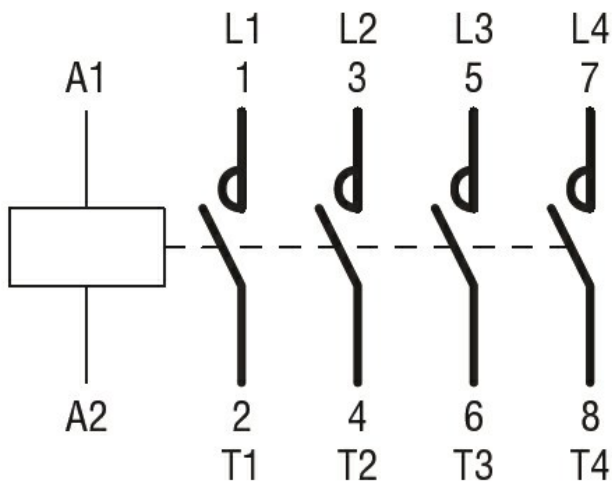
Pollution degree

3

Dimensions [mm (in)]



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



Product designation Power contactor
Product type designation B310

Contact characteristics

| | | |
|---|--------------------|--------|
| Number of poles | Nr. | 4 |
| 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 | 450 |
| Operational current I _e | AC-1 (≤40°C) | A 450 |
| | AC-1 (≤55°C) | A 370 |
| | AC-1 (≤70°C) | A 300 |
| | AC-3 (≤440V ≤55°C) | A 320 |
| | AC-4 (400V) | A 150 |
| Rated operational power AC-1 (T≤40°C) | 230V | kW 158 |
| | 400V | kW 270 |
| | 500V | kW 350 |
| | 690V | kW 488 |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 1 poles in series | 75V | A 375 |
| | 110V | A 195 |
| | 220V | A -- |
| | 330V | A -- |
| | 460V | A -- |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 2 poles in series | 75V | A 375 |
| | 110V | A 350 |
| | 220V | A 300 |
| | 330V | A -- |
| | 460V | A -- |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 3 poles in series | 75V | A 375 |
| | 110V | A 350 |
| | 220V | A 350 |
| | 330V | A 300 |
| | 460V | A -- |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series | 75V | A 375 |
| | 110V | A 350 |
| | 220V | A 350 |
| | 330V | A 350 |
| | 460V | A 300 |

IEC max current I_e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 170 |
| 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 | 310 |
| 110V | A | 290 |
| 220V | A | 230 |
| 330V | A | -- |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 310 |
| 220V | A | 290 |
| 330V | A | 230 |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 310 |
| 220V | A | 310 |
| 330V | A | 230 |
| 460V | A | 230 |

Short-time allowable current for 10s (IEC/EN60947-1)

| | |
|---|------|
| A | 2900 |
|---|------|

Protection fuse

| | | |
|----------|---|-----|
| gG (IEC) | A | 500 |
| aM (IEC) | A | 400 |

Making capacity (RMS value)

| | |
|---|------|
| A | 3150 |
|---|------|

Breaking capacity at voltage

| | | |
|------|---|------|
| 440V | A | 3000 |
| 500V | A | 2700 |
| 690V | A | 2520 |

Resistance per pole (average value)

| | |
|----|-----|
| mΩ | 0.2 |
|----|-----|

Power dissipation per pole (average value)

| | | |
|-----------------|---|------|
| I _{th} | W | 40.5 |
| AC3 | W | 20 |

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 3/0 |
|-----|--------|

Power terminal protection according to IEC/EN 60529

| |
|------|
| IP00 |
|------|

Mechanical features

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 | 10000000 |
| Electrical life | cycles | 700000 |

Safety related data

Performance level B10d according to EN/ISO 13489-1

| | | | |
|--|-------------------------------|------------------|--------------------|
| | rated load mechanical load | cycles cycles | 700000 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 | 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 | 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 | 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 | 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 | 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 | ms | 30 |
| | | | max | ms | 75 |

| | | | | |
|--|--|---------|---|-----|
| UL technical data | | | | |
| Full-load current (FLA) for three-phase AC motor | | | | |
| | | at 480V | A | 301 |
| | | at 600V | A | 289 |

| | | | | |
|--------------------------------|--------------------------|----------|----|-----|
| Yielded mechanical performance | | | | |
| | for three-phase AC motor | | | |
| | | 200/208V | HP | 100 |
| | | 220/230V | HP | 125 |
| | | 460/480V | HP | 250 |
| | | 575/600V | HP | 300 |

| | | | | |
|-------------|-----------|------------|---|-----|
| General USE | | | | |
| | Contactor | | | |
| | | AC current | A | 450 |

| | | | | |
|-------------------------------------|----------------|-----------------------|----|-----|
| Short-circuit protection fuse, 600V | | | | |
| | Standard fault | | | |
| | | Short circuit current | kA | 18 |
| | | Fuse rating | A | 800 |
| | | Fuse class | | L |

| | | | | |
|---------------------------|-----------------------|-----|--------------------|-----|
| Ambient conditions | | | | |
| Temperature | | | | |
| | Operating temperature | | | |
| | | min | $^{\circ}\text{C}$ | -50 |
| | | max | $^{\circ}\text{C}$ | 70 |
| | Storage temperature | | | |

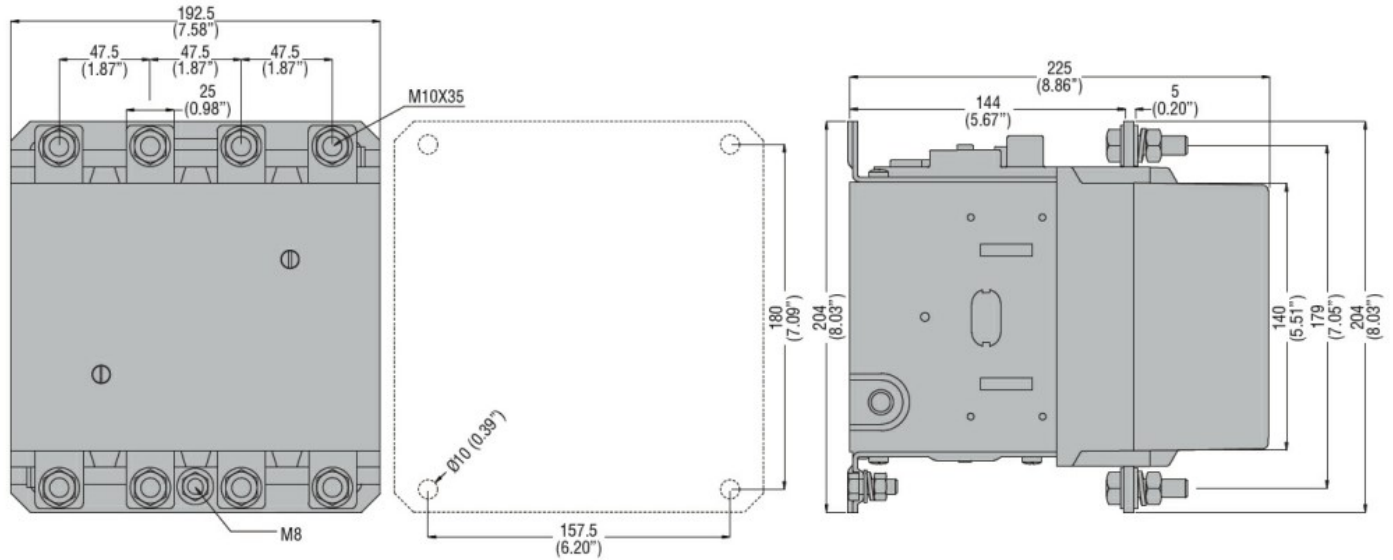
| | | |
|--------------|----|------|
| min | °C | -60 |
| max | °C | 80 |
| Max altitude | m | 3000 |

Resistance & Protection

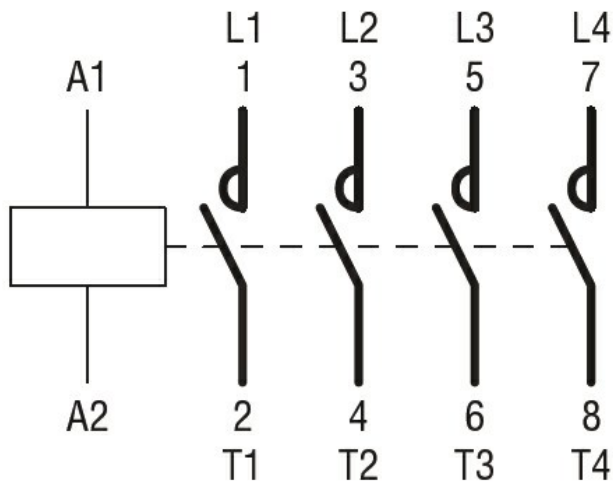
Pollution degree

3

Dimensions [mm (in)]



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



| | | | | |
|--|---|----|-----|-----------------|
| Product designation | | | | Power contactor |
| Product type designation | | | | B310 |
| Contact characteristics | | | | |
| Number of poles | Nr. | | | 4 |
| 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 | | | 450 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A | 450 | |
| | AC-1 ($\leq 55^\circ\text{C}$) | A | 370 | |
| | AC-1 ($\leq 70^\circ\text{C}$) | A | 300 | |
| | AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$) | A | 320 | |
| | AC-4 (400V) | A | 150 | |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW | 158 | |
| | 400V | kW | 270 | |
| | 500V | kW | 350 | |
| | 690V | kW | 488 | |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | 75V | A | 375 | |
| | 110V | A | 195 | |
| | 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 | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 300 | |
| | 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 | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 350 | |
| | 330V | A | 300 | |
| | 460V | A | -- | |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series | 75V | A | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 350 | |
| | 330V | A | 350 | |
| | 460V | A | 300 | |

IEC max current I_e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 170 |
| 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 | 310 |
| 110V | A | 290 |
| 220V | A | 230 |
| 330V | A | -- |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 310 |
| 220V | A | 290 |
| 330V | A | 230 |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 310 |
| 220V | A | 310 |
| 330V | A | 230 |
| 460V | A | 230 |

Short-time allowable current for 10s (IEC/EN60947-1)

| | |
|---|------|
| A | 2900 |
|---|------|

Protection fuse

| | | |
|----------|---|-----|
| gG (IEC) | A | 500 |
| aM (IEC) | A | 400 |

Making capacity (RMS value)

| | |
|---|------|
| A | 3150 |
|---|------|

Breaking capacity at voltage

| | | |
|------|---|------|
| 440V | A | 3000 |
| 500V | A | 2700 |
| 690V | A | 2520 |

Resistance per pole (average value)

| | |
|----|-----|
| mΩ | 0.2 |
|----|-----|

Power dissipation per pole (average value)

| | | |
|-----------------|---|------|
| I _{th} | W | 40.5 |
| AC3 | W | 20 |

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 3/0 |
|-----|--------|

Power terminal protection according to IEC/EN 60529

| |
|------|
| IP00 |
|------|

Mechanical features

Operating position

| | | |
|-------------------|-----------------------------|-----------------------|
| | normal allowable | Vertical plan ±30° |
| Fixing | | Screw |
| Weight | g | 1114 |
| Conductor section | AWG/kcmil conductor section | |
| | max | 2x 3/0 |

Operations

| | | |
|-----------------|--------|----------|
| Mechanical life | cycles | 10000000 |
| Electrical life | cycles | 700000 |

Safety related data

Performance level B10d according to EN/ISO 13489-1

| | | | |
|--|-------------------------------|------------------|--------------------|
| | rated load mechanical load | cycles cycles | 700000 10000000 |
|--|-------------------------------|------------------|--------------------|

Mirror contacts according to IEC/EN 60947-4-1

EMC compatibility

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 |
|---|----|

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 $\leq 20^{\circ}\text{C}$ | | | | |
| | | 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 |
| | | | max | ms |
| | | Opening NO | min | ms |
| | | | max | ms |
| | in DC | | | |
| | | Closing NO | min | ms |
| | | | max | ms |
| | | Opening NO | min | ms |
| | | | max | ms |

UL technical data

| | | | | |
|--|--|---------|---|-----|
| Full-load current (FLA) for three-phase AC motor | | | | |
| | | at 480V | A | 301 |
| | | at 600V | A | 289 |

| | | | | |
|--------------------------------|--------------------------|----------|----|-----|
| Yielded mechanical performance | | | | |
| | for three-phase AC motor | | | |
| | | 200/208V | HP | 100 |
| | | 220/230V | HP | 125 |
| | | 460/480V | HP | 250 |
| | | 575/600V | HP | 300 |

| | | | | |
|-------------|-----------|------------|---|-----|
| General USE | | | | |
| | Contactor | | | |
| | | AC current | A | 450 |

| | | | | |
|-------------------------------------|----------------|-----------------------|----|-----|
| Short-circuit protection fuse, 600V | | | | |
| | Standard fault | | | |
| | | Short circuit current | kA | 18 |
| | | Fuse rating | A | 800 |
| | | Fuse class | | L |

Ambient conditions

| | | | | |
|-------------|-----------------------|-----|--------------------|-----|
| Temperature | | | | |
| | Operating temperature | | | |
| | | min | $^{\circ}\text{C}$ | -50 |
| | | max | $^{\circ}\text{C}$ | 70 |
| | Storage temperature | | | |

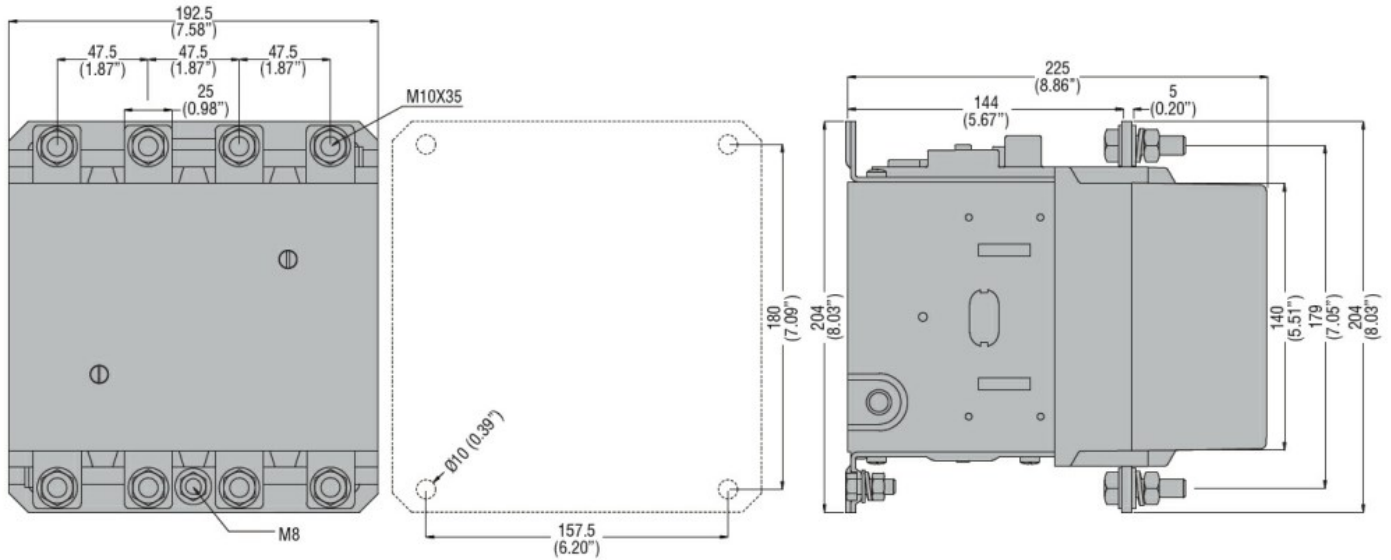
| | | |
|--------------|----|------|
| min | °C | -60 |
| max | °C | 80 |
| Max altitude | m | 3000 |

Resistance & Protection

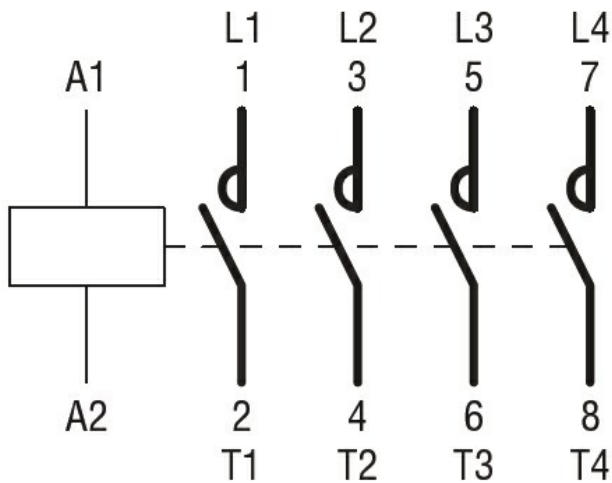
Pollution degree

3

Dimensions [mm (in)]



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



| | | | | |
|---|--------------------|----|-----|-----------------|
| Product designation | | | | Power contactor |
| Product type designation | | | | B310 |
| Contact characteristics | | | | |
| Number of poles | Nr. | | | 4 |
| 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 | | | 450 |
| Operational current I _e | AC-1 (≤40°C) | A | 450 | |
| | AC-1 (≤55°C) | A | 370 | |
| | AC-1 (≤70°C) | A | 300 | |
| | AC-3 (≤440V ≤55°C) | A | 320 | |
| | AC-4 (400V) | A | 150 | |
| Rated operational power AC-1 (T≤40°C) | 230V | kW | 158 | |
| | 400V | kW | 270 | |
| | 500V | kW | 350 | |
| | 690V | kW | 488 | |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 1 poles in series | 75V | A | 375 | |
| | 110V | A | 195 | |
| | 220V | A | -- | |
| | 330V | A | -- | |
| | 460V | A | -- | |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 2 poles in series | 75V | A | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 300 | |
| | 330V | A | -- | |
| | 460V | A | -- | |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 3 poles in series | 75V | A | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 350 | |
| | 330V | A | 300 | |
| | 460V | A | -- | |
| IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series | 75V | A | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 350 | |
| | 330V | A | 350 | |
| | 460V | A | 300 | |

IEC max current I_e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 170 |
| 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 | 310 |
| 110V | A | 290 |
| 220V | A | 230 |
| 330V | A | -- |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 310 |
| 220V | A | 290 |
| 330V | A | 230 |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 310 |
| 220V | A | 310 |
| 330V | A | 230 |
| 460V | A | 230 |

Short-time allowable current for 10s (IEC/EN60947-1)

| | |
|---|------|
| A | 2900 |
|---|------|

Protection fuse

| | | |
|----------|---|-----|
| gG (IEC) | A | 500 |
| aM (IEC) | A | 400 |

Making capacity (RMS value)

| | |
|---|------|
| A | 3150 |
|---|------|

Breaking capacity at voltage

| | | |
|------|---|------|
| 440V | A | 3000 |
| 500V | A | 2700 |
| 690V | A | 2520 |

Resistance per pole (average value)

| | |
|----|-----|
| mΩ | 0.2 |
|----|-----|

Power dissipation per pole (average value)

| | | |
|-----------------|---|------|
| I _{th} | W | 40.5 |
| AC3 | W | 20 |

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 3/0 |
|-----|--------|

Power terminal protection according to IEC/EN 60529

| |
|------|
| IP00 |
|------|

Mechanical features

Operating position

| | | |
|-------------------|-----------------------------|--------------------|
| | normal allowable | Vertical plan ±30° |
| Fixing | | Screw |
| Weight | g | 1112 |
| Conductor section | AWG/kcmil conductor section | |
| | max | 2x 3/0 |

Operations

| | | |
|-----------------|--------|----------|
| Mechanical life | cycles | 10000000 |
| Electrical life | cycles | 700000 |

Safety related data

| | | | |
|--|----------------------------|--------|----------|
| Performance level B10d according to EN/ISO 13489-1 | rated load mechanical load | cycles | 700000 |
| | | 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 | 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 |
| | | | max | ms |
| | | Opening NO | | |
| | | | min | ms |
| | | | max | ms |
| | in DC | | | |
| | | Closing NO | | |
| | | | min | ms |
| | | | max | ms |
| | | Opening NO | | |
| | | | min | ms |
| | | | max | ms |

UL technical data

| | | | | |
|--|--|---------|---|-----|
| Full-load current (FLA) for three-phase AC motor | | at 480V | A | 301 |
| | | at 600V | A | 289 |

| | | | | |
|--------------------------------|--------------------------|----------|----|-----|
| Yielded mechanical performance | | | | |
| | for three-phase AC motor | | | |
| | | 200/208V | HP | 100 |
| | | 220/230V | HP | 125 |
| | | 460/480V | HP | 250 |
| | | 575/600V | HP | 300 |

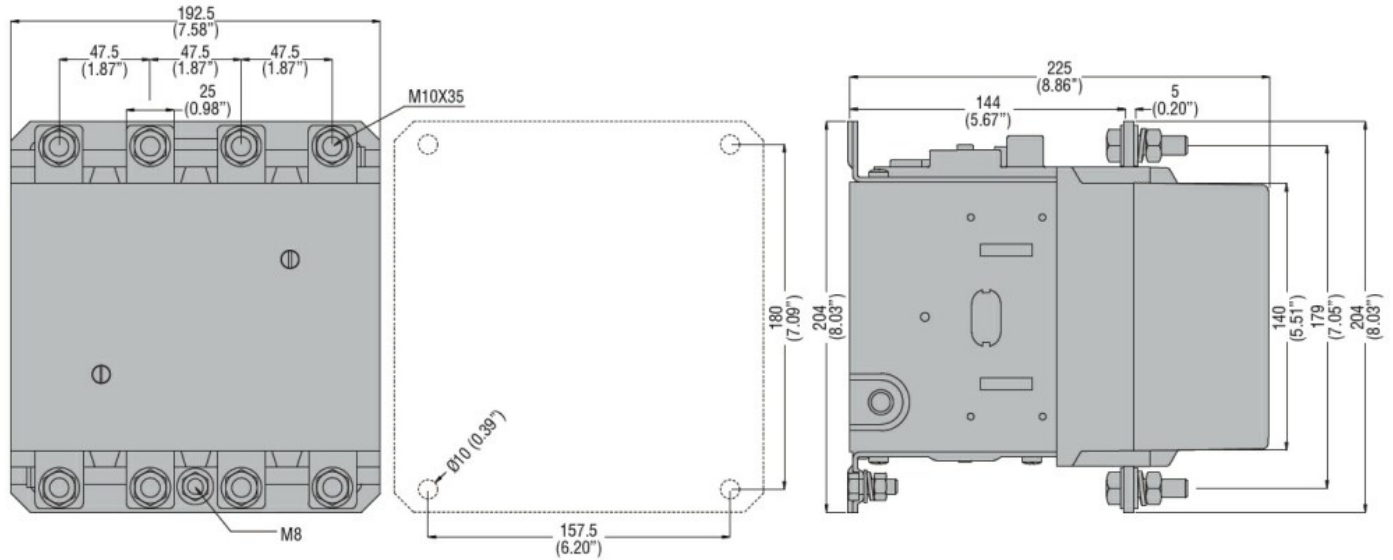
| | | | | |
|-------------|-----------|------------|---|-----|
| General USE | | | | |
| | Contactor | | | |
| | | AC current | A | 450 |

| | | | | |
|-------------------------------------|----------------|-----------------------|----|-----|
| Short-circuit protection fuse, 600V | | | | |
| | Standard fault | | | |
| | | Short circuit current | kA | 18 |
| | | Fuse rating | A | 800 |
| | | Fuse class | | L |

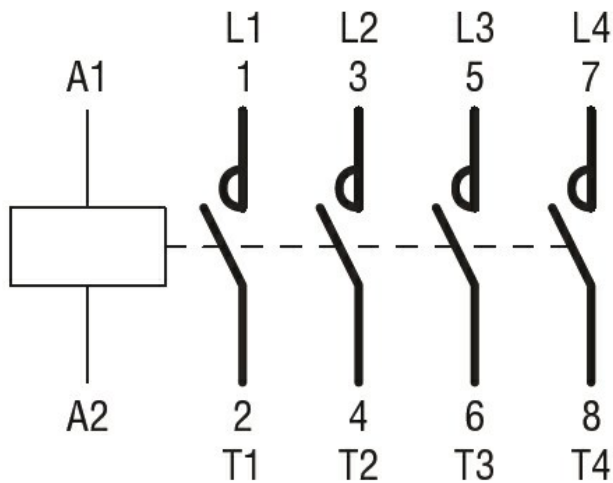
Ambient conditions

| | | | | |
|-------------|-----------------------|-----|--------------------|-----|
| 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 | | | 3 |
| Dimensions [mm (in)] | | | |



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



| | | | | |
|--|---|----|-----|-----------------|
| Product designation | | | | Power contactor |
| Product type designation | | | | B310 |
| Contact characteristics | | | | |
| Number of poles | Nr. | | | 4 |
| 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 | | | 450 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A | 450 | |
| | AC-1 ($\leq 55^\circ\text{C}$) | A | 370 | |
| | AC-1 ($\leq 70^\circ\text{C}$) | A | 300 | |
| | AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$) | A | 320 | |
| | AC-4 (400V) | A | 150 | |
| Rated operational power AC-1 ($T \leq 40^\circ\text{C}$) | 230V | kW | 158 | |
| | 400V | kW | 270 | |
| | 500V | kW | 350 | |
| | 690V | kW | 488 | |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | 75V | A | 375 | |
| | 110V | A | 195 | |
| | 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 | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 300 | |
| | 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 | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 350 | |
| | 330V | A | 300 | |
| | 460V | A | -- | |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series | 75V | A | 375 | |
| | 110V | A | 350 | |
| | 220V | A | 350 | |
| | 330V | A | 350 | |
| | 460V | A | 300 | |

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 170 |
| 220V | A | -- |
| 330V | A | -- |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 290 |
| 220V | A | 230 |
| 330V | A | -- |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 310 |
| 220V | A | 290 |
| 330V | A | 230 |
| 460V | A | -- |

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series

| | | |
|------|---|-----|
| 75V | A | 310 |
| 110V | A | 310 |
| 220V | A | 310 |
| 330V | A | 230 |
| 460V | A | 230 |

Short-time allowable current for 10s (IEC/EN60947-1)

| | |
|---|------|
| A | 2900 |
|---|------|

Protection fuse

| | | |
|----------|---|-----|
| gG (IEC) | A | 500 |
| aM (IEC) | A | 400 |

Making capacity (RMS value)

| | |
|---|------|
| A | 3150 |
|---|------|

Breaking capacity at voltage

| | | |
|------|---|------|
| 440V | A | 3000 |
| 500V | A | 2700 |
| 690V | A | 2520 |

Resistance per pole (average value)

| | |
|----|-----|
| mΩ | 0.2 |
|----|-----|

Power dissipation per pole (average value)

| | | |
|-----------------|---|------|
| I _{th} | W | 40.5 |
| AC3 | W | 20 |

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 3/0 |
|-----|--------|

Power terminal protection according to IEC/EN 60529

| |
|------|
| IP00 |
|------|

Mechanical features

Operating position

| | | |
|-------------------|-----------------------------|--------------------|
| | normal allowable | Vertical plan ±30° |
| Fixing | | Screw |
| Weight | g | 1118 |
| Conductor section | AWG/kcmil conductor section | |
| | max | 2x 3/0 |

Operations

| | | |
|-----------------|--------|----------|
| Mechanical life | cycles | 10000000 |
| Electrical life | cycles | 700000 |

Safety related data

| | | | |
|--|----------------------------|--------|----------|
| Performance level B10d according to EN/ISO 13489-1 | rated load mechanical load | cycles | 700000 |
| | | 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 | 440 |
| | 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 | 440 |
| | | 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 U_s control | | | | |
| | in AC | | | |
| | | Closing NO | | |
| | | | min | ms |
| | | | max | ms |
| | | Opening NO | | |
| | | | min | ms |
| | | | max | ms |
| | in DC | | | |
| | | Closing NO | | |
| | | | min | ms |
| | | | max | ms |
| | | Opening NO | | |
| | | | min | ms |
| | | | max | ms |

UL technical data

| | | | | |
|--|--|---------|---|-----|
| Full-load current (FLA) for three-phase AC motor | | at 480V | A | 301 |
| | | at 600V | A | 289 |

| | | | | |
|--------------------------------|--------------------------|----------|----|-----|
| Yielded mechanical performance | | | | |
| | for three-phase AC motor | | | |
| | | 200/208V | HP | 100 |
| | | 220/230V | HP | 125 |
| | | 460/480V | HP | 250 |
| | | 575/600V | HP | 300 |

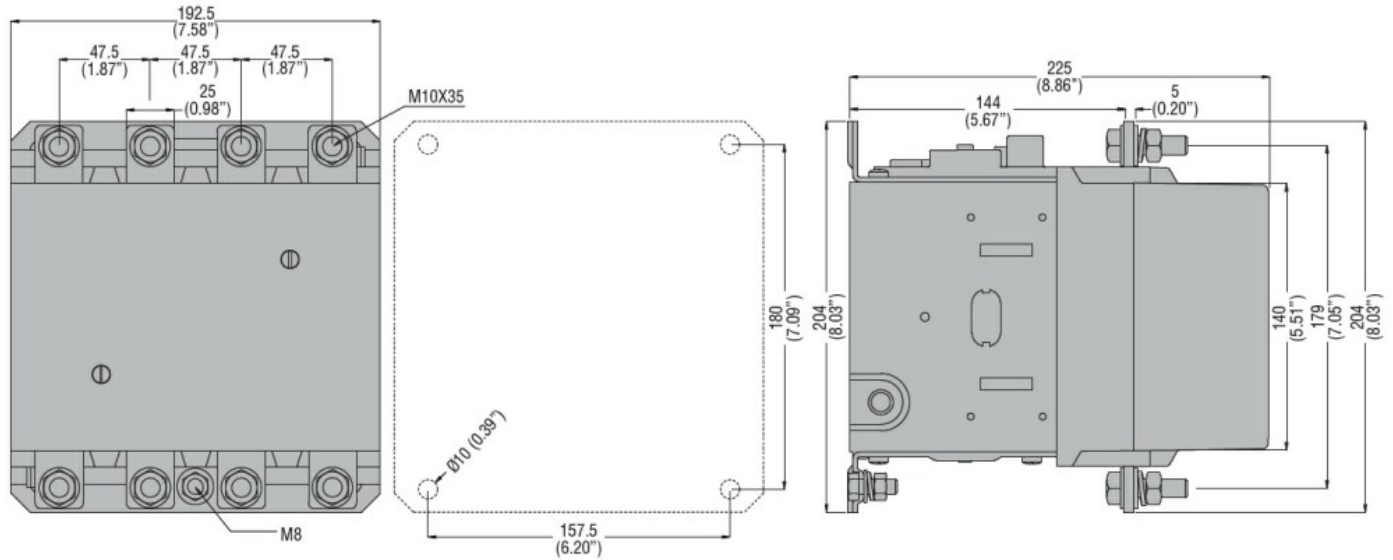
| | | | | |
|-------------|-----------|------------|---|-----|
| General USE | | | | |
| | Contactor | | | |
| | | AC current | A | 450 |

| | | | | |
|-------------------------------------|----------------|-----------------------|----|-----|
| Short-circuit protection fuse, 600V | | | | |
| | Standard fault | | | |
| | | Short circuit current | kA | 18 |
| | | Fuse rating | A | 800 |
| | | Fuse class | | L |

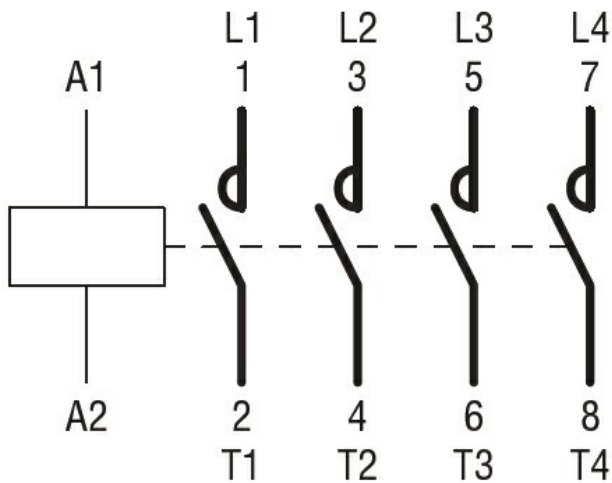
Ambient conditions

| | | | | |
|-------------|-----------------------|-----|--------------------|-----|
| 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 | | | 3 |
| Dimensions [mm (in)] | | | |



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