



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 $I_{th} \leq 40^\circ\text{C}$ | A | 165 |
| Operational current I_e | AC-1 ($\leq 40^\circ\text{C}$) | A 165 |
| | AC-1 ($\leq 55^\circ\text{C}$) | A 135 |
| | AC-1 ($\leq 70^\circ\text{C}$) | A 118 |
| | AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$) | A 150 |
| | AC-4 (400V) | A 70 |
| Rated operational power AC-3 ($T \leq 55^\circ\text{C}$) | 230V | kW 45 |
| | 400V | kW 75 |
| | 415V | kW 75 |
| | 440V | kW 75 |
| | 500V | kW 90 |
| | 690V | kW 110 |
| | 1000V | kW 55 |
| Rated operational current AC-3 ($T \leq 55^\circ\text{C}$) | 230V | A 150 |
| | 400V | A 150 |
| | 415V | A 150 |
| | 440V | A 150 |
| | 500V | A 128 |
| | 690V | A 113 |
| | 1000V | A 51 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$ | A 165 |
| | 48V | A 165 |
| | 75V | A 150 |
| | 110V | A 10 |
| | 220V | A – |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series | $\leq 24\text{V}$ | A 165 |
| | 48V | A 165 |
| | 75V | A 165 |
| | 110V | A 150 |
| | 220V | A 14 |
| IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$ | A 165 |
| | 48V | A 165 |

| | | | |
|--|-----------------|------------------|------|
| | 75V | A | 165 |
| | 110V | A | 160 |
| | 220V | A | 150 |
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| IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series | | | |
| | ≤24V | A | 165 |
| | 48V | A | 165 |
| | 75V | A | 165 |
| | 110V | A | 165 |
| | 220V | A | 165 |
| <hr/> | | | |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | | | |
| | ≤24V | A | 165 |
| | 48V | A | 60 |
| | 75V | A | 44 |
| | 110V | A | 6 |
| | 220V | A | – |
| <hr/> | | | |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | | | |
| | ≤24V | A | 165 |
| | 48V | A | 82 |
| | 75V | A | 70 |
| | 110V | A | 80 |
| | 220V | A | 7 |
| <hr/> | | | |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | | | |
| | ≤24V | A | 165 |
| | 48V | A | 195 |
| | 75V | A | 110 |
| | 110V | A | 120 |
| | 220V | A | 120 |
| <hr/> | | | |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | | | |
| | ≤24V | A | 165 |
| | 48V | A | 130 |
| | 75V | A | 130 |
| | 110V | A | 150 |
| | 220V | A | 150 |
| <hr/> | | | |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 1200 |
| <hr/> | | | |
| Protection fuse | | | |
| | gG (IEC) | A | 250 |
| | aM (IEC) | A | 160 |
| <hr/> | | | |
| Making capacity (RMS value) | | A | 1500 |
| <hr/> | | | |
| Breaking capacity at voltage | | | |
| | 440V | A | 1200 |
| | 500V | A | 1025 |
| | 690V | A | 905 |
| <hr/> | | | |
| Resistance per pole (average value) | | mΩ | 0.45 |
| <hr/> | | | |
| Power dissipation per pole (average value) | | | |
| | I _{th} | W | 12 |
| | AC-3 | W | 10.1 |
| <hr/> | | | |
| Tightening torque for terminals | | | |
| | min | Nm | 6 |
| | max | Nm | 7 |
| | min | I _{bin} | 4.4 |
| | max | I _{bin} | 5.2 |
| <hr/> | | | |
| Tightening torque for coil terminal | | | |
| | min | Nm | 0.8 |

| | | | | |
|---|---------------------------------|-------------------------------|------------------|--------------------------|
| | | max | Nm | 1 |
| | | min | I _{bin} | 0.59 |
| | | max | I _{bin} | 0.74 |
| Conductor section | | | | |
| | AWG/Kcmil | | | |
| | | max | | 2/0 |
| Flexible w/o lug conductor section | | | | |
| | | min | mm ² | 1.5 |
| | | max | mm ² | 70 |
| Flexible c/w lug conductor section | | | | |
| | | min | mm ² | 1.5 |
| | | max | mm ² | 70 |
| Power terminal protection according to IEC/EN 60529 | | | | IP20 front |
| Mechanical features | | | | |
| Operating position | | | | |
| | | normal allowable | | Vertical plan ±30° |
| Fixing | | | | Screw / DIN rail 35mm |
| Weight | | | g | 2020 |
| Operations | | | | |
| Mechanical life | | | cycles | 15000000 |
| Electrical life | | | cycles | 800000 |
| Safety related data | | | | |
| Performance level B10d according to EN/ISO 13489-1 | | | | |
| | | rated load mechanical load | cycles cycles | 800000 15000000 |
| EMC compatibility | | | | yes |
| AC coil operating | | | | |
| Rated AC voltage at 50/60Hz | | | V | 400 |
| 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 | 55 |
| | of 50/60Hz coil powered at 60Hz | | | |
| | pick-up | | min %Us | 85 |
| | | | max %Us | 110 |
| | drop-out | | min %Us | 40 |
| | | | max %Us | 55 |
| AC average coil consumption at 20°C | | | | |
| | of 50/60Hz coil powered at 50Hz | | | |
| | | in-rush | VA | 300 |
| | | holding | VA | 20 |
| | of 50/60Hz coil powered at 60Hz | | | |
| | | in-rush | VA | 275 |
| | | holding | VA | 17 |
| | of 60Hz coil powered at 60Hz | | | |
| | | in-rush | VA | 300 |

| | | | |
|---|---------|----|-----|
| | holding | VA | 20 |
| Dissipation at holding $\leq 20^{\circ}\text{C}$ 50Hz | | W | 6.5 |

Max cycles frequency

| | | | |
|----------------------|--|----------|------|
| Mechanical operation | | cycles/h | 1500 |
|----------------------|--|----------|------|

Operating times

| | | | |
|---|------------|-----|-------|
| Average time for U_s control in AC | | | |
| | Closing NO | | |
| | | min | ms 45 |
| | | max | ms 32 |
| | Opening NO | | |
| | | min | ms 9 |
| | | max | ms 24 |

UL technical data

| | | | |
|-----------------------------------|--|---|-----|
| Rated operational voltage AC (UL) | | V | 600 |
|-----------------------------------|--|---|-----|

| | | | |
|--|----------|----|-----|
| Yielded mechanical performance for three-phase AC motor | | | |
| | 200/208V | HP | 50 |
| | 220/240V | HP | 50 |
| | 460/480V | HP | 100 |
| | 575/600V | HP | 125 |

General USE

| | | | |
|-----------|------------|---|-----|
| Contactor | | | |
| | AC current | A | 165 |

| | | | |
|---|-----------------------|----|-----|
| Short-circuit protection fuse, 600V High fault | | | |
| | Short circuit current | kA | 100 |
| | Fuse rating | A | 200 |
| | Fuse class | | J |

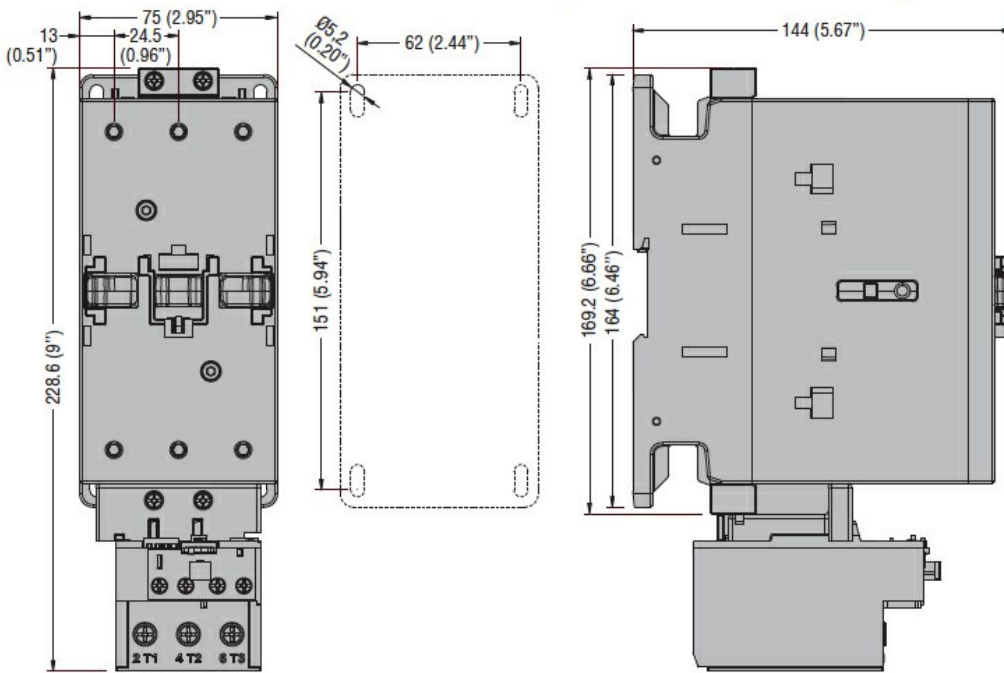
| | | | |
|----------------|-----------------------|----|-----|
| Standard fault | | | |
| | Short circuit current | kA | 10 |
| | Fuse rating | A | 250 |
| | Fuse class | | RK5 |

Ambient conditions

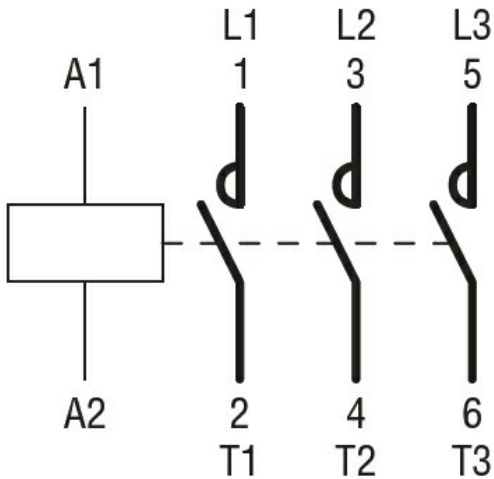
| | | | |
|-----------------------|-----|--------------------|-----|
| Temperature | | | |
| Operating temperature | | | |
| | min | $^{\circ}\text{C}$ | -50 |
| | max | $^{\circ}\text{C}$ | 70 |
| Storage temperature | | | |
| | min | $^{\circ}\text{C}$ | -60 |
| | max | $^{\circ}\text{C}$ | 80 |

| | | | |
|--------------|--|---|------|
| Max altitude | | m | 3000 |
|--------------|--|---|------|

Dimensions



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN 60335-2-89

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

CSA C22.2 n. 60335-2-40:22 LZGH A2L

CSA C22.2 No. 60335-2-89:21 LZGH A2L

cULus

UL 60335-2-40 LZGH A2L

UL 60335-2-89 LZGH A2L

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching