



#### 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  |
| IEC max current Ie 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  |
| IEC max current Ie 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    | –    |
| IEC max current Ie 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    |
| IEC max current Ie 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  |
| IEC max current Ie 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  |
| Short-time allowable current for 10s (IEC/EN60947-1)                 |          | A    | 1200 |
| Protection fuse                                                      |          |      |      |
|                                                                      | gG (IEC) | A    | 250  |
|                                                                      | aM (IEC) | A    | 160  |
| Making capacity (RMS value)                                          |          | A    | 1500 |
| Breaking capacity at voltage                                         |          |      |      |
|                                                                      | 440V     | A    | 1200 |
|                                                                      | 500V     | A    | 1025 |
|                                                                      | 690V     | A    | 905  |
| Resistance per pole (average value)                                  |          | mΩ   | 0.45 |
| Power dissipation per pole (average value)                           |          |      |      |
|                                                                      | Ith      | W    | 12   |
|                                                                      | AC-3     | W    | 10.1 |
| Tightening torque for terminals                                      |          |      |      |
|                                                                      | min      | Nm   | 6    |
|                                                                      | max      | Nm   | 7    |
|                                                                      | min      | Ibin | 4.4  |
|                                                                      | max      | Ibin | 5.2  |
| Tightening torque for coil terminal                                  |          |      |      |
|                                                                      | min      | Nm   | 0.8  |

|                                                     |                                          |                  |                 |                       |
|-----------------------------------------------------|------------------------------------------|------------------|-----------------|-----------------------|
|                                                     |                                          | max              | Nm              | 1                     |
|                                                     |                                          | min              | Ibin            | 0.59                  |
|                                                     |                                          | max              | Ibin            | 0.74                  |
| Conductor section                                   |                                          |                  |                 |                       |
|                                                     | AWG/Kcmil                                |                  |                 |                       |
|                                                     |                                          | max              |                 | 2/0                   |
| Flexible w/o lug conductor section                  |                                          |                  |                 |                       |
|                                                     |                                          | min              | mm <sup>2</sup> | 1.5                   |
|                                                     |                                          | max              | mm <sup>2</sup> | 70                    |
| Flexible c/w lug conductor section                  |                                          |                  |                 |                       |
|                                                     |                                          | min              | mm <sup>2</sup> | 1.5                   |
|                                                     |                                          | max              | mm <sup>2</sup> | 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       | cycles          | 800000                |
|                                                     |                                          | mechanical load  | cycles          | 15000000              |
| EMC compatibility                                   |                                          |                  |                 | yes                   |
| AC coil operating                                   |                                          |                  |                 |                       |
| Rated AC voltage at 60Hz                            |                                          |                  | V               | 230                   |
| AC operating voltage                                |                                          |                  |                 |                       |
|                                                     | of 50/60Hz coil powered at 50Hz drop-out |                  |                 |                       |
|                                                     |                                          | max              | %Us             | 55                    |
|                                                     | of 60Hz coil powered at 60Hz pick-up     |                  |                 |                       |
|                                                     |                                          | min              | %Us             | 80                    |
|                                                     |                                          | max              | %Us             | 110                   |
|                                                     | drop-out                                 |                  |                 |                       |
|                                                     |                                          | min              | %Us             | 20                    |
|                                                     |                                          | max              | %Us             | 55                    |
| AC average coil consumption at 20°C                 |                                          |                  |                 |                       |
|                                                     | of 60Hz coil powered at 60Hz             |                  |                 |                       |
|                                                     |                                          | in-rush          | VA              | 300                   |
|                                                     |                                          | holding          | VA              | 20                    |
| Dissipation at holding ≤20°C 50Hz                   |                                          |                  | W               | 6.5                   |
| Max cycles frequency                                |                                          |                  |                 |                       |
| Mechanical operation                                |                                          |                  | cycles/h        | 1500                  |
| Operating times                                     |                                          |                  |                 |                       |
| Average time for Us 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 | °C | -50 |
| max | °C | 70  |

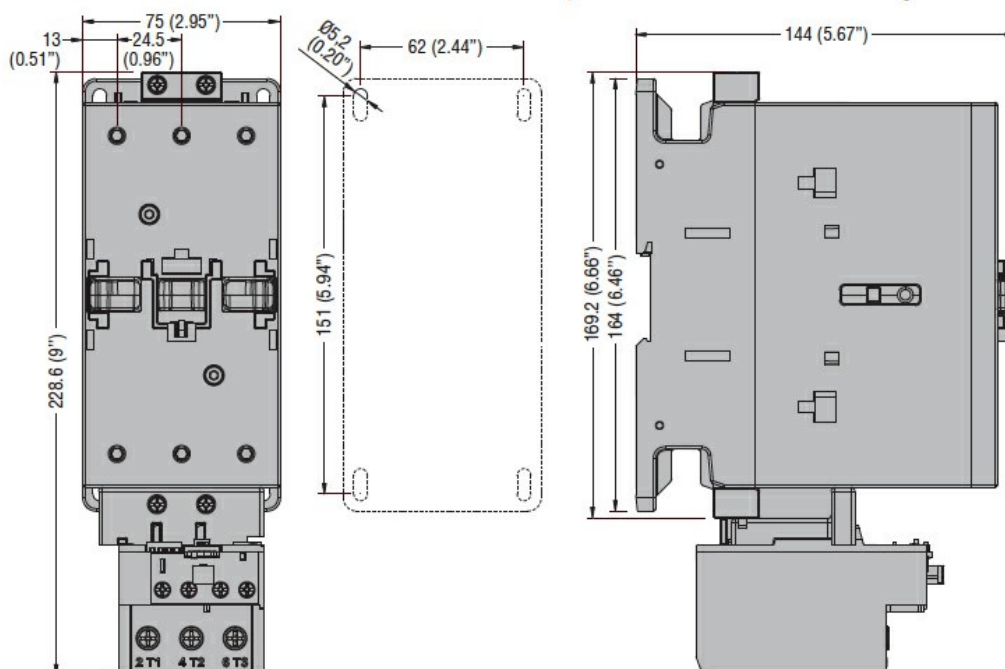
Storage temperature

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

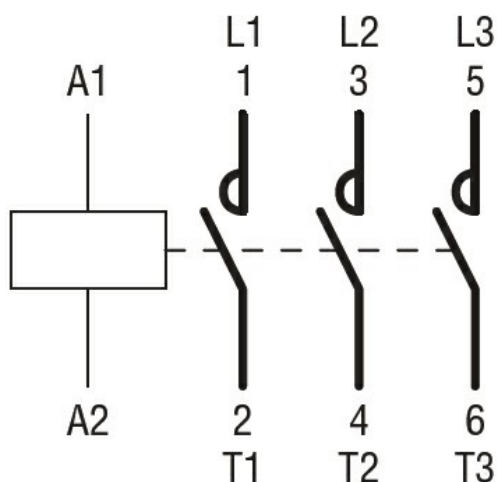
Max altitude

|   |      |
|---|------|
| 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