



#### Contact characteristics

|                                                                             |                    |        |
|-----------------------------------------------------------------------------|--------------------|--------|
| Number of poles                                                             | Nr.                | 3      |
| Rated insulation voltage U <sub>i</sub> IEC/EN                              | V                  | 1000   |
| Rated impulse withstand voltage U <sub>imp</sub>                            | kV                 | 8      |
| Operational frequency                                                       | min                | Hz 25  |
|                                                                             | max                | Hz 400 |
| IEC Conventional free air thermal current I <sub>th</sub> ≤ 40°C            | A                  | 140    |
| Operational current I <sub>e</sub>                                          | AC-1 (≤40°C)       | A 140  |
|                                                                             | AC-1 (≤55°C)       | A 115  |
|                                                                             | AC-1 (≤70°C)       | A 100  |
|                                                                             | AC-3 (≤440V ≤55°C) | A 95   |
|                                                                             | AC-4 (400V)        | A 45   |
| Rated operational power AC-3 (T≤55°C)                                       | 230V               | kW 30  |
|                                                                             | 400V               | kW 55  |
|                                                                             | 415V               | kW 55  |
|                                                                             | 440V               | kW 55  |
|                                                                             | 500V               | kW 75  |
|                                                                             | 690V               | kW 90  |
|                                                                             | 1000V              | kW 45  |
| Rated operational current AC-3 (T≤55°C)                                     | 230V               | A 95   |
|                                                                             | 400V               | A 95   |
|                                                                             | 415V               | A 95   |
|                                                                             | 440V               | A 95   |
|                                                                             | 500V               | A 95   |
|                                                                             | 690V               | A 93   |
|                                                                             | 1000V              | A 33   |
| IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 1 poles in series | ≤24V               | A 140  |
|                                                                             | 48V                | A 140  |
|                                                                             | 75V                | A 100  |
|                                                                             | 110V               | A 10   |
|                                                                             | 220V               | A –    |
| IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 2 poles in series | ≤24V               | A 140  |
|                                                                             | 48V                | A 140  |
|                                                                             | 75V                | A 140  |
|                                                                             | 110V               | A 110  |
|                                                                             | 220V               | A 12   |
| IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 3 poles in series | ≤24V               | A 140  |
|                                                                             | 48V                | A 140  |

|                                                                                  |                 |                  |      |
|----------------------------------------------------------------------------------|-----------------|------------------|------|
|                                                                                  | 75V             | A                | 155  |
|                                                                                  | 110V            | A                | 120  |
|                                                                                  | 220V            | A                | 125  |
| IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 4 poles in series      |                 |                  |      |
|                                                                                  | ≤24V            | A                | 140  |
|                                                                                  | 48V             | A                | 140  |
|                                                                                  | 75V             | A                | 155  |
|                                                                                  | 110V            | A                | 140  |
|                                                                                  | 220V            | A                | 140  |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series |                 |                  |      |
|                                                                                  | ≤24V            | A                | 140  |
|                                                                                  | 48V             | A                | 44   |
|                                                                                  | 75V             | A                | 36   |
|                                                                                  | 110V            | A                | 6    |
|                                                                                  | 220V            | A                | –    |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series |                 |                  |      |
|                                                                                  | ≤24V            | A                | 140  |
|                                                                                  | 48V             | A                | 63   |
|                                                                                  | 75V             | A                | 60   |
|                                                                                  | 110V            | A                | 55   |
|                                                                                  | 220V            | A                | 7    |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series |                 |                  |      |
|                                                                                  | ≤24V            | A                | 140  |
|                                                                                  | 48V             | A                | 115  |
|                                                                                  | 75V             | A                | 90   |
|                                                                                  | 110V            | A                | 85   |
|                                                                                  | 220V            | A                | 76   |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series |                 |                  |      |
|                                                                                  | ≤24V            | A                | 140  |
|                                                                                  | 48V             | A                | 110  |
|                                                                                  | 75V             | A                | 110  |
|                                                                                  | 110V            | A                | 105  |
|                                                                                  | 220V            | A                | 95   |
| Short-time allowable current for 10s (IEC/EN60947-1)                             |                 | A                | 760  |
| Protection fuse                                                                  |                 |                  |      |
|                                                                                  | gG (IEC)        | A                | 160  |
|                                                                                  | aM (IEC)        | A                | 100  |
| Making capacity (RMS value)                                                      |                 | A                | 1200 |
| Breaking capacity at voltage                                                     |                 |                  |      |
|                                                                                  | 440V            | A                | 1100 |
|                                                                                  | 500V            | A                | 775  |
|                                                                                  | 690V            | A                | 745  |
| Resistance per pole (average value)                                              |                 | mΩ               | 0.45 |
| Power dissipation per pole (average value)                                       |                 |                  |      |
|                                                                                  | I <sub>th</sub> | W                | 8.8  |
|                                                                                  | AC-3            | W                | 4.1  |
| Tightening torque for terminals                                                  |                 |                  |      |
|                                                                                  | min             | Nm               | 6    |
|                                                                                  | max             | Nm               | 7    |
|                                                                                  | min             | I <sub>bin</sub> | 4.4  |
|                                                                                  | max             | I <sub>bin</sub> | 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                  |
| Auxiliary contact characteristics                   |                                          |                  |                 |                       |
| Thermal current Ith                                 |                                          |                  | A               | 140                   |
| Operations                                          |                                          |                  |                 |                       |
| Mechanical life                                     |                                          |                  | cycles          | 15000000              |
| Electrical life                                     |                                          |                  | cycles          | 1400000               |
| Safety related data                                 |                                          |                  |                 |                       |
| Performance level B10d according to EN/ISO 13489-1  |                                          |                  |                 |                       |
|                                                     |                                          | rated load       | cycles          | 1400000               |
|                                                     |                                          | mechanical load  | cycles          | 15000000              |
| AC coil operating                                   |                                          |                  |                 |                       |
| Rated AC voltage at 60Hz                            |                                          |                  | V               | 48                    |
| 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              | 16                    |

|            |     |    |    |
|------------|-----|----|----|
| Opening NO | max | ms | 32 |
|            | 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 | 30 |
| 220/240V | HP | 30 |
| 460/480V | HP | 60 |
| 575/600V | HP | 75 |

#### General USE

Contactor

|            |   |     |
|------------|---|-----|
| AC current | A | 150 |
|------------|---|-----|

#### 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  |

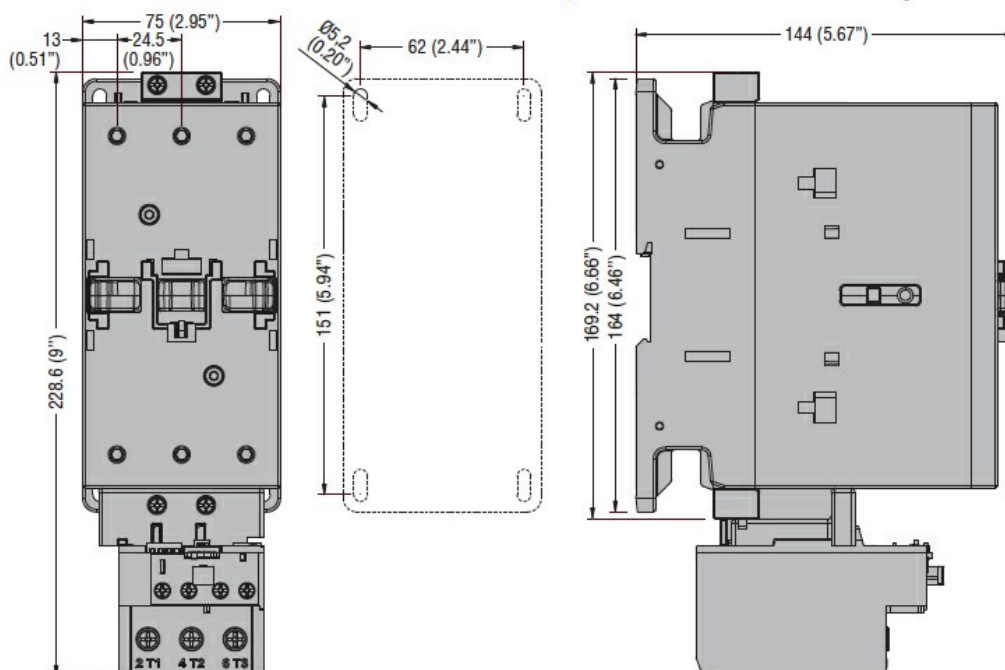
Storage temperature

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

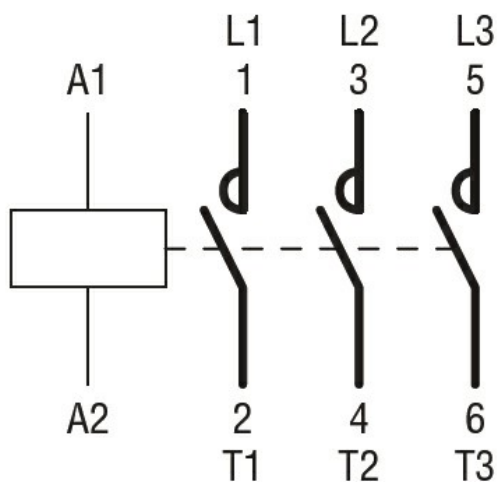
#### Max altitude

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