



#### 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                  | 160    |
| Operational current I <sub>e</sub>                                          | AC-1 (≤40°C)       | A 160  |
|                                                                             | AC-1 (≤55°C)       | A 130  |
|                                                                             | AC-1 (≤70°C)       | A 115  |
|                                                                             | AC-3 (≤440V ≤55°C) | A 115  |
|                                                                             | AC-4 (400V)        | A 54   |
| Rated operational power AC-3 (T≤55°C)                                       | 230V               | kW 37  |
|                                                                             | 400V               | kW 55  |
|                                                                             | 415V               | kW 55  |
|                                                                             | 440V               | kW 55  |
|                                                                             | 500V               | kW 75  |
|                                                                             | 690V               | kW 110 |
|                                                                             | 1000V              | kW 55  |
| Rated operational current AC-3 (T≤55°C)                                     | 230V               | A 115  |
|                                                                             | 400V               | A 115  |
|                                                                             | 415V               | A 115  |
|                                                                             | 440V               | A 115  |
|                                                                             | 500V               | A 106  |
|                                                                             | 690V               | A 106  |
|                                                                             | 1000V              | A 39   |
| IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 1 poles in series | ≤24V               | A 160  |
|                                                                             | 48V                | A 160  |
|                                                                             | 75V                | A 120  |
|                                                                             | 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 160  |
|                                                                             | 48V                | A 160  |
|                                                                             | 75V                | A 160  |
|                                                                             | 110V               | A 130  |
|                                                                             | 220V               | A 14   |
| IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 3 poles in series | ≤24V               | A 160  |
|                                                                             | 48V                | A 160  |

|                                                                      |                 |                  |      |
|----------------------------------------------------------------------|-----------------|------------------|------|
|                                                                      | 75V             | A                | 160  |
|                                                                      | 110V            | A                | 140  |
|                                                                      | 220V            | A                | 145  |
| IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series      |                 |                  |      |
|                                                                      | ≤24V            | A                | 160  |
|                                                                      | 48V             | A                | 160  |
|                                                                      | 75V             | A                | 160  |
|                                                                      | 110V            | A                | 160  |
|                                                                      | 220V            | A                | 160  |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series |                 |                  |      |
|                                                                      | ≤24V            | A                | 160  |
|                                                                      | 48V             | A                | 50   |
|                                                                      | 75V             | A                | 40   |
|                                                                      | 110V            | A                | 6    |
|                                                                      | 220V            | A                | –    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series |                 |                  |      |
|                                                                      | ≤24V            | A                | 160  |
|                                                                      | 48V             | A                | 72   |
|                                                                      | 75V             | A                | 65   |
|                                                                      | 110V            | A                | 65   |
|                                                                      | 220V            | A                | 7    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series |                 |                  |      |
|                                                                      | ≤24V            | A                | 160  |
|                                                                      | 48V             | A                | 150  |
|                                                                      | 75V             | A                | 100  |
|                                                                      | 110V            | A                | 100  |
|                                                                      | 220V            | A                | 92   |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series |                 |                  |      |
|                                                                      | ≤24V            | A                | 160  |
|                                                                      | 48V             | A                | 120  |
|                                                                      | 75V             | A                | 120  |
|                                                                      | 110V            | A                | 125  |
|                                                                      | 220V            | A                | 115  |
| Short-time allowable current for 10s (IEC/EN60947-1)                 |                 | A                | 920  |
| Protection fuse                                                      |                 |                  |      |
|                                                                      | gG (IEC)        | A                | 200  |
|                                                                      | aM (IEC)        | A                | 125  |
| Making capacity (RMS value)                                          |                 | A                | 1500 |
| Breaking capacity at voltage                                         |                 |                  |      |
|                                                                      | 440V            | A                | 1200 |
|                                                                      | 500V            | A                | 850  |
|                                                                      | 690V            | A                | 905  |
| Resistance per pole (average value)                                  |                 | mΩ               | 0.45 |
| Power dissipation per pole (average value)                           |                 |                  |      |
|                                                                      | I <sub>th</sub> | W                | 11.5 |
|                                                                      | AC-3            | W                | 6.0  |
| 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                  |
| Operations                                          |                                 |                  |                 |                       |
| Mechanical life                                     |                                 |                  | cycles          | 15000000              |
| Electrical life                                     |                                 |                  | cycles          | 1200000               |
| Safety related data                                 |                                 |                  |                 |                       |
| Performance level B10d according to EN/ISO 13489-1  |                                 |                  |                 |                       |
|                                                     |                                 | rated load       | cycles          | 1200000               |
|                                                     |                                 | mechanical load  | cycles          | 15000000              |
| 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                    |

### Max cycles frequency

Mechanical operation cycles/h 1500

### Operating times

Average time for Us control

in AC

Closing NO

min ms 16

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 40

220/240V HP 40

460/480V HP 75

575/600V HP 100

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

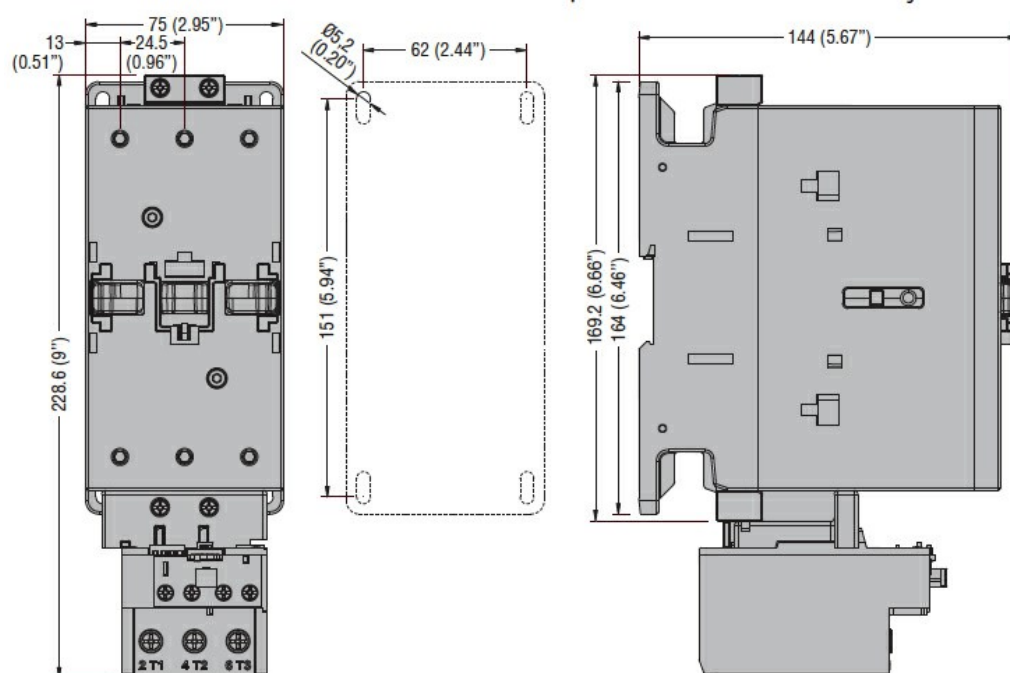
min °C -60

max °C +80

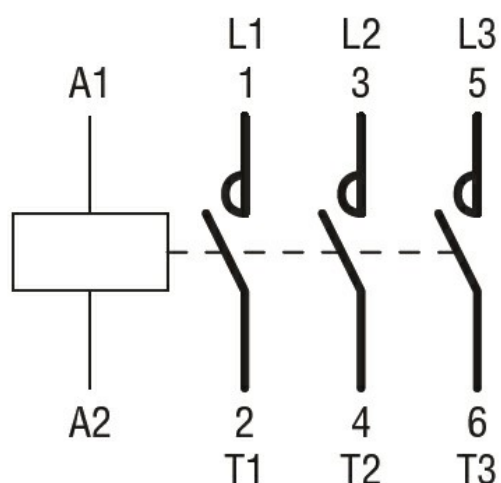
Max altitude

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