



#### Contact characteristics

|                                                                                |                                                   |        |
|--------------------------------------------------------------------------------|---------------------------------------------------|--------|
| Number of poles                                                                | Nr.                                               | 3      |
| Rated insulation voltage $U_i$ IEC/EN                                          | V                                                 | 690    |
| Rated impulse withstand voltage $U_{imp}$                                      | kV                                                | 6      |
| Operational frequency                                                          | min                                               | Hz 25  |
|                                                                                | max                                               | Hz 400 |
| IEC Conventional free air thermal current $I_{th} \leq 40^\circ\text{C}$       | A                                                 | 32     |
| Operational current $I_e$                                                      | AC-1 ( $\leq 40^\circ\text{C}$ )                  | A 32   |
|                                                                                | AC-1 ( $\leq 55^\circ\text{C}$ )                  | A 26   |
|                                                                                | AC-1 ( $\leq 70^\circ\text{C}$ )                  | A 23   |
|                                                                                | AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ ) | A 18   |
|                                                                                | AC-4 (400V)                                       | A 8.5  |
| Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )                     | 230V                                              | kW 4   |
|                                                                                | 400V                                              | kW 7.5 |
|                                                                                | 415V                                              | kW 9   |
|                                                                                | 440V                                              | kW 9   |
|                                                                                | 500V                                              | kW 10  |
|                                                                                | 690V                                              | kW 10  |
| Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )                     | 230V                                              | kW 12  |
|                                                                                | 400V                                              | kW 21  |
|                                                                                | 500V                                              | kW 26  |
|                                                                                | 690V                                              | kW 36  |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$                                 | A 17   |
|                                                                                | 48V                                               | A 15   |
|                                                                                | 75V                                               | A 15   |
|                                                                                | 110V                                              | A 6    |
|                                                                                | 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 20   |
|                                                                                | 48V                                               | A 20   |
|                                                                                | 75V                                               | A 20   |
|                                                                                | 110V                                              | A 13   |
|                                                                                | 220V                                              | A 1    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$                                 | A 22   |
|                                                                                | 48V                                               | A 22   |
|                                                                                | 75V                                               | A 20   |
|                                                                                | 110V                                              | A 16   |
|                                                                                | 220V                                              | A 11   |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series |                                                   |        |

|                                                                                  |                 |                  |      |
|----------------------------------------------------------------------------------|-----------------|------------------|------|
|                                                                                  | ≤24V            | A                | 22   |
|                                                                                  | 48V             | A                | 22   |
|                                                                                  | 75V             | A                | 20   |
|                                                                                  | 110V            | A                | 18   |
|                                                                                  | 220V            | A                | 13   |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series |                 |                  |      |
|                                                                                  | ≤24V            | A                | 12   |
|                                                                                  | 48V             | A                | 11   |
|                                                                                  | 75V             | A                | 11   |
|                                                                                  | 110V            | A                | 2    |
|                                                                                  | 220V            | A                | –    |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series |                 |                  |      |
|                                                                                  | ≤24V            | A                | 15   |
|                                                                                  | 48V             | A                | 13   |
|                                                                                  | 75V             | A                | 13   |
|                                                                                  | 110V            | A                | 8    |
|                                                                                  | 220V            | A                | 2    |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series |                 |                  |      |
|                                                                                  | ≤24V            | A                | 18   |
|                                                                                  | 48V             | A                | 18   |
|                                                                                  | 75V             | A                | 16   |
|                                                                                  | 110V            | A                | 12   |
|                                                                                  | 220V            | A                | 6    |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series |                 |                  |      |
|                                                                                  | ≤24V            | A                | 18   |
|                                                                                  | 48V             | A                | 18   |
|                                                                                  | 75V             | A                | 16   |
|                                                                                  | 110V            | A                | 13   |
|                                                                                  | 220V            | A                | 8    |
| Short-time allowable current for 10s (IEC/EN60947-1)                             |                 | A                | 200  |
| Protection fuse                                                                  |                 |                  |      |
|                                                                                  | gG (IEC)        | A                | 32   |
|                                                                                  | aM (IEC)        | A                | 20   |
| Making capacity (RMS value)                                                      |                 | A                | 180  |
| Breaking capacity at voltage                                                     |                 |                  |      |
|                                                                                  | 440V            | A                | 144  |
|                                                                                  | 500V            | A                | 120  |
|                                                                                  | 690V            | A                | 94   |
| Resistance per pole (average value)                                              |                 | mΩ               | 2.5  |
| Power dissipation per pole (average value)                                       |                 |                  |      |
|                                                                                  | I <sub>th</sub> | W                | 2.6  |
|                                                                                  | AC-3            | W                | 0.8  |
| Tightening torque for terminals                                                  |                 |                  |      |
|                                                                                  | min             | Nm               | 1.5  |
|                                                                                  | max             | Nm               | 1.8  |
|                                                                                  | min             | I <sub>bin</sub> | 1.1  |
|                                                                                  | max             | I <sub>bin</sub> | 1.5  |
| Tightening torque for coil terminal                                              |                 |                  |      |
|                                                                                  | min             | Nm               | 0.8  |
|                                                                                  | max             | Nm               | 1    |
|                                                                                  | min             | I <sub>bin</sub> | 0.8  |
|                                                                                  | max             | I <sub>bin</sub> | 0.74 |
| Max number of wires simultaneously connectable                                   |                 | Nr.              | 2    |

## Conductor section

AWG/Kcmil

max 10

Flexible w/o lug conductor section

min mm<sup>2</sup> 1  
max mm<sup>2</sup> 6

Flexible c/w lug conductor section

min mm<sup>2</sup> 1  
max mm<sup>2</sup> 4

Flexible with insulated spade lug conductor section

min mm<sup>2</sup> 1  
max mm<sup>2</sup> 6

Power terminal protection according to IEC/EN 60529

IP20 when  
properly wired

Cable stripping length

main circuit mm 10  
command circuit mm 8

## Mechanical features

Operating position

normal  
allowable Vertical plan  
±30°

Fixing

Screw / DIN rail  
35mm

Weight

g 500

## Auxiliary contact characteristics

Thermal current I<sub>th</sub>

A 10

IEC/EN 60947-5-1 designation

A600 - P600

Operating current AC15

230V A 3  
400V A 1.9  
500V A 1.4

Operating current DC12

110V A 5.7

Operating current DC13

24V A 5.7  
48V A 2.9  
60V A 2.3  
110V A 1.25  
125V A 1.1  
220V A 0.55  
600V A 0.2

## Operations

Mechanical life

cycles 20000000

Electrical life

cycles 1600000

## Safety related data

Performance level B10d according to EN/ISO 13489-1

rated load cycles 1600000  
mechanical load cycles 20000000

EMC compatibility

yes

## DC coil operating

DC rated control voltage

V 60

DC operating voltage

pick-up

|                                                  |  |            |      |     |
|--------------------------------------------------|--|------------|------|-----|
|                                                  |  | min        | %Us  | 70  |
|                                                  |  | max        | %Us  | 125 |
| drop-out                                         |  |            |      |     |
|                                                  |  | min        | %Us  | 10  |
|                                                  |  | max        | %Us  | 40  |
| Average coil consumption ≤20°C                   |  |            |      |     |
|                                                  |  | in-rush    | W    | 5.4 |
|                                                  |  | holding    | W    | 5.4 |
| Max cycles frequency                             |  |            |      |     |
| Mechanical operation                             |  | cycles/h   | 3600 |     |
| Operating times                                  |  |            |      |     |
| Average time for Us control                      |  |            |      |     |
| in AC                                            |  |            |      |     |
| Closing NO                                       |  | min        | ms   | 8   |
|                                                  |  | max        | ms   | 24  |
| Opening NO                                       |  | min        | ms   | 10  |
|                                                  |  | max        | ms   | 20  |
| Closing NC                                       |  | min        | ms   | 14  |
|                                                  |  | max        | ms   | 28  |
| Opening NC                                       |  | min        | ms   | 7   |
|                                                  |  | max        | ms   | 18  |
| in DC                                            |  |            |      |     |
| Closing NO                                       |  | min        | ms   | 54  |
|                                                  |  | max        | ms   | 66  |
| Opening NO                                       |  | min        | ms   | 14  |
|                                                  |  | max        | ms   | 17  |
| UL technical data                                |  |            |      |     |
| Rated operational voltage AC (UL)                |  |            | V    | 600 |
| Full-load current (FLA) for three-phase AC motor |  |            |      |     |
|                                                  |  | at 480V    | A    | 14  |
|                                                  |  | at 600V    | A    | 17  |
| Yielded mechanical performance                   |  |            |      |     |
| for single-phase AC motor                        |  | 110/120V   | HP   | 1   |
|                                                  |  | 230V       | HP   | 3   |
| for three-phase AC motor                         |  | 200/208V   | HP   | 5   |
|                                                  |  | 220/240V   | HP   | 5   |
|                                                  |  | 460/480V   | HP   | 10  |
|                                                  |  | 575/600V   | HP   | 15  |
| General USE                                      |  |            |      |     |
| Contactor                                        |  | AC current | A    | 32  |
| Auxiliary contacts                               |  | AC voltage | V    | 600 |
|                                                  |  | AC current | A    | 10  |
|                                                  |  | DC voltage | V    | 250 |
|                                                  |  | DC current | A    | 1   |

Short-circuit protection fuse, 600V

High fault

|                       |    |     |
|-----------------------|----|-----|
| Short circuit current | kA | 100 |
| Fuse rating           | A  | 60  |
| Fuse class            | J  |     |

Standard fault

|                       |    |    |
|-----------------------|----|----|
| Short circuit current | kA | 5  |
| Fuse rating           | A  | 80 |

Contact rating of auxiliary contacts according to UL

A600 - P600

#### Ambient conditions

Temperature

Operating temperature

|     |    |     |
|-----|----|-----|
| min | °C | -50 |
| max | °C | 70  |

Storage temperature

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

Max altitude

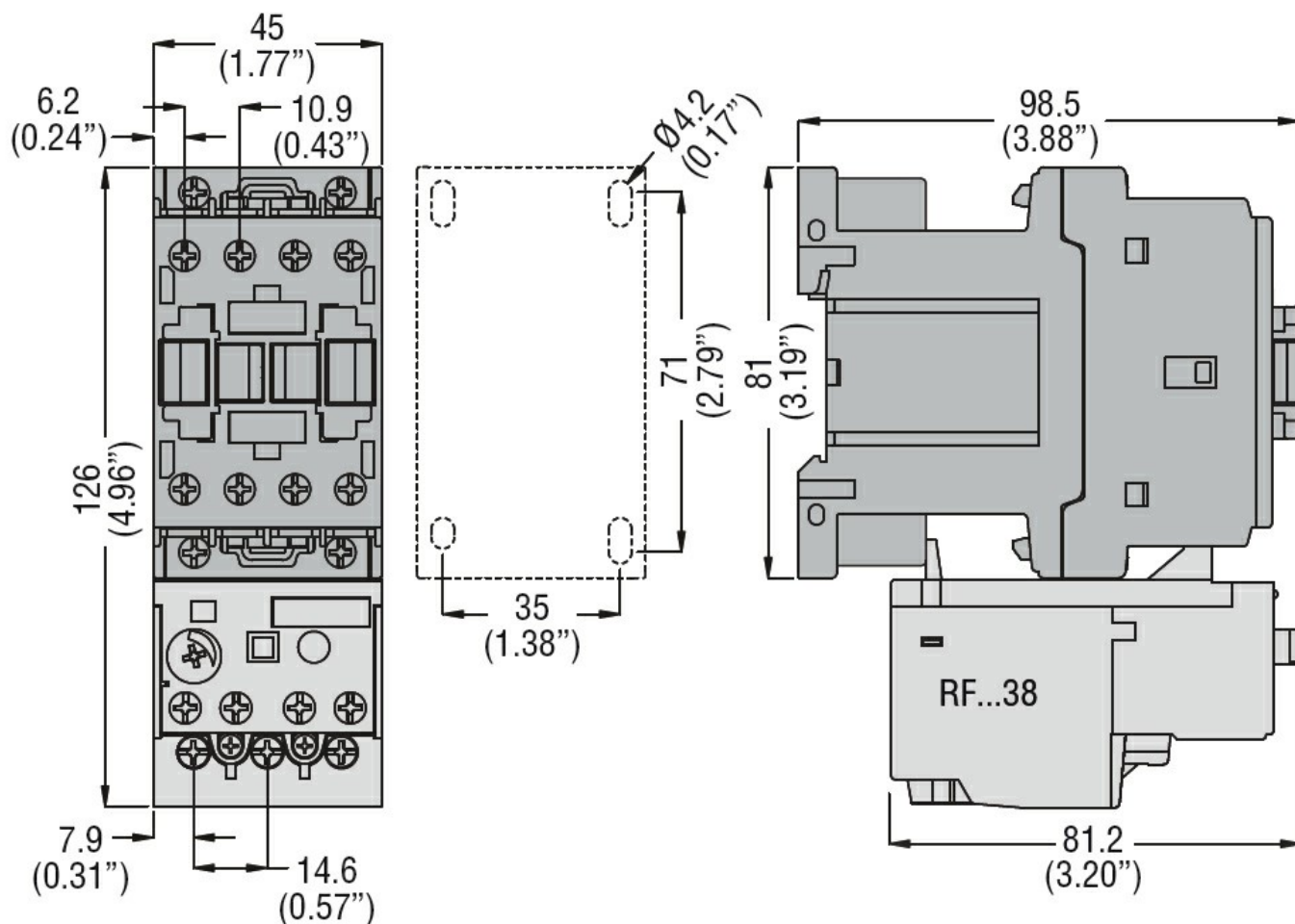
m 3000

#### Resistance & Protection

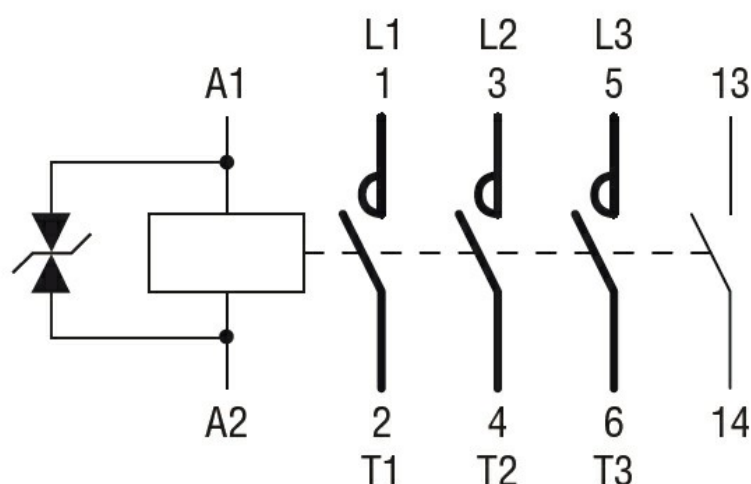
Pollution degree

3

#### Dimensions



#### 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

EAC

UL 60335-2-40 LZGH A2L

UL 60335-2-89 LZGH A2L

## ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching