



#### 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 25    |
|                                                                                | AC-4 (400V)                                       | A 10    |
| Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )                     | 230V                                              | kW 7    |
|                                                                                | 400V                                              | kW 12.5 |
|                                                                                | 415V                                              | kW 13.4 |
|                                                                                | 440V                                              | kW 13.4 |
|                                                                                | 500V                                              | kW 15   |
|                                                                                | 690V                                              | kW 11   |
| 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 20    |
|                                                                                | 48V                                               | A 18    |
|                                                                                | 75V                                               | A 18    |
|                                                                                | 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 23    |
|                                                                                | 48V                                               | A 23    |
|                                                                                | 75V                                               | A 23    |
|                                                                                | 110V                                              | A 16    |
|                                                                                | 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 23    |
|                                                                                | 48V                                               | A 23    |
|                                                                                | 75V                                               | A 23    |
|                                                                                | 110V                                              | A 18    |
|                                                                                | 220V                                              | A 12    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series |                                                   |         |

|                                                                                  |                 |                  |      |
|----------------------------------------------------------------------------------|-----------------|------------------|------|
|                                                                                  | ≤24V            | A                | –    |
|                                                                                  | 48V             | A                | –    |
|                                                                                  | 75V             | A                | –    |
|                                                                                  | 110V            | A                | –    |
|                                                                                  | 220V            | A                | –    |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series |                 |                  |      |
|                                                                                  | ≤24V            | A                | 15   |
|                                                                                  | 48V             | A                | 13   |
|                                                                                  | 75V             | A                | 13   |
|                                                                                  | 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                | 18   |
|                                                                                  | 48V             | A                | 18   |
|                                                                                  | 75V             | A                | 16   |
|                                                                                  | 110V            | A                | 10   |
|                                                                                  | 220V            | A                | 2    |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series |                 |                  |      |
|                                                                                  | ≤24V            | A                | 22   |
|                                                                                  | 48V             | A                | 22   |
|                                                                                  | 75V             | A                | 18   |
|                                                                                  | 110V            | A                | 15   |
|                                                                                  | 220V            | A                | 8    |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series |                 |                  |      |
|                                                                                  | ≤24V            | A                | –    |
|                                                                                  | 48V             | A                | –    |
|                                                                                  | 75V             | A                | –    |
|                                                                                  | 110V            | A                | –    |
|                                                                                  | 220V            | A                | –    |
| Short-time allowable current for 10s (IEC/EN60947-1)                             |                 | A                | 200  |
| Protection fuse                                                                  |                 |                  |      |
|                                                                                  | gG (IEC)        | A                | 50   |
|                                                                                  | aM (IEC)        | A                | 25   |
| Making capacity (RMS value)                                                      |                 | A                | 250  |
| Breaking capacity at voltage                                                     |                 |                  |      |
|                                                                                  | 440V            | A                | 200  |
|                                                                                  | 500V            | A                | 184  |
|                                                                                  | 690V            | A                | 102  |
| Resistance per pole (average value)                                              |                 | mΩ               | 2.5  |
| Power dissipation per pole (average value)                                       |                 |                  |      |
|                                                                                  | I <sub>th</sub> | W                | 2.6  |
|                                                                                  | AC-3            | W                | 1.6  |
| 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> 4        |
| 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           | 1200000                  |
| Safety related data                                 |  |                  |                          |
| Performance level B10d according to EN/ISO 13489-1  |  |                  |                          |
|                                                     |  | rated load       | cycles 1200000           |
|                                                     |  | mechanical load  | cycles 20000000          |
| EMC compatibility                                   |  |                  | yes                      |
| AC coil operating                                   |  |                  |                          |
| AC operating voltage                                |  |                  |                          |
| of 50/60Hz coil powered at 50Hz drop-out            |  |                  |                          |

|                                                  |  |            |            |          |      |
|--------------------------------------------------|--|------------|------------|----------|------|
|                                                  |  |            | max        | %Us      | 55   |
| <b>DC coil operating</b>                         |  |            |            |          |      |
| DC rated control voltage                         |  |            |            | V        | 48   |
| DC operating voltage                             |  |            |            |          |      |
| pick-up                                          |  |            | min        | %Us      | 80   |
|                                                  |  |            | max        | %Us      | 110  |
| drop-out                                         |  |            |            |          |      |
|                                                  |  |            | min        | %Us      | 10   |
|                                                  |  |            | max        | %Us      | 40   |
| Average coil consumption ≤20°C                   |  |            |            |          |      |
|                                                  |  |            | in-rush    | W        | 2.4  |
|                                                  |  |            | holding    | W        | 2.4  |
| <b>Max cycles frequency</b>                      |  |            |            |          |      |
| Mechanical operation                             |  |            |            | cycles/h | 3600 |
| <b>Operating times</b>                           |  |            |            |          |      |
| 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       | 75   |
|                                                  |  |            | max        | ms       | 91   |
|                                                  |  | Opening NO | min        | ms       | 15   |
|                                                  |  |            | max        | ms       | 19   |
| <b>UL technical data</b>                         |  |            |            |          |      |
| Rated operational voltage AC (UL)                |  |            |            | V        | 600  |
| Full-load current (FLA) for three-phase AC motor |  |            |            |          |      |
|                                                  |  |            | at 480V    | A        | 21   |
|                                                  |  |            | at 600V    | A        | 17   |
| Yielded mechanical performance                   |  |            |            |          |      |
| for single-phase AC motor                        |  |            |            |          |      |
|                                                  |  |            | 110/120V   | HP       | 2    |
|                                                  |  |            | 230V       | HP       | 3    |
| for three-phase AC motor                         |  |            |            |          |      |
|                                                  |  |            | 200/208V   | HP       | 7.5  |
|                                                  |  |            | 220/240V   | HP       | 7.5  |
|                                                  |  |            | 460/480V   | HP       | 15   |
|                                                  |  |            | 575/600V   | HP       | 15   |
| <b>General USE</b>                               |  |            |            |          |      |
| Contactor                                        |  |            |            |          |      |
|                                                  |  |            | AC current | A        | 32   |

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Auxiliary contacts

|            |   |     |
|------------|---|-----|
| AC voltage | V | 600 |
| AC current | A | 10  |
| DC voltage | V | 250 |
| DC current | A | 1   |

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Short-circuit protection fuse, 600V

High fault

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

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Standard fault

|                       |    |     |
|-----------------------|----|-----|
| Short circuit current | kA | 5   |
| Fuse rating           | A  | 100 |

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Contact rating of auxiliary contacts according to UL

A600 - P600

**Ambient conditions**

Temperature

Operating temperature

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

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Storage temperature

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

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Max altitude

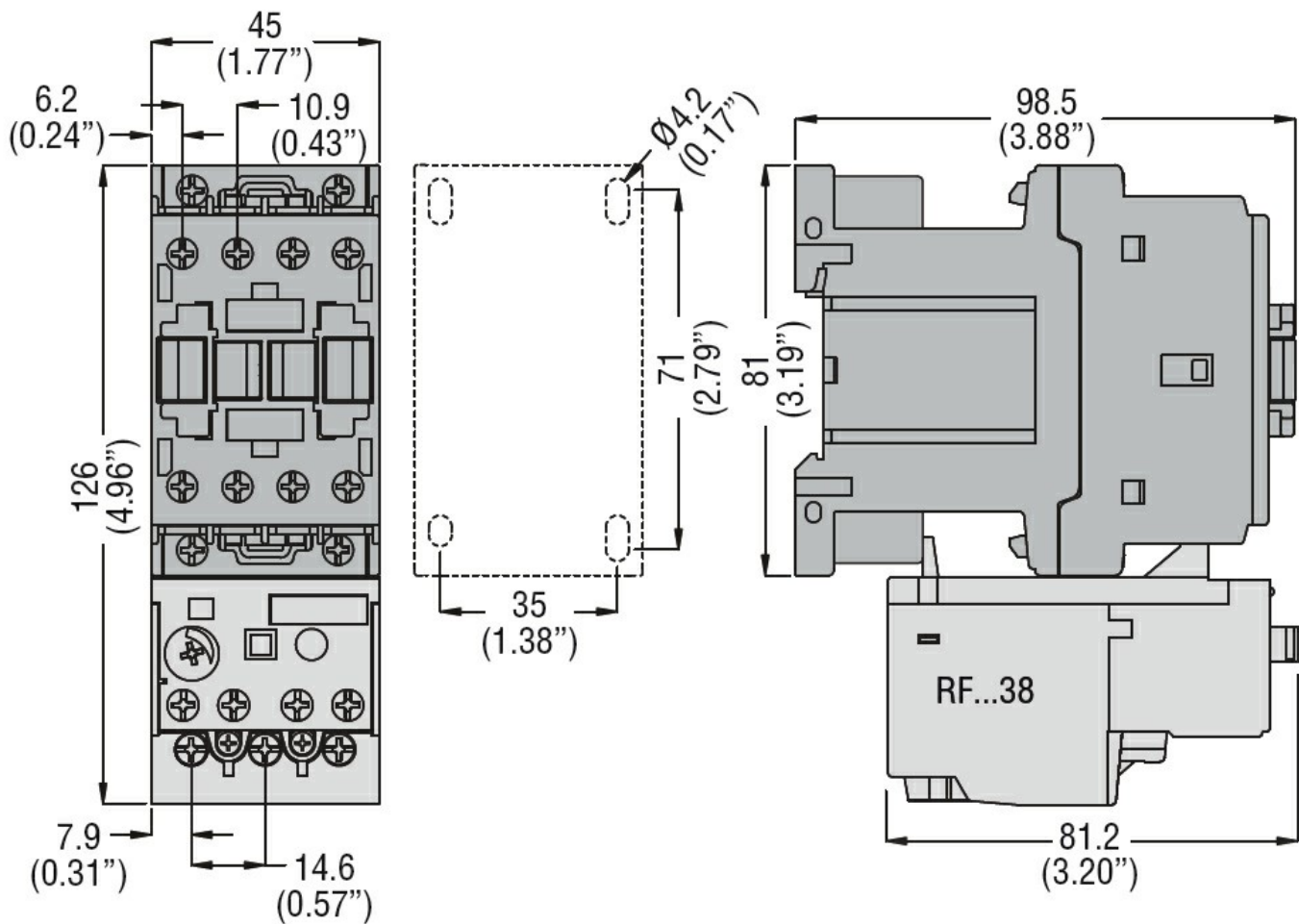
m 3000

**Resistance & Protection**

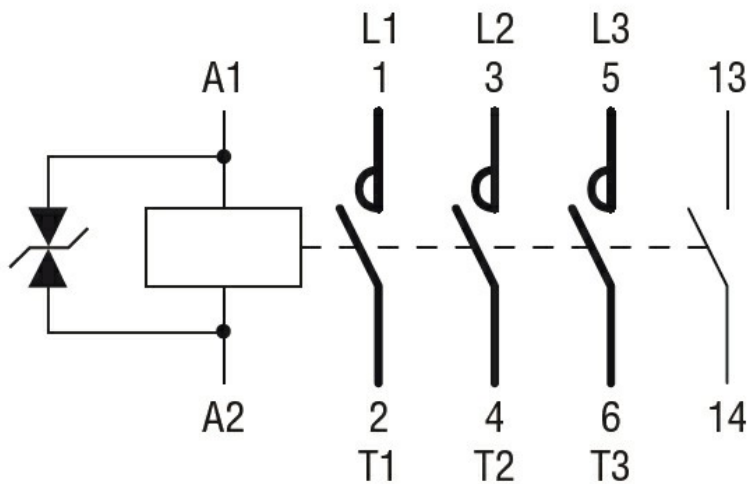
Pollution degree

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