



#### Contact characteristics

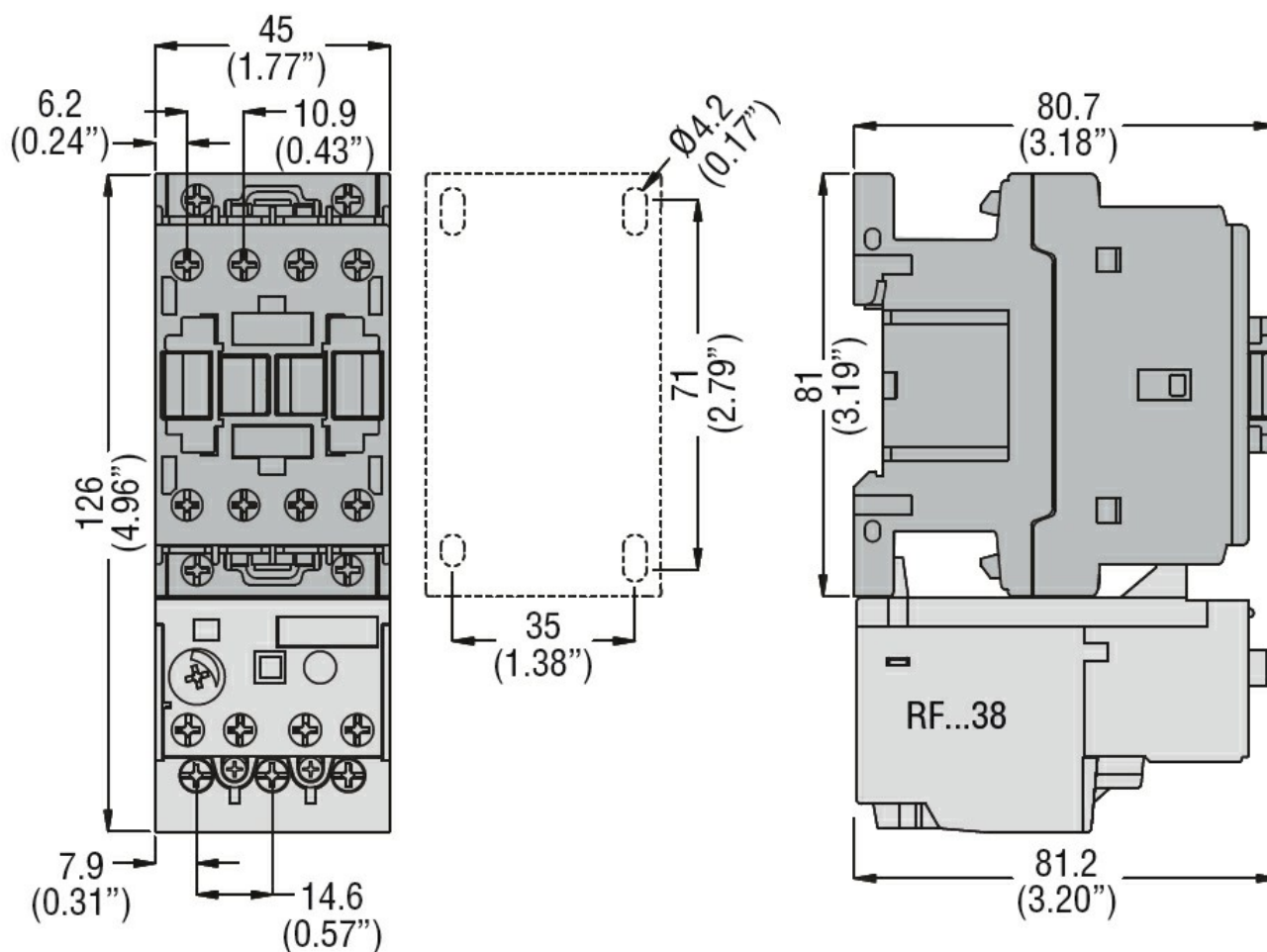
|                                                                         |                                      |        |
|-------------------------------------------------------------------------|--------------------------------------|--------|
| Number of poles                                                         | 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 $I_{th} \leq 40^\circ C$      | A                                    | 25     |
| Operational current $I_e$                                               |                                      |        |
|                                                                         | AC-1 ( $\leq 40^\circ C$ )           | A 25   |
|                                                                         | AC-1 ( $\leq 55^\circ C$ )           | A 20   |
|                                                                         | AC-1 ( $\leq 70^\circ C$ )           | A 18   |
|                                                                         | AC-3 ( $\leq 440V \leq 55^\circ C$ ) | A 9    |
|                                                                         | AC-4 (400V)                          | A 4.9  |
| Rated operational power AC-3 ( $T \leq 55^\circ C$ )                    |                                      |        |
|                                                                         | 230V                                 | kW 2.2 |
|                                                                         | 400V                                 | kW 4.2 |
|                                                                         | 415V                                 | kW 4.5 |
|                                                                         | 440V                                 | kW 4.8 |
|                                                                         | 500V                                 | kW 5.5 |
|                                                                         | 690V                                 | kW 7.5 |
| Rated operational power AC-1 ( $T \leq 40^\circ C$ )                    |                                      |        |
|                                                                         | 230V                                 | kW 9.5 |
|                                                                         | 400V                                 | kW 16  |
|                                                                         | 500V                                 | kW 21  |
|                                                                         | 690V                                 | kW 27  |
| IEC max current $I_e$ in DC1 with $L/R \leq 1ms$ with 1 poles in series |                                      |        |
|                                                                         | $\leq 24V$                           | A 15   |
|                                                                         | 48V                                  | A 13   |
|                                                                         | 75V                                  | A 12   |
|                                                                         | 110V                                 | A 6    |
|                                                                         | 220V                                 | A —    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1ms$ with 2 poles in series |                                      |        |
|                                                                         | $\leq 24V$                           | A 18   |
|                                                                         | 48V                                  | A 18   |
|                                                                         | 75V                                  | A 17   |
|                                                                         | 110V                                 | A 12   |
|                                                                         | 220V                                 | A 1    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1ms$ with 3 poles in series |                                      |        |
|                                                                         | $\leq 24V$                           | A 20   |
|                                                                         | 48V                                  | A 20   |
|                                                                         | 75V                                  | A 20   |
|                                                                         | 110V                                 | A 15   |
|                                                                         | 220V                                 | A 10   |
| IEC max current $I_e$ in DC1 with $L/R \leq 1ms$ with 4 poles in series |                                      |        |

|                                                                      |          |      |      |
|----------------------------------------------------------------------|----------|------|------|
|                                                                      | ≤24V     | A    | 20   |
|                                                                      | 48V      | A    | 20   |
|                                                                      | 75V      | A    | 20   |
|                                                                      | 110V     | A    | 16   |
|                                                                      | 220V     | A    | 12   |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series |          |      |      |
|                                                                      | ≤24V     | A    | 10   |
|                                                                      | 48V      | A    | 9    |
|                                                                      | 75V      | A    | 8    |
|                                                                      | 110V     | A    | 2    |
|                                                                      | 220V     | A    | –    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series |          |      |      |
|                                                                      | ≤24V     | A    | 13   |
|                                                                      | 48V      | A    | 11   |
|                                                                      | 75V      | A    | 10   |
|                                                                      | 110V     | A    | 7    |
|                                                                      | 220V     | A    | 2    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series |          |      |      |
|                                                                      | ≤24V     | A    | 15   |
|                                                                      | 48V      | A    | 15   |
|                                                                      | 75V      | A    | 13   |
|                                                                      | 110V     | A    | 11   |
|                                                                      | 220V     | A    | 6    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series |          |      |      |
|                                                                      | ≤24V     | A    | 15   |
|                                                                      | 48V      | A    | 15   |
|                                                                      | 75V      | A    | 15   |
|                                                                      | 110V     | A    | 12   |
|                                                                      | 220V     | A    | 7    |
| Short-time allowable current for 10s (IEC/EN60947-1)                 |          | A    | 150  |
| Protection fuse                                                      |          |      |      |
|                                                                      | gG (IEC) | A    | 25   |
|                                                                      | aM (IEC) | A    | 10   |
| Making capacity (RMS value)                                          |          | A    | 90   |
| Breaking capacity at voltage                                         |          |      |      |
|                                                                      | 440V     | A    | 72   |
|                                                                      | 500V     | A    | 72   |
|                                                                      | 690V     | A    | 71   |
| Resistance per pole (average value)                                  |          | mΩ   | 2.5  |
| Power dissipation per pole (average value)                           |          |      |      |
|                                                                      | Ith      | W    | 1.6  |
|                                                                      | AC-3     | W    | 0.2  |
| Tightening torque for terminals                                      |          |      |      |
|                                                                      | min      | Nm   | 1.5  |
|                                                                      | max      | Nm   | 1.8  |
|                                                                      | min      | Ibin | 1.1  |
|                                                                      | max      | Ibin | 1.5  |
| Tightening torque for coil terminal                                  |          |      |      |
|                                                                      | min      | Nm   | 0.8  |
|                                                                      | max      | Nm   | 1    |
|                                                                      | min      | Ibin | 0.8  |
|                                                                      | max      | Ibin | 0.74 |
| Max number of wires simultaneously connectable                       |          | Nr.  | 2    |

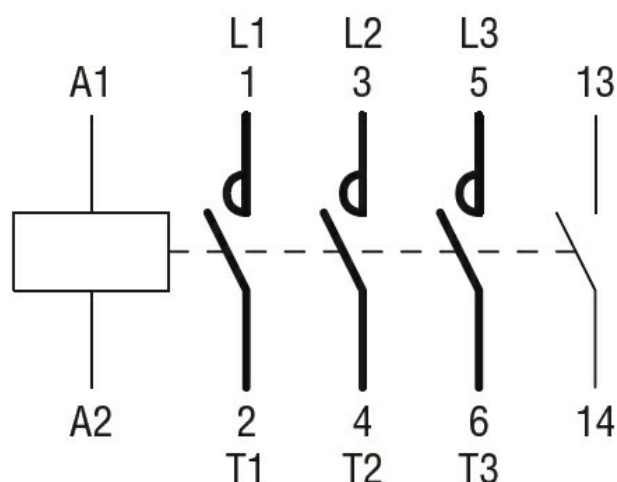
|                                                     |                  |                    |                          |
|-----------------------------------------------------|------------------|--------------------|--------------------------|
| Conductor section                                   |                  |                    |                          |
| 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 lenght                              |                  |                    |                          |
|                                                     | main circuit     | mm                 | 10                       |
|                                                     | command circuit  | mm                 | 8                        |
| Mechanical features                                 |                  |                    |                          |
| Operating position                                  |                  |                    |                          |
|                                                     | normal allowable | Vertical plan ±30° |                          |
| Fixing                                              |                  |                    | Screw / DIN rail 35mm    |
| Weight                                              |                  | g                  | 346                      |
| 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             | 2000000                  |
| Safety related data                                 |                  |                    |                          |
| Performance level B10d according to EN/ISO 13489-1  |                  |                    |                          |
|                                                     | rated load       | cycles             | 2000000                  |
|                                                     | mechanical load  | cycles             | 20000000                 |
| EMC compatibility                                   |                  |                    | yes                      |
| AC coil operating                                   |                  |                    |                          |
| Rated AC voltage at 60Hz                            |                  | V                  | 575                      |
| AC operating voltage                                |                  |                    |                          |
| 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<br>of 60Hz coil powered at 60Hz |  |                       |          |      |
|                                                                     |  | in-rush               | VA       | 75   |
|                                                                     |  | holding               | VA       | 9    |
| Dissipation at holding ≤20°C 50Hz                                   |  |                       | W        | 2.5  |
| Max cycles frequency                                                |  |                       |          |      |
| Mechanical operation                                                |  |                       | cycles/h | 3600 |
| Operating times                                                     |  |                       |          |      |
| Average time for Us control<br>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   |
| UL technical data                                                   |  |                       |          |      |
| Rated operational voltage AC (UL)                                   |  |                       | V        | 600  |
| Full-load current (FLA) for three-phase AC motor                    |  | at 480V               | A        | 7.6  |
|                                                                     |  | at 600V               | A        | 9    |
| Yielded mechanical performance                                      |  |                       |          |      |
| for single-phase AC motor                                           |  | 110/120V              | HP       | 0.75 |
|                                                                     |  | 230V                  | HP       | 2    |
| for three-phase AC motor                                            |  | 200/208V              | HP       | 3    |
|                                                                     |  | 220/240V              | HP       | 3    |
|                                                                     |  | 460/480V              | HP       | 5    |
|                                                                     |  | 575/600V              | HP       | 7.5  |
| General USE                                                         |  |                       |          |      |
| Contactor                                                           |  | AC current            | A        | 25   |
| 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        | 30   |

|                                                      |                       |             |
|------------------------------------------------------|-----------------------|-------------|
|                                                      | Fuse class            | J           |
| Standard fault                                       |                       |             |
|                                                      | Short circuit current | kA 5        |
|                                                      | Fuse rating           | A 60        |
| 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