



#### 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                                                 | 56     |
| Operational current $I_e$                                                      | AC-1 ( $\leq 40^\circ\text{C}$ )                  | A 56   |
|                                                                                | AC-1 ( $\leq 55^\circ\text{C}$ )                  | A 45   |
|                                                                                | AC-1 ( $\leq 70^\circ\text{C}$ )                  | A 40   |
|                                                                                | AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ ) | A 32   |
|                                                                                | AC-4 (400V)                                       | A 13.5 |
| Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )                     | 230V                                              | kW 8.8 |
|                                                                                | 400V                                              | kW 16  |
|                                                                                | 415V                                              | kW 17  |
|                                                                                | 440V                                              | kW 17  |
|                                                                                | 500V                                              | kW 20  |
|                                                                                | 690V                                              | kW 22  |
| Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )                     | 230V                                              | kW 21  |
|                                                                                | 400V                                              | kW 36  |
|                                                                                | 500V                                              | kW 45  |
|                                                                                | 690V                                              | kW 62  |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$                                 | A 30   |
|                                                                                | 48V                                               | A 26   |
|                                                                                | 75V                                               | A 22   |
|                                                                                | 110V                                              | A 8    |
|                                                                                | 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 32   |
|                                                                                | 48V                                               | A 32   |
|                                                                                | 75V                                               | A 28   |
|                                                                                | 110V                                              | A 25   |
|                                                                                | 220V                                              | A 3    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$                                 | A 32   |
|                                                                                | 48V                                               | A 32   |
|                                                                                | 75V                                               | A 32   |
|                                                                                | 110V                                              | A 27   |
|                                                                                | 220V                                              | A 23   |
| 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                | 20   |
|                                                                                  | 48V             | A                | 17   |
|                                                                                  | 75V             | A                | 15   |
|                                                                                  | 110V            | A                | 2,5  |
|                                                                                  | 220V            | A                | –    |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series |                 |                  |      |
|                                                                                  | ≤24V            | A                | 25   |
|                                                                                  | 48V             | A                | 22   |
|                                                                                  | 75V             | A                | 20   |
|                                                                                  | 110V            | A                | 15   |
|                                                                                  | 220V            | A                | 3    |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series |                 |                  |      |
|                                                                                  | ≤24V            | A                | 30   |
|                                                                                  | 48V             | A                | 28   |
|                                                                                  | 75V             | A                | 28   |
|                                                                                  | 110V            | A                | 20   |
|                                                                                  | 220V            | A                | 23   |
| 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                | 320  |
| Protection fuse                                                                  |                 |                  |      |
|                                                                                  | gG (IEC)        | A                | 63   |
|                                                                                  | aM (IEC)        | A                | 32   |
| Making capacity (RMS value)                                                      |                 | A                | 320  |
| Breaking capacity at voltage                                                     |                 |                  |      |
|                                                                                  | 440V            | A                | 256  |
|                                                                                  | 500V            | A                | 240  |
|                                                                                  | 690V            | A                | 192  |
| Resistance per pole (average value)                                              |                 | mΩ               | 2    |
| Power dissipation per pole (average value)                                       |                 |                  |      |
|                                                                                  | I <sub>th</sub> | W                | 6    |
|                                                                                  | AC-3            | W                | 2    |
| Tightening torque for terminals                                                  |                 |                  |      |
|                                                                                  | min             | Nm               | 2.5  |
|                                                                                  | max             | Nm               | 3    |
|                                                                                  | min             | I <sub>bin</sub> | 1.8  |
|                                                                                  | max             | I <sub>bin</sub> | 2.2  |
| 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              |                    | 6                        |
| Flexible w/o lug conductor section                  |  |                  |                    |                          |
|                                                     |  | min              | mm <sup>2</sup>    | 2.5                      |
|                                                     |  | max              | mm <sup>2</sup>    | 16                       |
| Flexible c/w lug conductor section                  |  |                  |                    |                          |
|                                                     |  | min              | mm <sup>2</sup>    | 1                        |
|                                                     |  | max              | mm <sup>2</sup>    | 10                       |
| Flexible with insulated spade lug conductor section |  |                  |                    |                          |
|                                                     |  | min              | mm <sup>2</sup>    | 1                        |
|                                                     |  | max              | mm <sup>2</sup>    | 16                       |
| 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                  | 414                      |
| 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                      |
| 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                 |  |                  |                    |                          |
| 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                         |  |                  |                    |                          |
| in AC                                               |  |                  |                    |                          |
| Closing NO                                          |  | min              | ms                 | 8                        |

|            |     |    |    |
|------------|-----|----|----|
| Opening NO | max | ms | 24 |
|            | min | ms | 5  |
| Closing NC | max | ms | 15 |
|            | min | ms | 9  |
| Opening NC | max | ms | 20 |
|            | min | ms | 9  |
|            | 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 | 27 |
| at 600V | A | 27 |

Yielded mechanical performance

for single-phase AC motor

|          |    |     |
|----------|----|-----|
| 110/120V | HP | 3   |
| 230V     | HP | 7.5 |

for three-phase AC motor

|          |    |    |
|----------|----|----|
| 200/208V | HP | 10 |
| 220/240V | HP | 10 |
| 460/480V | HP | 20 |
| 575/600V | HP | 25 |

General USE

Contactor

|            |   |    |
|------------|---|----|
| AC current | A | 55 |
|------------|---|----|

Short-circuit protection fuse, 600V

High fault

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

Standard fault

|                       |    |     |
|-----------------------|----|-----|
| Short circuit current | kA | 5   |
| Fuse rating           | A  | 125 |

#### Ambient conditions

Temperature

Operating temperature

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

Storage temperature

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

Max altitude

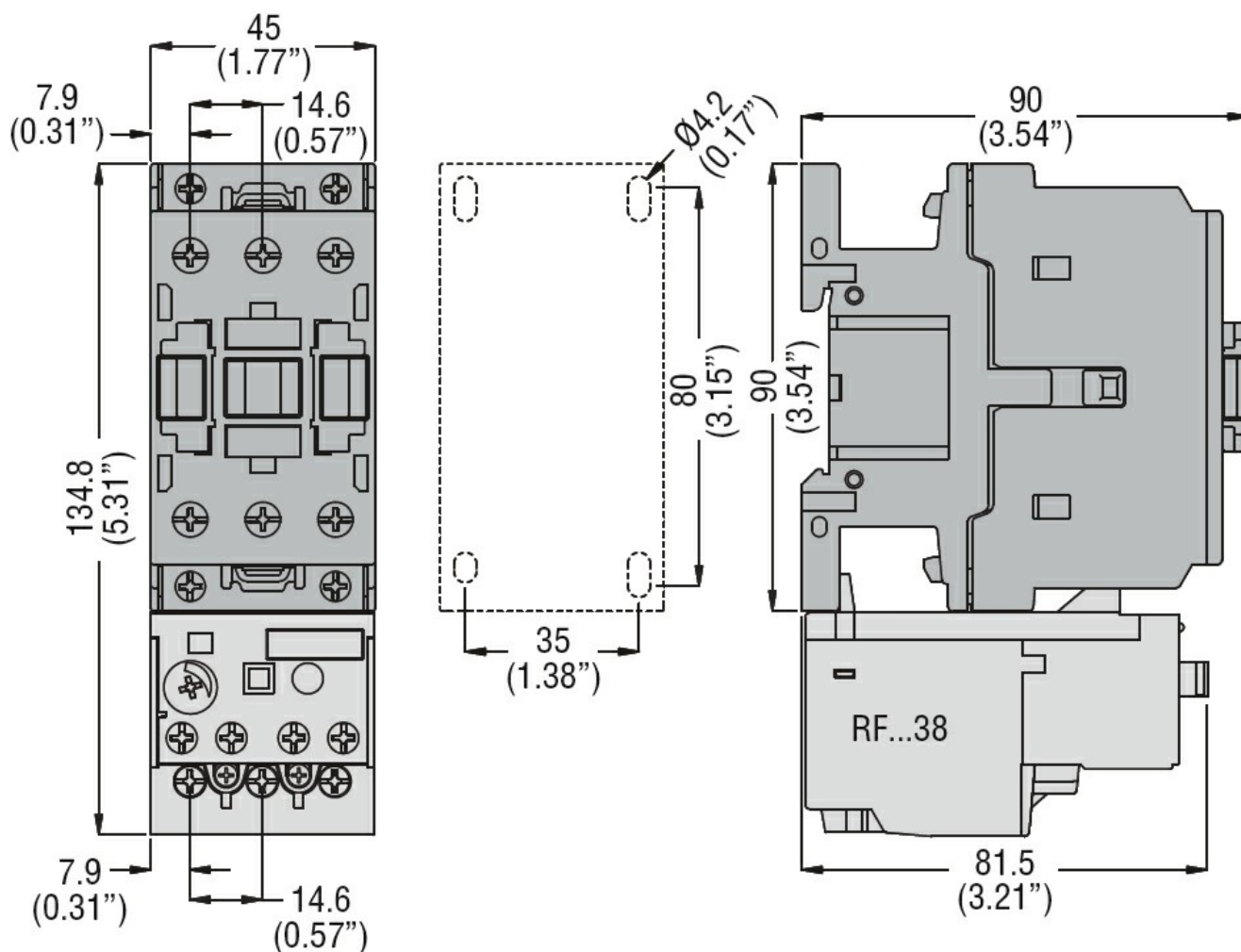
|   |      |
|---|------|
| m | 3000 |
|---|------|

#### Resistance & Protection

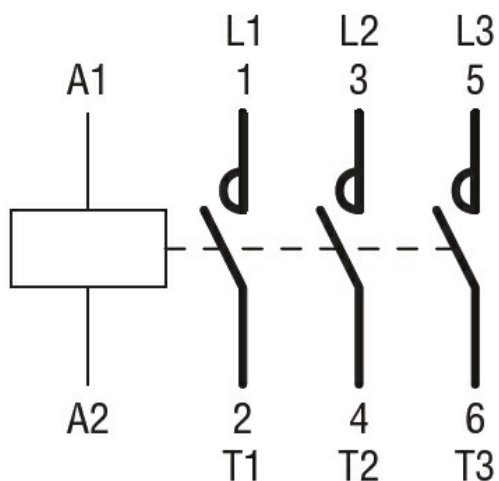
Pollution degree

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