



### Contact characteristics

|                                                                                |                                                                               |        |
|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------|--------|
| Number of poles                                                                | Nr.                                                                           | 4      |
| 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 ( $\leq 40^\circ\text{C}$ ) with 16mm <sup>2</sup> wire and fork end lug | A 60   |
|                                                                                | AC-1 ( $\leq 55^\circ\text{C}$ )                                              | A 45   |
|                                                                                | AC-1 ( $\leq 55^\circ\text{C}$ ) with 16mm <sup>2</sup> wire and fork end lug | A 48   |
|                                                                                | AC-1 ( $\leq 70^\circ\text{C}$ )                                              | A 40   |
|                                                                                | AC-1 ( $\leq 70^\circ\text{C}$ ) with 16mm <sup>2</sup> wire and fork end lug | A 42   |
|                                                                                | AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ )                             | A 38   |
| Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )                     | AC-4 (400V)                                                                   | A 15.5 |
|                                                                                | 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 35   |
|                                                                                | 48V                                                                           | A 30   |
|                                                                                | 75V                                                                           | A 23   |
|                                                                                | 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 36   |
|                                                                                | 48V                                                                           | A 34   |
|                                                                                | 75V                                                                           | A 29   |
|                                                                                | 110V                                                                          | A 32   |
|                                                                                | 220V                                                                          | A 4    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$                                                             | A 36   |
|                                                                                | 48V                                                                           | A 34   |
|                                                                                | 75V                                                                           | A 33   |
|                                                                                | 110V                                                                          | A 34   |
|                                                                                | 220V                                                                          | A 30   |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series | $\leq 24\text{V}$                                                             | A 36   |
|                                                                                | 48V                                                                           | A 34   |
|                                                                                | 75V                                                                           | A 33   |
|                                                                                | 110V                                                                          | A 34   |
|                                                                                |                                                                               |        |

|                                                                      |           |      |      |
|----------------------------------------------------------------------|-----------|------|------|
|                                                                      | 220V      | A    | 38   |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | ≤24V      | A    | 24   |
|                                                                      | 48V       | A    | 20   |
|                                                                      | 75V       | A    | 17   |
|                                                                      | 110V      | A    | 2,5  |
|                                                                      | 220V      | A    | –    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | ≤24V      | A    | 28   |
|                                                                      | 48V       | A    | 25   |
|                                                                      | 75V       | A    | 22   |
|                                                                      | 110V      | A    | 18   |
|                                                                      | 220V      | A    | 3    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | ≤24V      | A    | 32   |
|                                                                      | 48V       | A    | 28   |
|                                                                      | 75V       | A    | 28   |
|                                                                      | 110V      | A    | 23   |
|                                                                      | 220V      | A    | 25   |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | ≤24V      | A    | 32   |
|                                                                      | 48V       | A    | 28   |
|                                                                      | 75V       | A    | 28   |
|                                                                      | 110V      | A    | 23   |
|                                                                      | 220V      | A    | 15   |
| Short-time allowable current for 10s (IEC/EN60947-1)                 |           | A    | 320  |
| Protection fuse                                                      | gG (IEC)  | A    | 63   |
|                                                                      | aM (IEC)  | A    | 40   |
| Making capacity (RMS value)                                          |           | A    | 380  |
| Breaking capacity at voltage                                         | 440V      | A    | 304  |
|                                                                      | 500V      | A    | 240  |
|                                                                      | 690V      | A    | 192  |
| Resistance per pole (average value)                                  |           | mΩ   | 2    |
| Power dissipation per pole (average value)                           | Ith       | W    | 6    |
|                                                                      | AC-3      | W    | 2.9  |
| Tightening torque for terminals                                      | min       | Nm   | 2.5  |
|                                                                      | max       | Nm   | 3    |
|                                                                      | min       | Ibin | 1.8  |
|                                                                      | max       | Ibin | 2.2  |
| 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       |      | 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                        |
| <b>Mechanical features</b>                          |                              |                 |                          |
| Operating position                                  |                              |                 |                          |
|                                                     | normal allowable             |                 | Vertical plan ±30°       |
| Fixing                                              |                              |                 | Screw / DIN rail 35mm    |
| Weight                                              |                              | g               | 504                      |
| <b>Operations</b>                                   |                              |                 |                          |
| Mechanical life                                     |                              | cycles          | 20000000                 |
| Electrical life                                     |                              | cycles          | 1400000                  |
| <b>Safety related data</b>                          |                              |                 |                          |
| Performance level B10d according to EN/ISO 13489-1  |                              |                 |                          |
|                                                     | rated load                   | cycles          | 1400000                  |
|                                                     | mechanical load              | cycles          | 20000000                 |
| EMC compatibility                                   |                              |                 | yes                      |
| <b>AC coil operating</b>                            |                              |                 |                          |
| Rated AC voltage at 60Hz                            |                              | V               | 120                      |
| 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                      |
| <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              | 5                        |
|                                                     | max                          | ms              | 15                       |

Closing NC

|     |    |    |
|-----|----|----|
| min | ms | 9  |
| max | ms | 20 |

Opening NC

|     |    |    |
|-----|----|----|
| 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 | 40 |
| at 600V | A | 32 |

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 | 15 |
| 460/480V | HP | 30 |
| 575/600V | HP | 30 |

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  | 150 |

Ambient conditions

Temperature

Operating temperature

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

Storage temperature

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

Max altitude

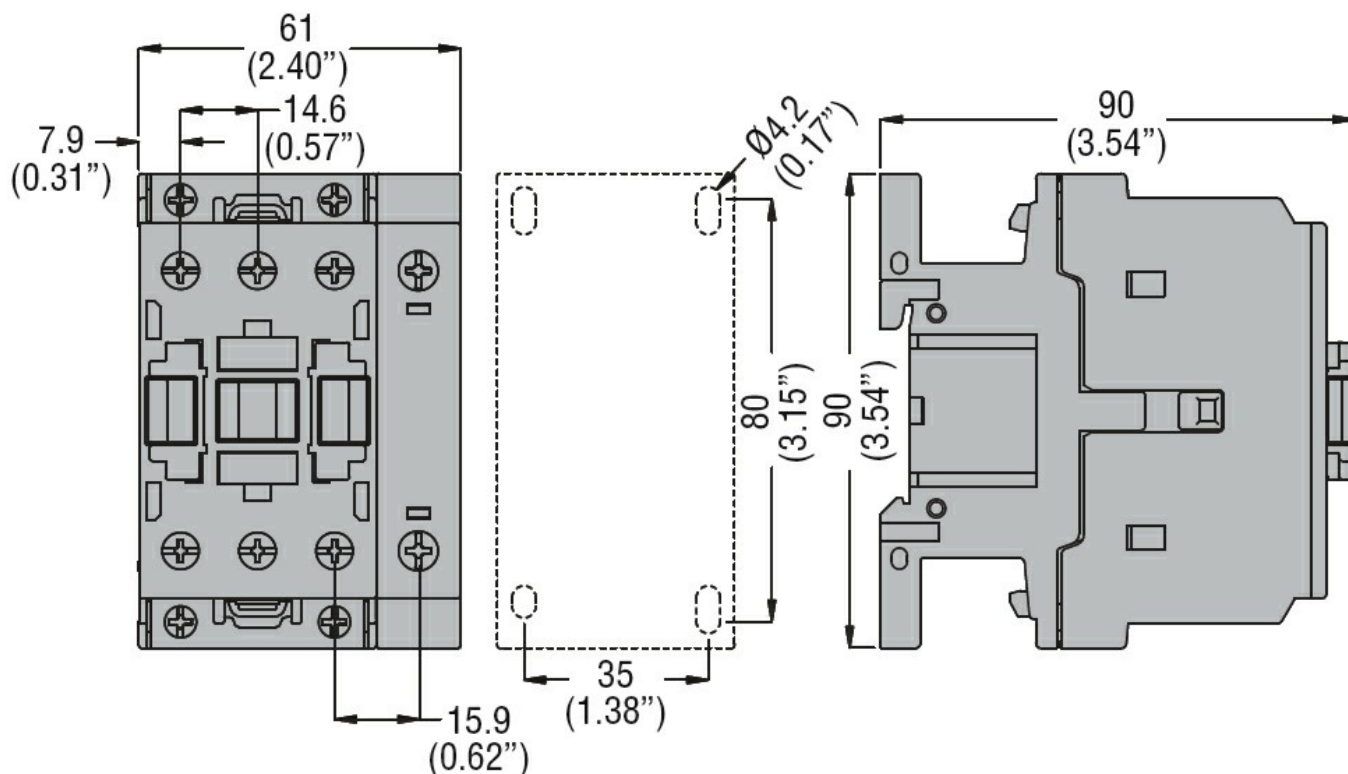
|   |      |
|---|------|
| m | 3000 |
|---|------|

Resistance & Protection

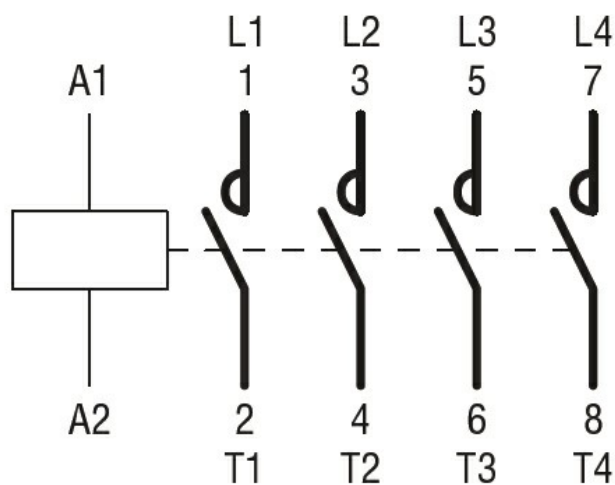
Pollution degree

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