



#### 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                                    | 16     |
| Operational current $I_e$                                               | AC-1 ( $\leq 40^\circ C$ )           | A 16   |
|                                                                         | AC-1 ( $\leq 55^\circ C$ )           | A 14   |
|                                                                         | AC-1 ( $\leq 70^\circ C$ )           | A 12   |
|                                                                         | AC-3 ( $\leq 440V \leq 55^\circ C$ ) | A 6    |
|                                                                         | AC-4 (400V)                          | A 3.3  |
| Rated operational power AC-3 ( $T \leq 55^\circ C$ )                    | 230V                                 | kW 1.5 |
|                                                                         | 400V                                 | kW 2.2 |
|                                                                         | 415V                                 | kW 2.4 |
|                                                                         | 440V                                 | kW 2.5 |
|                                                                         | 500V                                 | kW 3   |
|                                                                         | 690V                                 | kW 3   |
| Rated operational power AC-1 ( $T \leq 40^\circ C$ )                    | 230V                                 | kW 6   |
|                                                                         | 400V                                 | kW 10  |
|                                                                         | 500V                                 | kW 13  |
|                                                                         | 690V                                 | kW 18  |
| IEC max current $I_e$ in DC1 with $L/R \leq 1ms$ with 1 poles in series | $\leq 24V$                           | A 9    |
|                                                                         | 48V                                  | A 8    |
|                                                                         | 75V                                  | A 4    |
|                                                                         | 110V                                 | A 3    |
|                                                                         | 220V                                 | A —    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1ms$ with 2 poles in series | $\leq 24V$                           | A 12   |
|                                                                         | 48V                                  | A 11   |
|                                                                         | 75V                                  | A 7    |
|                                                                         | 110V                                 | A 6    |
|                                                                         | 220V                                 | A —    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1ms$ with 3 poles in series | $\leq 24V$                           | A 14   |
|                                                                         | 48V                                  | A 14   |
|                                                                         | 75V                                  | A 8    |
|                                                                         | 110V                                 | A 8    |
|                                                                         | 220V                                 | A 1    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1ms$ with 4 poles in series |                                      |        |

|                                                                      |          |      |      |
|----------------------------------------------------------------------|----------|------|------|
|                                                                      | ≤24V     | A    | —    |
|                                                                      | 48V      | A    | —    |
|                                                                      | 75V      | A    | —    |
|                                                                      | 110V     | A    | —    |
|                                                                      | 220V     | A    | —    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series |          |      |      |
|                                                                      | ≤24V     | A    | 6    |
|                                                                      | 48V      | A    | 5    |
|                                                                      | 75V      | A    | 2    |
|                                                                      | 110V     | A    | 1    |
|                                                                      | 220V     | A    | —    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series |          |      |      |
|                                                                      | ≤24V     | A    | 7    |
|                                                                      | 48V      | A    | 7    |
|                                                                      | 75V      | A    | 4    |
|                                                                      | 110V     | A    | 3    |
|                                                                      | 220V     | A    | —    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series |          |      |      |
|                                                                      | ≤24V     | A    | 9    |
|                                                                      | 48V      | A    | 9    |
|                                                                      | 75V      | A    | 5    |
|                                                                      | 110V     | A    | 4    |
|                                                                      | 220V     | A    | 0,5  |
| IEC max current Ie 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    | 96   |
| Protection fuse                                                      |          |      |      |
|                                                                      | gG (IEC) | A    | 16   |
|                                                                      | aM (IEC) | A    | 6    |
| Making capacity (RMS value)                                          |          | A    | 92   |
| Breaking capacity at voltage                                         |          |      |      |
|                                                                      | 440V     | A    | 72   |
|                                                                      | 500V     | A    | 72   |
|                                                                      | 690V     | A    | 72   |
| Resistance per pole (average value)                                  |          | mΩ   | 10   |
| Power dissipation per pole (average value)                           |          |      |      |
|                                                                      | Ith      | W    | 2.6  |
|                                                                      | AC-3     | W    | 0.36 |
| Tightening torque for terminals                                      |          |      |      |
|                                                                      | min      | Nm   | 0.8  |
|                                                                      | max      | Nm   | 1    |
|                                                                      | min      | Ibin | 9    |
|                                                                      | max      | Ibin | 9    |
| Tightening torque for coil terminal                                  |          |      |      |
|                                                                      | min      | Nm   | 0.8  |
|                                                                      | max      | Nm   | 1    |
|                                                                      | min      | Ibin | 9    |
|                                                                      | max      | Ibin | 9    |
| Max number of wires simultaneously connectable                       |          | Nr.  | 2    |

|                                                       |  |                                         |                    |                          |
|-------------------------------------------------------|--|-----------------------------------------|--------------------|--------------------------|
| Conductor section                                     |  |                                         |                    |                          |
| AWG/Kcmil                                             |  |                                         |                    |                          |
|                                                       |  | max                                     | 12                 |                          |
| Flexible w/o lug conductor section                    |  | min                                     | mm <sup>2</sup>    | 0.75                     |
|                                                       |  | max                                     | mm <sup>2</sup>    | 2.5                      |
| Flexible c/w lug conductor section                    |  | min                                     | mm <sup>2</sup>    | 1.5                      |
|                                                       |  | max                                     | mm <sup>2</sup>    | 2.5                      |
| Flexible with insulated spade lug conductor section   |  | min                                     | mm <sup>2</sup>    | 1.5                      |
|                                                       |  | max                                     | mm <sup>2</sup>    | 2.5                      |
| Power terminal protection according to IEC/EN 60529   |  |                                         |                    | IP20 when properly wired |
| Mechanical features                                   |  |                                         |                    |                          |
| Operating position                                    |  | normal allowable                        | Vertical plan ±30° |                          |
| Fixing                                                |  | Screw / DIN rail 35mm                   |                    |                          |
| Weight                                                |  |                                         | g                  | 178                      |
| Auxiliary contact characteristics                     |  |                                         |                    |                          |
| Thermal current Ith                                   |  |                                         | A                  | 10                       |
| IEC/EN 60947-5-1 designation                          |  | A600 - Q600                             |                    |                          |
| Operating current AC15                                |  | 230V                                    | A                  | 3                        |
|                                                       |  | 400V                                    | A                  | 1.9                      |
|                                                       |  | 500V                                    | A                  | 1.4                      |
| Operating current DC12                                |  | 110V                                    | A                  | 2.9                      |
| Operating current DC13                                |  | 24V                                     | A                  | 2.9                      |
|                                                       |  | 48V                                     | A                  | 1.4                      |
|                                                       |  | 60V                                     | A                  | 1.2                      |
|                                                       |  | 110V                                    | A                  | 0.6                      |
|                                                       |  | 125V                                    | A                  | 0.55                     |
|                                                       |  | 220V                                    | A                  | 0.3                      |
|                                                       |  | 600V                                    | A                  | 0.1                      |
| Operations                                            |  |                                         |                    |                          |
| Mechanical life                                       |  |                                         | cycles             | 20000000                 |
| Electrical life                                       |  |                                         | cycles             | 500000                   |
| Safety related data                                   |  |                                         |                    |                          |
| Performance level B10d according to EN/ISO 13489-1    |  | rated load                              | cycles             | 500000                   |
|                                                       |  | mechanical load                         | cycles             | 20000000                 |
| Mirror contats according to IEC/EN 609474-4-1 annex F |  |                                         |                    | Yes                      |
| EMC compatibility                                     |  |                                         |                    | yes                      |
| AC coil operating                                     |  |                                         |                    |                          |
| Rated AC voltage at 50/60Hz                           |  |                                         | V                  | 110                      |
| AC operating voltage                                  |  | of 50/60Hz coil powered at 50Hz pick-up |                    |                          |
|                                                       |  | min                                     | %Us                | 75                       |

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 6A, AC COIL 50/60HZ, 110VAC, 1NC AUXILIARY CONTACT WITH MIRROR CONTACT FUNCTION

|                                                                        |                                 |         |          |      |    |
|------------------------------------------------------------------------|---------------------------------|---------|----------|------|----|
| AC average coil consumption at 20°C<br>of 50/60Hz coil powered at 60Hz | drop-out                        | max     | %Us      | 115  |    |
|                                                                        |                                 | min     | %Us      | 20   |    |
|                                                                        | pick-up                         | max     | %Us      | 55   |    |
|                                                                        |                                 | min     | %Us      | 80   |    |
|                                                                        | drop-out                        | max     | %Us      | 115  |    |
|                                                                        |                                 | min     | %Us      | 20   |    |
|                                                                        |                                 | max     | %Us      | 55   |    |
|                                                                        |                                 |         |          |      |    |
|                                                                        | of 50/60Hz coil powered at 50Hz |         | in-rush  | VA   | 30 |
|                                                                        |                                 |         | holding  | VA   | 4  |
| of 50/60Hz coil powered at 60Hz                                        |                                 | in-rush | VA       | 25   |    |
|                                                                        |                                 | holding | VA       | 3    |    |
| of 60Hz coil powered at 60Hz                                           |                                 | in-rush | VA       | 30   |    |
|                                                                        |                                 | holding | VA       | 4    |    |
| Dissipation at holding ≤20°C 50Hz                                      |                                 |         | W        | 0.95 |    |
| Max cycles frequency                                                   |                                 |         |          |      |    |
| Mechanical operation                                                   |                                 |         | cycles/h | 3600 |    |
| Operating times                                                        |                                 |         |          |      |    |
| Average time for Us control                                            |                                 |         |          |      |    |
| in AC                                                                  |                                 |         |          |      |    |
|                                                                        | Closing NO                      | min     | ms       | 12   |    |
|                                                                        |                                 | max     | ms       | 21   |    |
|                                                                        | Opening NO                      | min     | ms       | 9    |    |
|                                                                        |                                 | max     | ms       | 18   |    |
|                                                                        | Closing NC                      | min     | ms       | 17   |    |
|                                                                        |                                 | max     | ms       | 26   |    |
|                                                                        | Opening NC                      | min     | ms       | 7    |    |
|                                                                        |                                 | max     | ms       | 17   |    |
|                                                                        | in DC                           |         |          |      |    |
|                                                                        | Closing NO                      | min     | ms       | 18   |    |
|                                                                        |                                 | max     | ms       | 25   |    |
|                                                                        | Opening NO                      | min     | ms       | 2    |    |
|                                                                        |                                 | max     | ms       | 3    |    |
|                                                                        | Closing NC                      | min     | ms       | 3    |    |
| max                                                                    |                                 | ms      | 5        |      |    |
| Opening NC                                                             | min                             | ms      | 11       |      |    |
|                                                                        | 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 | 4.8 |
| at 600V | A | 3.9 |

Yielded mechanical performance

for single-phase AC motor

|          |    |     |
|----------|----|-----|
| 110/120V | HP | 0.3 |
| 230V     | HP | 1   |

for three-phase AC motor

|          |    |     |
|----------|----|-----|
| 200/208V | HP | 1.5 |
| 220/240V | HP | 2   |
| 460/480V | HP | 3   |
| 575/600V | HP | 3   |

General USE

Contactor

|            |   |    |
|------------|---|----|
| AC current | A | 16 |
|------------|---|----|

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  | 30 |

Contact rating of auxiliary contacts according to UL

A600 - Q600

Ambient conditions

Temperature

Operating temperature

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

Storage temperature

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

Max altitude

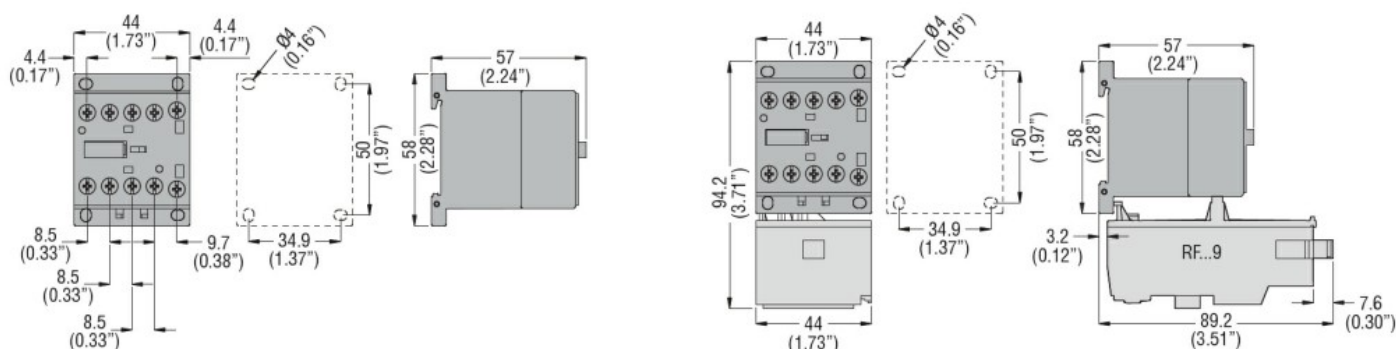
m 3000

Resistance & Protection

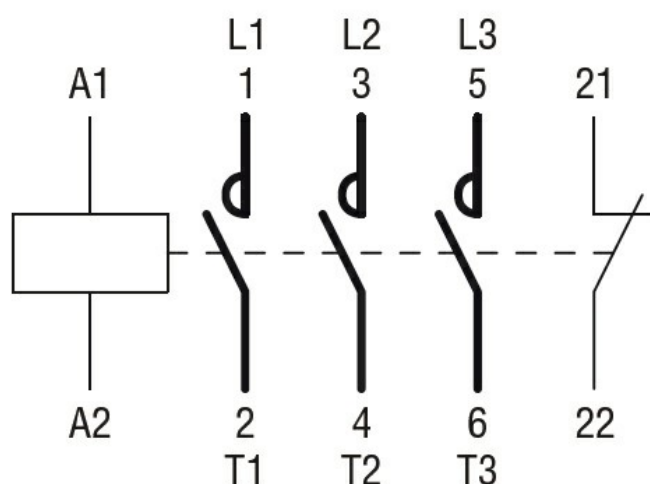
Pollution degree

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 60947-1

IEC/EN 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