



### 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                                                 | 20     |
| Operational current $I_e$                                                           | AC-1 ( $\leq 40^\circ\text{C}$ )                  | A 20   |
|                                                                                     | AC-1 ( $\leq 55^\circ\text{C}$ )                  | A 18   |
|                                                                                     | AC-1 ( $\leq 70^\circ\text{C}$ )                  | A 15   |
|                                                                                     | AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ ) | A 9    |
|                                                                                     | AC-4 (400V)                                       | A 4    |
| Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )                          | 230V                                              | kW 8   |
|                                                                                     | 400V                                              | kW 14  |
|                                                                                     | 500V                                              | kW 16  |
|                                                                                     | 690V                                              | kW 22  |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series      | $\leq 24\text{V}$                                 | A 12   |
|                                                                                     | 48V                                               | A 10   |
|                                                                                     | 75V                                               | A 4    |
|                                                                                     | 110V                                              | A 3    |
|                                                                                     | 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 15   |
|                                                                                     | 48V                                               | A 14   |
|                                                                                     | 75V                                               | A 9    |
|                                                                                     | 110V                                              | A 8    |
|                                                                                     | 220V                                              | A –    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series      | $\leq 24\text{V}$                                 | A 16   |
|                                                                                     | 48V                                               | A 16   |
|                                                                                     | 75V                                               | A 10   |
|                                                                                     | 110V                                              | A 10   |
|                                                                                     | 220V                                              | A 2    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series      | $\leq 24\text{V}$                                 | A 16   |
|                                                                                     | 48V                                               | A 16   |
|                                                                                     | 75V                                               | A 10   |
|                                                                                     | 110V                                              | A 10   |
|                                                                                     | 220V                                              | A 2    |
| IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series | $\leq 24\text{V}$                                 | A 7    |

|                                                                                  |                  |        |                       |
|----------------------------------------------------------------------------------|------------------|--------|-----------------------|
|                                                                                  | 48V              | A      | 6                     |
|                                                                                  | 75V              | A      | 2                     |
|                                                                                  | 110V             | A      | 1                     |
|                                                                                  | 220V             | A      | —                     |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series |                  |        |                       |
|                                                                                  | ≤24V             | A      | 8                     |
|                                                                                  | 48V              | A      | 8                     |
|                                                                                  | 75V              | A      | 5                     |
|                                                                                  | 110V             | A      | 4                     |
|                                                                                  | 220V             | A      | —                     |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series |                  |        |                       |
|                                                                                  | ≤24V             | A      | 10                    |
|                                                                                  | 48V              | A      | 10                    |
|                                                                                  | 75V              | A      | 6                     |
|                                                                                  | 110V             | A      | 5                     |
|                                                                                  | 220V             | A      | 0,8                   |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series |                  |        |                       |
|                                                                                  | ≤24V             | A      | 10                    |
|                                                                                  | 48V              | A      | 10                    |
|                                                                                  | 75V              | A      | 6                     |
|                                                                                  | 110V             | A      | 5                     |
|                                                                                  | 220V             | A      | 0,8                   |
| Short-time allowable current for 10s (IEC/EN60947-1)                             |                  | A      | 96                    |
| Protection fuse                                                                  |                  |        |                       |
|                                                                                  | gG (IEC)         | A      | 20                    |
|                                                                                  | aM (IEC)         | A      | 10                    |
| 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)                                       |                  |        |                       |
|                                                                                  | I <sub>th</sub>  | W      | 4                     |
|                                                                                  | AC-3             | W      | 0.81                  |
| Conductor section                                                                |                  |        |                       |
|                                                                                  | AWG/Kcmil        |        |                       |
|                                                                                  | max              |        | 12                    |
| Mechanical features                                                              |                  |        |                       |
| Operating position                                                               |                  |        |                       |
|                                                                                  | normal allowable |        | Vertical plan ±30°    |
| Fixing                                                                           |                  |        | Screw / DIN rail 35mm |
| Weight                                                                           |                  | g      | 180                   |
| Auxiliary contact characteristics                                                |                  |        |                       |
| Thermal current I <sub>th</sub>                                                  |                  | A      | 10                    |
| IEC/EN 60947-5-1 designation                                                     |                  |        | A600                  |
| 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 |
| EMC compatibility                   |                                 |                 |          | yes      |
| AC coil operating                   |                                 |                 |          |          |
| Rated AC voltage at 50/60Hz         |                                 |                 | V        | 24       |
| AC operating voltage                |                                 |                 |          |          |
|                                     | of 50/60Hz coil powered at 50Hz |                 |          |          |
|                                     | pick-up                         | min             | %Us      | 75       |
|                                     |                                 | max             | %Us      | 115      |
|                                     | drop-out                        | min             | %Us      | 20       |
|                                     |                                 | max             | %Us      | 55       |
|                                     | of 50/60Hz coil powered at 60Hz |                 |          |          |
|                                     | pick-up                         | min             | %Us      | 80       |
|                                     |                                 | max             | %Us      | 115      |
|                                     | drop-out                        | min             | %Us      | 20       |
|                                     |                                 | max             | %Us      | 55       |
| AC average coil consumption at 20°C |                                 |                 |          |          |
|                                     | 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        |

|            |     |    |    |
|------------|-----|----|----|
| Closing NC | max | ms | 3  |
|            | min | ms | 3  |
| Opening NC | max | ms | 5  |
|            | 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 | 7.6 |
| at 600V | A | 6.1 |

Yielded mechanical performance

for single-phase AC motor

|          |    |     |
|----------|----|-----|
| 110/120V | HP | 0.5 |
| 230V     | HP | 1.5 |

for three-phase AC motor

|          |    |   |
|----------|----|---|
| 200/208V | HP | 2 |
| 220/240V | HP | 3 |
| 460/480V | HP | 5 |
| 575/600V | HP | 5 |

General USE

Contactor

AC current A 20

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 |

#### Ambient conditions

Temperature

Operating temperature

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

Storage temperature

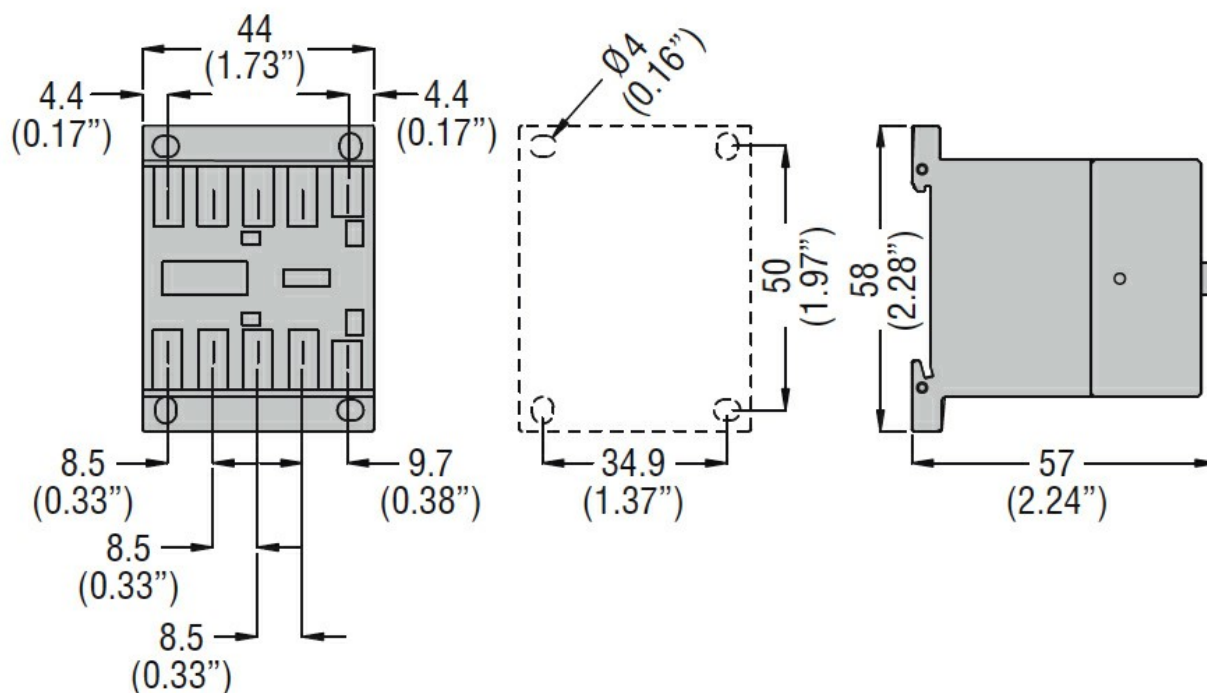
|     |    |     |
|-----|----|-----|
| min | °C | -60 |
| max | °C | +80 |

Max altitude m 3000

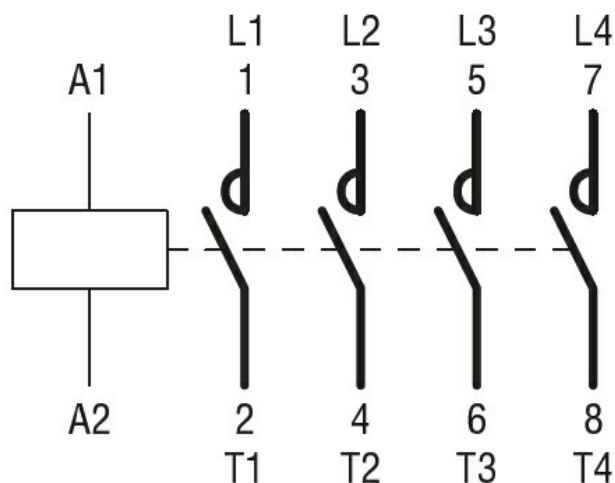
#### Resistance & Protection

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 60947-1  
IEC/EN 60947-4-1  
UL 60947-1  
UL 60947-4-1

##### Certificates

CCC  
cULus  
EAC

#### ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching