



### Contact characteristics

|                                                                          |                                                   |        |
|--------------------------------------------------------------------------|---------------------------------------------------|--------|
| Number of poles                                                          | Nr.                                               | 3      |
| Rated insulation voltage $U_i$ IEC/EN                                    | V                                                 | 500    |
| 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-3 ( $T \leq 55^\circ\text{C}$ )               | 230V                                              | kW 2.2 |
|                                                                          | 400V                                              | kW 4   |
|                                                                          | 415V                                              | kW 4.3 |
|                                                                          | 440V                                              | kW 4.5 |
|                                                                          | 500V                                              | kW 5   |
| Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )               | 230V                                              | kW 8   |
|                                                                          | 400V                                              | kW 14  |
|                                                                          | 500V                                              | kW 16  |
| 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   |
| Resistance per pole (average value)                                      | m $\Omega$                                        | 10     |
| Power dissipation per pole (average value)                               | $I_{th}$                                          | W 4    |
|                                                                          | AC-3                                              | W 0.81 |
| 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                           | I <sub>bin</sub> | 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>  | 0.8                      |
|                                                       | 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   |                               |                  | IP00                     |
| <b>Mechanical features</b>                            |                               |                  |                          |
| Operating position                                    | normal<br>allowable           |                  | Vertical plan<br>±30°    |
| Fixing                                                |                               |                  | Screw / DIN rail<br>35mm |
| Weight                                                |                               | g                | 243                      |
| <b>Auxiliary contact characteristics</b>              |                               |                  |                          |
| Thermal current I <sub>th</sub>                       |                               | 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                | 1.1                      |
|                                                       | 125V                          | A                | 0.3                      |
|                                                       | 220V                          | A                | 0.1                      |
|                                                       | 600V                          | A                | 0.6                      |
| <b>Operations</b>                                     |                               |                  |                          |
| Mechanical life                                       |                               | cycles           | 20000000                 |
| Electrical life                                       |                               | cycles           | 500000                   |
| <b>Safety related data</b>                            |                               |                  |                          |
| Performance level B10d according to EN/ISO 13489-1    | rated load<br>mechanical load | cycles<br>cycles | 500000<br>20000000       |
| Mirror contacts according to IEC/EN 60947-4-1 annex F |                               |                  | Yes                      |
| EMC compatibility                                     |                               |                  | yes                      |
| <b>DC coil operating</b>                              |                               |                  |                          |
| DC rated control voltage                              |                               | V                | 12                       |
| DC operating voltage                                  |                               |                  |                          |
| pick-up                                               | min                           | %U <sub>s</sub>  | 75                       |
|                                                       | max                           | %U <sub>s</sub>  | 115                      |

drop-out

|     |     |    |
|-----|-----|----|
| min | %Us | 10 |
| max | %Us | 25 |

Average coil consumption  $\leq 20^{\circ}\text{C}$

|         |   |     |
|---------|---|-----|
| in-rush | W | 3.2 |
| holding | W | 3.2 |

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

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 |
|------------|---|----|

Contact rating of auxiliary contacts according to UL

A600 - Q600

Ambient conditions

## Temperature

Operating temperature

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

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Storage temperature

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

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Max altitude

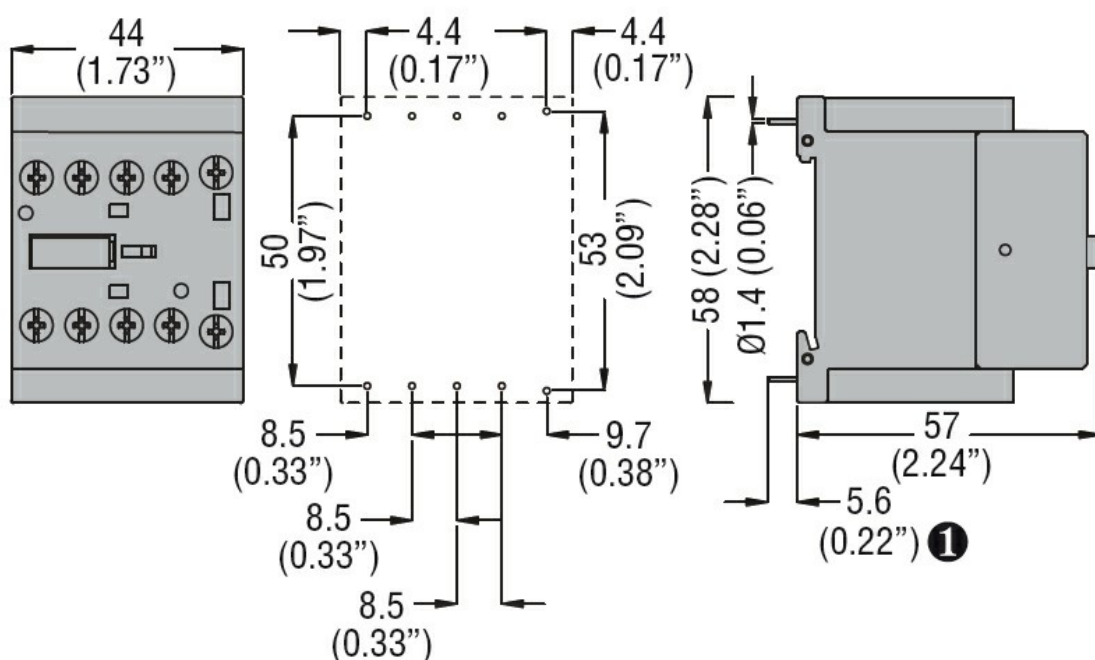
|   |      |
|---|------|
| m | 3000 |
|---|------|

## Resistance & Protection

Pollution degree

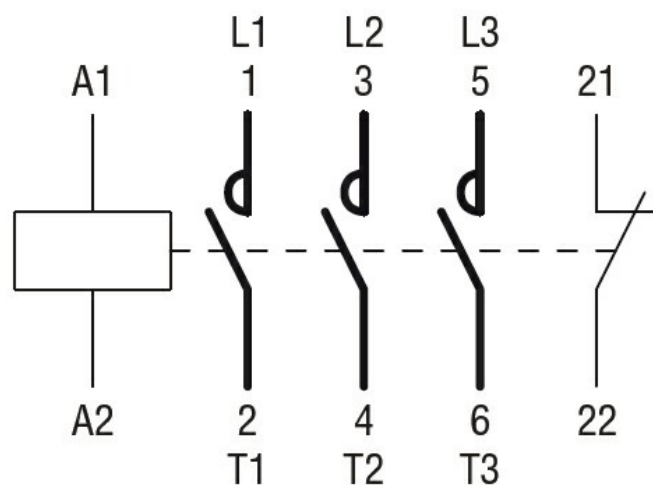
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## Dimensions



❶ Recommended PCB drillings 1.7-2mm.

## 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

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UL 60947-1

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UL 60947-4-1

Certificates

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cURus

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EAC

ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching