



**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 $I_{th} \leq 40^\circ C$           | A                                    | 32     |
| Operational current $I_e$  | AC-1 ( $\leq 40^\circ C$ )           | A 32   |
|  | AC-1 ( $\leq 55^\circ C$ )           | A 26   |
|  | AC-1 ( $\leq 70^\circ C$ )           | A 23   |
|  | AC-3 ( $\leq 440V \leq 55^\circ C$ ) | A 18   |
|  | AC-4 (400V)                          | A 8.5  |
| Rated operational power AC-1 ( $T \leq 40^\circ C$ )                         | 230V                                 | kW 12  |
|  | 400V                                 | kW 21  |
|  | 500V                                 | kW 26  |
|  | 690V                                 | kW 36  |
| IEC max current $I_e$ in DC1 with $L/R \leq 1ms$ with 1 poles in series      | $\leq 24V$                           | A 17   |
|  | 48V                                  | A 15   |
|  | 75V                                  | A 15   |
|  | 110V                                 | A 6    |
|  | 220V                                 | A -    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1ms$ with 2 poles in series      | $\leq 24V$                           | A 20   |
|  | 48V                                  | A 20   |
|  | 75V                                  | A 20   |
|  | 110V                                 | A 13   |
|  | 220V                                 | A 1    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1ms$ with 3 poles in series      | $\leq 24V$                           | A 22   |
|  | 48V                                  | A 22   |
|  | 75V                                  | A 20   |
|  | 110V                                 | A 16   |
|  | 220V                                 | A 11   |
| IEC max current $I_e$ in DC1 with $L/R \leq 1ms$ with 4 poles in series      | $\leq 24V$                           | A 22   |
|  | 48V                                  | A 22   |
|  | 75V                                  | A 20   |
|  | 110V                                 | A 18   |
|  | 220V                                 | A 13   |
| IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15ms$ with 1 poles in series | $\leq 24V$                           | A 12   |

|  |                 |                  |      |
|--|-----------------|------------------|------|
|  | 48V             | A                | 11   |
|  | 75V             | A                | 11   |
|  | 110V            | A                | 2    |
|  | 220V            | A                | –    |
| <hr/>  |                 |                  |      |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series | ≤24V            | A                | 15   |
|  | 48V             | A                | 13   |
|  | 75V             | A                | 13   |
|  | 110V            | A                | 8    |
|  | 220V            | A                | 2    |
| <hr/>  |                 |                  |      |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series | ≤24V            | A                | 18   |
|  | 48V             | A                | 18   |
|  | 75V             | A                | 16   |
|  | 110V            | A                | 12   |
|  | 220V            | A                | 6    |
| <hr/>  |                 |                  |      |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series | ≤24V            | A                | 18   |
|  | 48V             | A                | 18   |
|  | 75V             | A                | 16   |
|  | 110V            | A                | 13   |
|  | 220V            | A                | 8    |
| <hr/>  |                 |                  |      |
| Short-time allowable current for 10s (IEC/EN60947-1)                             |                 | A                | 200  |
| <hr/>  |                 |                  |      |
| Protection fuse  | gG (IEC)        | A                | 32   |
|  | aM (IEC)        | A                | 20   |
| <hr/>  |                 |                  |      |
| Making capacity (RMS value)  |                 | A                | 180  |
| <hr/>  |                 |                  |      |
| Breaking capacity at voltage   | 440V            | A                | 144  |
|  | 500V            | A                | 120  |
|  | 690V            | A                | 94   |
| <hr/>  |                 |                  |      |
| Resistance per pole (average value)  |                 | mΩ               | 2.5  |
| <hr/>  |                 |                  |      |
| Power dissipation per pole (average value)                                       | I <sub>th</sub> | W                | 2.6  |
|  | AC-3            | W                | 0.8  |
| <hr/>  |                 |                  |      |
| Tightening torque for terminals  | min             | Nm               | 1.5  |
|  | max             | Nm               | 1.8  |
|  | min             | I <sub>bin</sub> | 1.1  |
|  | max             | I <sub>bin</sub> | 1.5  |
| <hr/>  |                 |                  |      |
| 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 |
| <hr/>  |                 |                  |      |
| Max number of wires simultaneously connectable                                   |                 | Nr.              | 2    |
| <hr/>  |                 |                  |      |
| Conductor section  | AWG/Kcmil       |                  |      |
|  | max             |                  | 10   |
| <hr/>  |                 |                  |      |
| Flexible w/o lug conductor section   | min             | mm <sup>2</sup>  | 1    |
|  | max             | mm <sup>2</sup>  | 6    |
| <hr/>  |                 |                  |      |
| Flexible c/w lug conductor section   |                 |                  |      |

|   |                              |                 |                          |
|---|------------------------------|-----------------|--------------------------|
|   | min                          | mm <sup>2</sup> | 1                        |
|   | max                          | mm <sup>2</sup> | 4                        |
| Flexible with insulated spade lug conductor section |                              |                 |                          |
|   | min                          | mm <sup>2</sup> | 1                        |
|   | max                          | mm <sup>2</sup> | 6                        |
| Power terminal protection according to IEC/EN 60529 |                              |                 | IP20 when properly wired |
| Cable stripping length                              |                              |                 |                          |
|   | 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               | 355                      |
| <b>Operations</b>                                   |                              |                 |                          |
| Mechanical life                                     |                              | cycles          | 20000000                 |
| Electrical life                                     |                              | cycles          | 1600000                  |
| <b>Safety related data</b>                          |                              |                 |                          |
| Performance level B10d according to EN/ISO 13489-1  |                              |                 |                          |
|   | rated load                   | cycles          | 1600000                  |
|   | mechanical load              | cycles          | 20000000                 |
| EMC compatibility                                   |                              |                 | yes                      |
| <b>AC coil operating</b>                            |                              |                 |                          |
| Rated AC voltage at 60Hz                            |                              | V               | 230                      |
| 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              | 10                       |
|   | max                          | ms              | 20                       |
|   | Closing NC                   |                 |                          |
|   | min                          | ms              | 14                       |
|   | max                          | ms              | 28                       |

Opening NC

|     |    |    |
|-----|----|----|
| min | ms | 7  |
| max | ms | 18 |

**UL technical data**

Rated operational voltage AC (UL) V 600

Full-load current (FLA) for three-phase AC motor

|         |   |    |
|---------|---|----|
| at 480V | A | 14 |
| at 600V | A | 17 |

Yielded mechanical performance

for single-phase AC motor

|          |    |   |
|----------|----|---|
| 110/120V | HP | 1 |
| 230V     | HP | 3 |

for three-phase AC motor

|          |    |    |
|----------|----|----|
| 200/208V | HP | 5  |
| 220/240V | HP | 5  |
| 460/480V | HP | 10 |
| 575/600V | HP | 15 |

General USE

Contactor

|            |   |    |
|------------|---|----|
| AC current | A | 32 |
|------------|---|----|

Short-circuit protection fuse, 600V

High fault

|                       |    |     |
|-----------------------|----|-----|
| Short circuit current | kA | 100 |
| Fuse rating           | A  | 60  |
| Fuse class            |    | J   |

Standard fault

|                       |    |    |
|-----------------------|----|----|
| Short circuit current | kA | 5  |
| Fuse rating           | A  | 80 |

**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