



### 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 $I_{th} \leq 40^\circ\text{C}$       | A                                                 | 32      |
| Operational current $I_e$                                                      | AC-1 ( $\leq 40^\circ\text{C}$ )                  | A 32    |
|                                                                                | AC-1 ( $\leq 55^\circ\text{C}$ )                  | A 26    |
|                                                                                | AC-1 ( $\leq 70^\circ\text{C}$ )                  | A 23    |
|                                                                                | AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ ) | A 25    |
|                                                                                | AC-4 (400V)                                       | A 10    |
| Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )                     | 230V                                              | kW 7    |
|                                                                                | 400V                                              | kW 12.5 |
|                                                                                | 415V                                              | kW 13.4 |
|                                                                                | 440V                                              | kW 13.4 |
|                                                                                | 500V                                              | kW 15   |
|                                                                                | 690V                                              | kW 11   |
| Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )                     | 230V                                              | kW 12   |
|                                                                                | 400V                                              | kW 21   |
|                                                                                | 500V                                              | kW 26   |
|                                                                                | 690V                                              | kW 36   |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series | $\leq 24\text{V}$                                 | A 20    |
|                                                                                | 48V                                               | A 18    |
|                                                                                | 75V                                               | A 18    |
|                                                                                | 110V                                              | A 6     |
|                                                                                | 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 23    |
|                                                                                | 48V                                               | A 23    |
|                                                                                | 75V                                               | A 23    |
|                                                                                | 110V                                              | A 16    |
|                                                                                | 220V                                              | A 1     |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series | $\leq 24\text{V}$                                 | A 23    |
|                                                                                | 48V                                               | A 23    |
|                                                                                | 75V                                               | A 23    |
|                                                                                | 110V                                              | A 18    |
|                                                                                | 220V                                              | A 12    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series | $\leq 24\text{V}$                                 | A 23    |
|                                                                                | 48V                                               | A 23    |
|                                                                                | 75V                                               | A 23    |
|                                                                                | 110V                                              | A 18    |
|                                                                                | 220V                                              | A 12    |

|                                                                                  |                 |                  |      |
|----------------------------------------------------------------------------------|-----------------|------------------|------|
|                                                                                  | ≤24V            | A                | –    |
|                                                                                  | 48V             | A                | –    |
|                                                                                  | 75V             | A                | –    |
|                                                                                  | 110V            | A                | –    |
|                                                                                  | 220V            | A                | –    |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series |                 |                  |      |
|                                                                                  | ≤24V            | A                | 15   |
|                                                                                  | 48V             | A                | 13   |
|                                                                                  | 75V             | A                | 13   |
|                                                                                  | 110V            | A                | 2    |
|                                                                                  | 220V            | A                | –    |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series |                 |                  |      |
|                                                                                  | ≤24V            | A                | 18   |
|                                                                                  | 48V             | A                | 18   |
|                                                                                  | 75V             | A                | 16   |
|                                                                                  | 110V            | A                | 10   |
|                                                                                  | 220V            | A                | 2    |
| IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series |                 |                  |      |
|                                                                                  | ≤24V            | A                | 22   |
|                                                                                  | 48V             | A                | 22   |
|                                                                                  | 75V             | A                | 18   |
|                                                                                  | 110V            | A                | 15   |
|                                                                                  | 220V            | A                | 8    |
| IEC max current I <sub>e</sub> 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                | 200  |
| Protection fuse                                                                  |                 |                  |      |
|                                                                                  | gG (IEC)        | A                | 50   |
|                                                                                  | aM (IEC)        | A                | 25   |
| Making capacity (RMS value)                                                      |                 | A                | 250  |
| Breaking capacity at voltage                                                     |                 |                  |      |
|                                                                                  | 440V            | A                | 200  |
|                                                                                  | 500V            | A                | 184  |
|                                                                                  | 690V            | A                | 102  |
| Resistance per pole (average value)                                              |                 | mΩ               | 2.5  |
| Power dissipation per pole (average value)                                       |                 |                  |      |
|                                                                                  | I <sub>th</sub> | W                | 2.6  |
|                                                                                  | AC-3            | W                | 1.6  |
| 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  |
| 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 |
| Max number of wires simultaneously connectable                                   |                 | Nr.              | 2    |

|                                                      |  |                  |                          |
|------------------------------------------------------|--|------------------|--------------------------|
| Conductor section                                    |  |                  |                          |
| AWG/Kcmil                                            |  |                  |                          |
|                                                      |  | max              | 10                       |
| Flexible w/o lug conductor section                   |  |                  |                          |
|                                                      |  | min              | mm <sup>2</sup> 1        |
|                                                      |  | max              | mm <sup>2</sup> 6        |
| 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 lenght                               |  |                  |                          |
|                                                      |  | main circuit     | mm 10                    |
|                                                      |  | command circuit  | mm 8                     |
| Mechanical features                                  |  |                  |                          |
| Operating position                                   |  |                  |                          |
|                                                      |  | normal allowable | Vertical plan ±30°       |
| Fixing                                               |  |                  | Screw / DIN rail 35mm    |
| Weight                                               |  | g                | 500                      |
| Auxiliary contact characteristics                    |  |                  |                          |
| Thermal current I <sub>th</sub>                      |  | A                | 10                       |
| IEC/EN 60947-5-1 designation                         |  |                  | A600 - P600              |
| Operating current AC15                               |  |                  |                          |
|                                                      |  | 230V             | A 3                      |
|                                                      |  | 400V             | A 1.9                    |
|                                                      |  | 500V             | A 1.4                    |
| Operating current DC12                               |  |                  |                          |
|                                                      |  | 110V             | A 5.7                    |
| Operating current DC13                               |  |                  |                          |
|                                                      |  | 24V              | A 5.7                    |
|                                                      |  | 48V              | A 2.9                    |
|                                                      |  | 60V              | A 2.3                    |
|                                                      |  | 110V             | A 1.25                   |
|                                                      |  | 125V             | A 1.1                    |
|                                                      |  | 220V             | A 0.55                   |
|                                                      |  | 600V             | A 0.2                    |
| Operations                                           |  |                  |                          |
| Mechanical life                                      |  | cycles           | 20000000                 |
| Electrical life                                      |  | cycles           | 1200000                  |
| Safety related data                                  |  |                  |                          |
| Performance level B10d according to EN/ISO 13489-1   |  |                  |                          |
|                                                      |  | rated load       | cycles 1200000           |
|                                                      |  | mechanical load  | cycles 20000000          |
| Mirror contats according to IEC/EN 60947-4-1 annex F |  |                  | Yes                      |
| EMC compatibility                                    |  |                  | yes                      |
| DC coil operating                                    |  |                  |                          |
| DC rated control voltage                             |  | V                | 24                       |
| DC operating voltage                                 |  |                  |                          |

pick-up

|     |     |     |
|-----|-----|-----|
| min | %Us | 70  |
| max | %Us | 125 |

drop-out

|     |     |    |
|-----|-----|----|
| min | %Us | 10 |
| max | %Us | 40 |

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

|         |   |     |
|---------|---|-----|
| in-rush | W | 5.4 |
| holding | W | 5.4 |

Max cycles frequency

Mechanical operation

cycles/h 3600

Operating times

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 |

in DC

Closing NO

|     |    |    |
|-----|----|----|
| min | ms | 54 |
| max | ms | 66 |

Opening NO

|     |    |    |
|-----|----|----|
| min | ms | 14 |
| max | ms | 17 |

Closing NC

|     |    |    |
|-----|----|----|
| min | ms | 24 |
| max | ms | 30 |

Opening NC

|     |    |    |
|-----|----|----|
| min | ms | 47 |
| max | ms | 57 |

UL technical data

Rated operational voltage AC (UL)

V 600

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

|         |   |    |
|---------|---|----|
| at 480V | A | 21 |
| at 600V | A | 17 |

Yielded mechanical performance

for single-phase AC motor

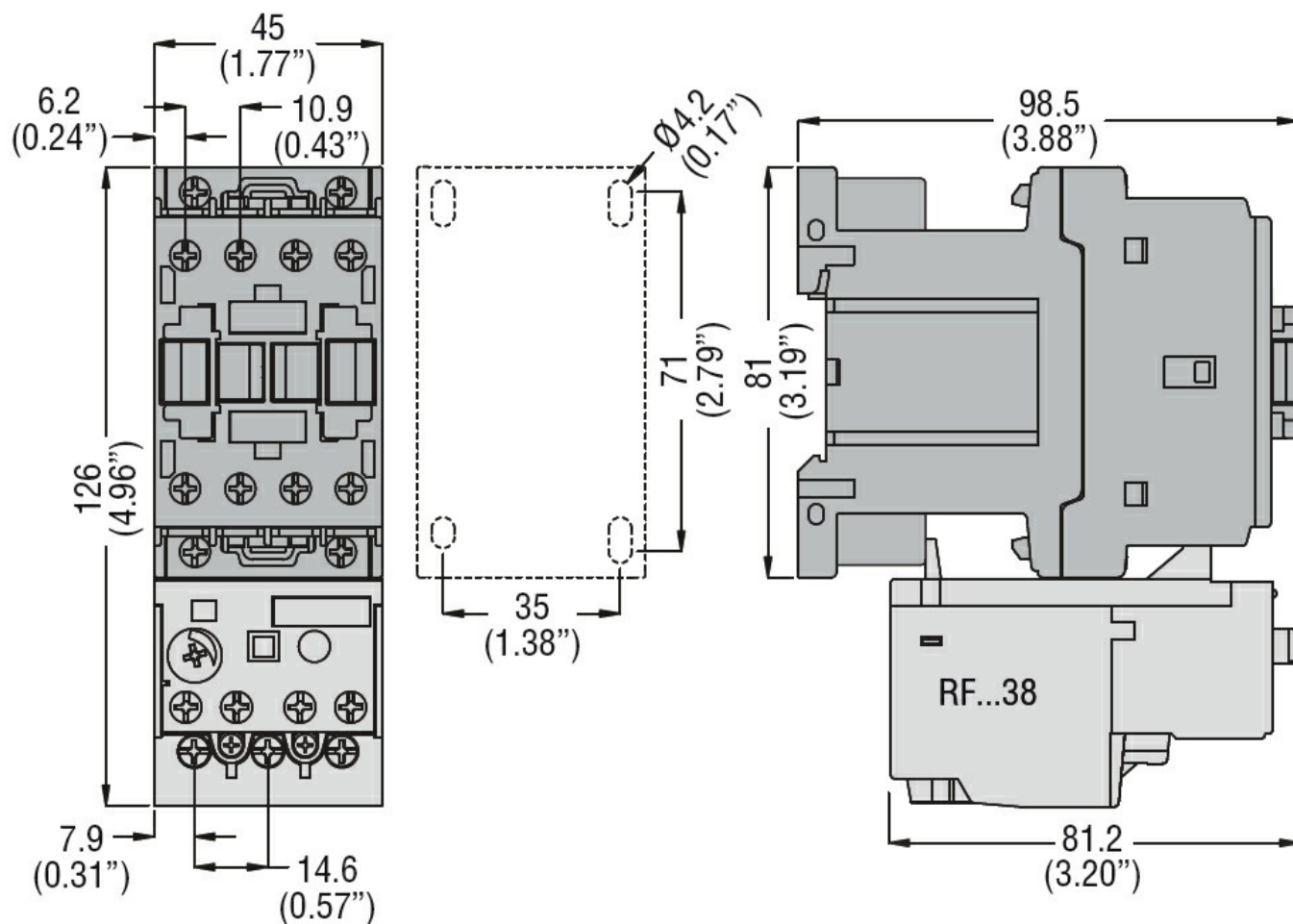
|          |    |   |
|----------|----|---|
| 110/120V | HP | 2 |
| 230V     | HP | 3 |

for three-phase AC motor

|          |    |     |
|----------|----|-----|
| 200/208V | HP | 7.5 |
| 220/240V | HP | 7.5 |
| 460/480V | HP | 15  |
| 575/600V | HP | 15  |

General USE

|                                                      |  |                       |    |             |
|------------------------------------------------------|--|-----------------------|----|-------------|
| Contactor                                            |  | AC current            | A  | 32          |
| Auxiliary contacts                                   |  | AC voltage            | V  | 600         |
|                                                      |  | AC current            | A  | 10          |
|                                                      |  | DC voltage            | V  | 250         |
|                                                      |  | DC current            | A  | 1           |
| 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  | 100         |
| Contact rating of auxiliary contacts according to UL |  |                       |    | A600 - P600 |
| 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