



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 | 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 |
| | 690V | kW 5 |
| 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 | | |

| | | | |
|--|-----------------|------------------|------|
| | ≤24V | A | 16 |
| | 48V | A | 16 |
| | 75V | A | 10 |
| | 110V | A | 10 |
| | 220V | A | 2 |
| <hr/> | | | |
| IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series | ≤24V | A | 7 |
| | 48V | A | 6 |
| | 75V | A | 2 |
| | 110V | A | 1 |
| | 220V | A | – |
| <hr/> | | | |
| IEC max current I _e 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 | – |
| <hr/> | | | |
| IEC max current I _e 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 |
| <hr/> | | | |
| IEC max current I _e 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 |
| <hr/> | | | |
| Short-time allowable current for 10s (IEC/EN60947-1) | | A | 96 |
| <hr/> | | | |
| Protection fuse | gG (IEC) | A | 20 |
| | aM (IEC) | A | 10 |
| <hr/> | | | |
| Making capacity (RMS value) | | A | 92 |
| <hr/> | | | |
| Breaking capacity at voltage | 440V | A | 72 |
| | 500V | A | 72 |
| | 690V | A | 72 |
| <hr/> | | | |
| Resistance per pole (average value) | | mΩ | 10 |
| <hr/> | | | |
| Power dissipation per pole (average value) | I _{th} | W | 4 |
| | AC-3 | W | 0.81 |
| <hr/> | | | |
| Tightening torque for terminals | min | Nm | 0.8 |
| | max | Nm | 1 |
| | min | I _{bin} | 9 |
| | max | I _{bin} | 9 |
| <hr/> | | | |
| Tightening torque for coil terminal | min | Nm | 0.8 |
| | max | Nm | 1 |
| | min | I _{bin} | 9 |
| | max | I _{bin} | 9 |
| <hr/> | | | |
| Max number of wires simultaneously connectable | | Nr. | 2 |

Conductor section

| | | | | |
|---|--|-----|-----------------|------|
| AWG/Kcmil | | | | |
| | | max | | 12 |
| Flexible w/o lug conductor section | | min | mm ² | 0.75 |
| | | max | mm ² | 2.5 |
| Flexible c/w lug conductor section | | min | mm ² | 1.5 |
| | | max | mm ² | 2.5 |
| Flexible with insulated spade lug conductor section | | min | mm ² | 1.5 |
| | | max | mm ² | 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 I_{th}

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 |

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 |
| | 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 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 |
| | | Fuse class | | RK5 |

| | | | | |
|--|--|--|--|-------------|
| Contact rating of auxiliary contacts according to UL | | | | A600 - Q600 |
|--|--|--|--|-------------|

Ambient conditions

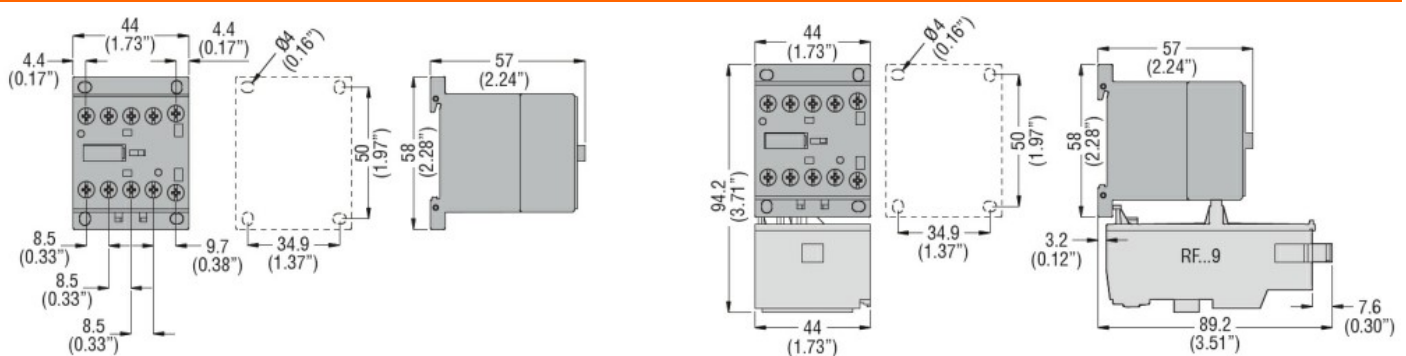
| | | | | |
|---------------------|-----------------------|-----|----|-----|
| Temperature | Operating temperature | min | °C | -50 |
| | | max | °C | +70 |
| Storage temperature | | min | °C | -60 |
| | | max | °C | +80 |

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