



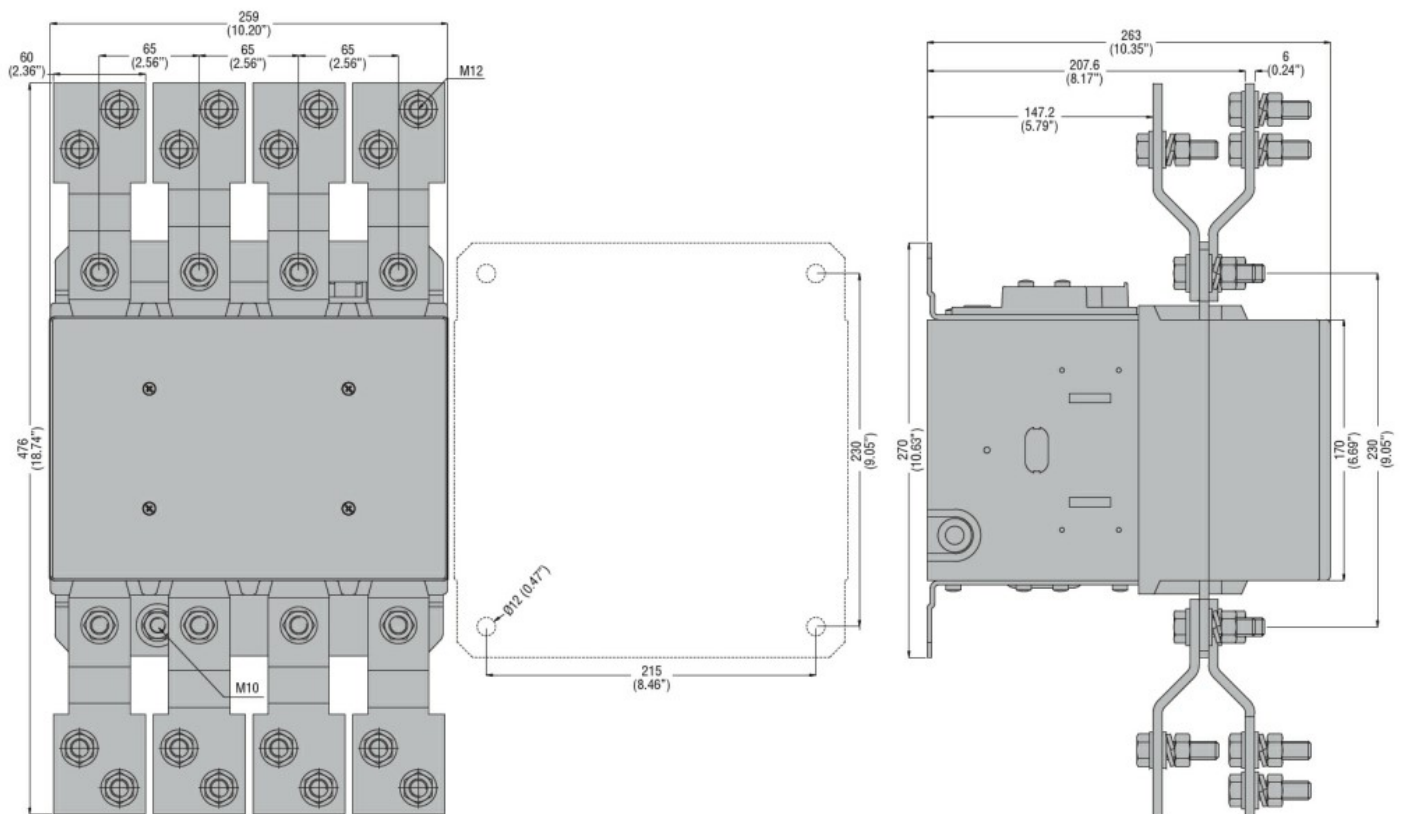
#### Contact characteristics

|                                                                                     |                                  |         |
|-------------------------------------------------------------------------------------|----------------------------------|---------|
| Number of poles                                                                     | Nr.                              | 4       |
| Rated insulation voltage $U_i$ IEC/EN                                               | V                                | 1000    |
| Rated impulse withstand voltage $U_{imp}$                                           | kV                               | 8       |
| Operational frequency                                                               | min                              | Hz 25   |
|                                                                                     | max                              | Hz 400  |
| IEC Conventional free air thermal current $I_{th} \leq 40^\circ\text{C}$            | A                                | 1000    |
| Operational current $I_e$                                                           | AC-1 ( $\leq 40^\circ\text{C}$ ) | A 1000  |
|                                                                                     | AC-1 ( $\leq 55^\circ\text{C}$ ) | A 850   |
|                                                                                     | AC-1 ( $\leq 70^\circ\text{C}$ ) | A 700   |
|                                                                                     | AC-4 (400V)                      | A 260   |
| Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )                          | 230V                             | kW 350  |
|                                                                                     | 400V                             | kW 600  |
|                                                                                     | 500V                             | kW 750  |
|                                                                                     | 690V                             | kW 1000 |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series      | 75V                              | A 800   |
|                                                                                     | 110V                             | A 460   |
|                                                                                     | 220V                             | A --    |
|                                                                                     | 330V                             | A --    |
|                                                                                     | 460V                             | A --    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series      | 75V                              | A 800   |
|                                                                                     | 110V                             | A 800   |
|                                                                                     | 220V                             | A 700   |
|                                                                                     | 330V                             | A --    |
|                                                                                     | 460V                             | A --    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series      | 75V                              | A 800   |
|                                                                                     | 110V                             | A 800   |
|                                                                                     | 220V                             | A 800   |
|                                                                                     | 330V                             | A 700   |
|                                                                                     | 460V                             | A --    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series      | 75V                              | A 800   |
|                                                                                     | 110V                             | A 800   |
|                                                                                     | 220V                             | A 800   |
|                                                                                     | 330V                             | A 750   |
|                                                                                     | 460V                             | A 700   |
| IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series | 75V                              | A 800   |
|                                                                                     | 110V                             | A 460   |

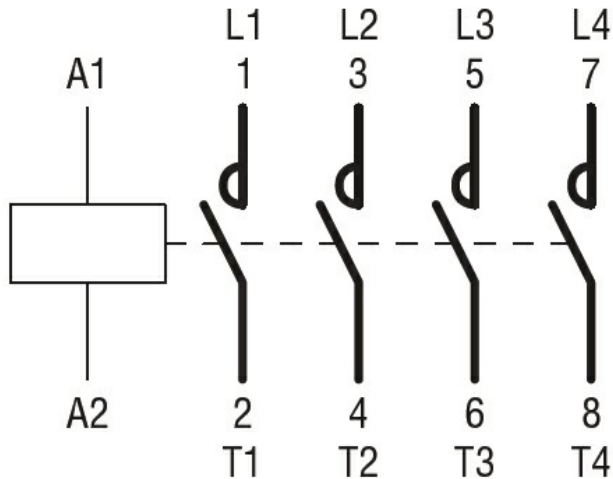
|                                                                      |                     |      |                       |
|----------------------------------------------------------------------|---------------------|------|-----------------------|
|                                                                      | 220V                | A    | --                    |
|                                                                      | 330V                | A    | --                    |
|                                                                      | 460V                | A    | --                    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series |                     |      |                       |
|                                                                      | 75V                 | A    | 800                   |
|                                                                      | 110V                | A    | 800                   |
|                                                                      | 220V                | A    | 700                   |
|                                                                      | 330V                | A    | --                    |
|                                                                      | 460V                | A    | --                    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series |                     |      |                       |
|                                                                      | 75V                 | A    | 800                   |
|                                                                      | 110V                | A    | 800                   |
|                                                                      | 220V                | A    | 800                   |
|                                                                      | 330V                | A    | 650                   |
|                                                                      | 460V                | A    | --                    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series |                     |      |                       |
|                                                                      | 75V                 | A    | 800                   |
|                                                                      | 110V                | A    | 800                   |
|                                                                      | 220V                | A    | 800                   |
|                                                                      | 330V                | A    | 650                   |
|                                                                      | 460V                | A    | 700                   |
| Short-time allowable current for 10s (IEC/EN60947-1)                 |                     | A    | 5600                  |
| Protection fuse                                                      | gG (IEC)            | A    | 1000                  |
| Making capacity (RMS value)                                          |                     | A    | 6300                  |
| Breaking capacity at voltage                                         | 440V                | A    | 6300                  |
|                                                                      | 500V                | A    | 5600                  |
|                                                                      | 690V                | A    | 5000                  |
| Resistance per pole (average value)                                  |                     | mΩ   | 0.14                  |
| Power dissipation per pole (average value)                           | Ith                 | W    | 140                   |
|                                                                      | AC-3                | W    | 56                    |
| Tightening torque for terminals                                      |                     |      |                       |
|                                                                      | min                 | Nm   | 55                    |
|                                                                      | max                 | Nm   | 55                    |
|                                                                      | min                 | Ibin | 40.6                  |
|                                                                      | max                 | Ibin | 40.6                  |
| Tightening torque for coil terminal                                  |                     |      |                       |
|                                                                      | min                 | Nm   | 1                     |
|                                                                      | max                 | Nm   | 1                     |
|                                                                      | min                 | Ibin | 0.74                  |
|                                                                      | max                 | Ibin | 0.74                  |
| Max number of wires simultaneously connectable                       |                     | Nr.  | 2                     |
| Conductor section                                                    | AWG/Kcmil           |      |                       |
|                                                                      | max                 |      | 2x 900 kcmil          |
| Power terminal protection according to IEC/EN 60529                  |                     |      | IP00                  |
| <b>Mechanical features</b>                                           |                     |      |                       |
| Operating position                                                   | normal<br>allowable |      | Vertical plan<br>±30° |
| Fixing                                                               |                     |      | Screw                 |

|                                                       |                 |                |
|-------------------------------------------------------|-----------------|----------------|
| Weight                                                | g               | 26             |
| <b>Operations</b>                                     |                 |                |
| Mechanical life                                       | cycles          | 5000000        |
| Electrical life                                       | cycles          | 700000         |
| <b>Safety related data</b>                            |                 |                |
| Performance level B10d according to EN/ISO 13489-1    |                 |                |
|                                                       | rated load      | cycles 700000  |
|                                                       | mechanical load | cycles 5000000 |
| Mirror contacts according to IEC/EN 60947-4-1 annex F |                 | Yes            |
| EMC compatibility                                     |                 | yes            |
| <b>AC coil operating</b>                              |                 |                |
| Rated AC voltage at 50/60Hz, 60Hz                     |                 |                |
|                                                       | min             | V 440          |
|                                                       | max             | V 415          |
| <b>AC operating voltage</b>                           |                 |                |
| of 50/60Hz coil powered at 50Hz                       |                 |                |
| pick-up                                               |                 |                |
|                                                       | min             | %Us 80         |
|                                                       | max             | %Us 110        |
| drop-out                                              |                 |                |
|                                                       | min             | %Us 20         |
|                                                       | max             | %Us 60         |
| of 50/60Hz coil powered at 60Hz                       |                 |                |
| pick-up                                               |                 |                |
|                                                       | min             | %Us 80         |
|                                                       | max             | %Us 110        |
| drop-out                                              |                 |                |
|                                                       | min             | %Us 20         |
|                                                       | max             | %Us 60         |
| of 60Hz coil powered at 60Hz                          |                 |                |
| pick-up                                               |                 |                |
|                                                       | min             | %Us 80         |
|                                                       | max             | %Us 110        |
| drop-out                                              |                 |                |
|                                                       | min             | %Us 20         |
|                                                       | max             | %Us 60         |
| <b>AC average coil consumption at 20°C</b>            |                 |                |
| of 50/60Hz coil powered at 50Hz                       |                 |                |
|                                                       | in-rush         | VA 400         |
|                                                       | holding         | VA 18          |
| of 50/60Hz coil powered at 60Hz                       |                 |                |
|                                                       | in-rush         | VA 400         |
|                                                       | holding         | VA 18          |
| Dissipation at holding ≤20°C 50Hz                     | W               | 18             |
| <b>DC coil operating</b>                              |                 |                |
| DC rated control voltage                              |                 |                |
|                                                       | min             | V 440          |
|                                                       | max             | V 415          |
| max                                                   |                 | V 415          |
| <b>DC operating voltage</b>                           |                 |                |
| pick-up                                               |                 |                |
|                                                       | min             | %Us 80         |
|                                                       | max             | %Us 110        |
| drop-out                                              |                 |                |

|                                     |  |                       |          |      |
|-------------------------------------|--|-----------------------|----------|------|
|                                     |  | min                   | %Us      | 20   |
|                                     |  | max                   | %Us      | 60   |
| Average coil consumption ≤20°C      |  |                       |          |      |
|                                     |  | in-rush               | W        | 400  |
|                                     |  | holding               | W        | 18   |
| Max cycles frequency                |  |                       |          |      |
| Mechanical operation                |  |                       | cycles/h | 1200 |
| Operating times                     |  |                       |          |      |
| Average time for Us control         |  |                       |          |      |
| in AC                               |  |                       |          |      |
|                                     |  | Closing NO            |          |      |
|                                     |  | min                   | ms       | 110  |
|                                     |  | max                   | ms       | 180  |
|                                     |  | Opening NO            |          |      |
|                                     |  | min                   | ms       | 60   |
|                                     |  | max                   | ms       | 100  |
| in DC                               |  |                       |          |      |
|                                     |  | Closing NO            |          |      |
|                                     |  | min                   | ms       | 110  |
|                                     |  | max                   | ms       | 180  |
|                                     |  | Opening NO            |          |      |
|                                     |  | min                   | ms       | 60   |
|                                     |  | max                   | ms       | 100  |
| UL technical data                   |  |                       |          |      |
| Rated operational voltage AC (UL)   |  |                       | V        | 600  |
| General USE                         |  |                       |          |      |
| Contactor                           |  |                       |          |      |
|                                     |  | AC current            | A        | 1000 |
| Short-circuit protection fuse, 600V |  |                       |          |      |
| Standard fault                      |  |                       |          |      |
|                                     |  | Short circuit current | kA       | 18   |
|                                     |  | Fuse rating           | A        | 1500 |
|                                     |  | Fuse class            |          | L    |
| 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