



- 400A at 120VDC
- Max. switching current = 4000A
- OFC contacts sealed in inert gas
- Magnet arc blowout
- IP67 fully sealed design
- Auxiliary contact option
- Male or Female power terminals



RoHS  
Compliant ✓

### Contacts

|   |  |
|---|--|
| Contact arrangement                     | SPST-NO-DM   |
| Contact material                        | Oxygen Free Copper ( Cu. C10200)                               |
| Max. switching voltage                  | DC 120VDC (DLVC400M)   |
| Rated load (resistive, cos φ=1)         | DC1 400A 80VDC   |
| Max continuous thermal current          | DC1 400A, 500A with 300mm <sup>2</sup> , or larger, conductors |
|   | 30s 600A   |
| Terminal temperature rise above ambient | <70°C. IEC EN60947 GB14/14048.4                                |
| Max switching current                   | 1 time only 4000A @ 48VDC                                      |
| Contact voltage drop                    | max. 160mV @ 400A  |
| Auxiliary contact (when fitted)         | arrangement SPST-NO (1 Form A)                                 |
|   | max. current 2A @ 24VDC / 3A @ 125VAC                          |
|   | min. current 100mA @ 8V  |

### Coil

|                         |  |
|-------------------------|--|
| Nominal voltage         | DC 12, 24, 48, 60VDC - see Table 1, page 2 |
| Rated power consumption | hold 12 ~ 13.5W                            |

### Insulation

|                       |   |
|-----------------------|---|
| Insulation resistance | initial 100MΩ (Min.) @500VDC                              |
|                       | life end 50MΩ (Min.)                                      |
| Dielectric strength   | coil to contact 2200Vrms / <1mA / 1 min (at sea level)    |
|                       | contact to contact 2200Vrms / <1mA / 1 min (at sea level) |

### General Data

|                        |                                       |
|------------------------|---------------------------------------|
| Operating time at 20°C | max. 40ms                             |
| Release time at 20°C   | max. 10ms                             |
| Bounce time at 20°C    | max. 5ms                              |
| Electrical life        | 9,000 operations @ 60VDC (see Fig. 1) |
| Mechanical life        | 3 x 10 <sup>5</sup>                   |

### Environmental

|                          |  |
|--------------------------|--|
| Environmental protection | IP67   |
| Ambient temperature      | operating -40 to +85°C                                 |
| Relative humidity        | 20 to 90%RH  |
| Shock resistance         | 20G peak, 11ms 1/2 sine                                |
| Vibration resistance     | 20G sine peak (80 to 2000Hz)                           |
| Dimensions               | L x W x H 59.6 x 58.2 x 93.8mm (approx.) - see Fig. 4. |
| Weight                   | 650g   |

### Ordering Code

D L V C 4 0 0 - 4 0 6 1 - S 8 - 1 0 1 2 - R 1

#### Series

DLVC400: standard  
DLVC400M: 120VDC with  
magnet arc blowout

#### Coil code:

See table 1

#### Contact material

40: Cu. C10200

#### Contact arrangement

61: SPST-NO  
71: SPST-NO + Auxiliary

#### Mounting & terminations

Bottom mount  
B8: M8 male stud power terminals  
B9: M8 female power terminals  
Side mount  
S8: M8 male stud power terminals  
S9: M8 female power terminals

#### Coil wire & auxiliary wire (when fitted) length

R: 390mm  
T: 150mm

#### Coil wire & auxiliary contact termination

1: None (bare ends)  
3: Mini-fit female (see Fig. 3)

## Coil Data

### Table 1

| Coil code | Nominal voltage<br>(VDC) U <sub>s</sub> | Coil operating<br>range<br>(V)         | Must operate<br>voltage max.<br>VDC) | Must release<br>voltage min. (VDC) | Coil Resistance<br>± 10% Ω @ 20°C |
|-----------|---|--|--------------------------------------|------------------------------------|-----------------------------------|
| 1012      | 12                                      | 0.85U <sub>s</sub> ~ 1.2U <sub>s</sub> | 9                                    | 1                                  | 11                                |
| 1024      | 24                                      | 0.85U <sub>s</sub> ~ 1.2U <sub>s</sub> | 18                                   | 2                                  | 44                                |
| 1048      | 48                                      | 0.85U <sub>s</sub> ~ 1.2U <sub>s</sub> | 36                                   | 4                                  | 170                               |
| 1060      | 60                                      | 0.85U <sub>s</sub> ~ 1.2U <sub>s</sub> | 45                                   | 5                                  | 275                               |

Other coils available upon special request. MOQ's will apply.

## Electrical Performance

**Fig. 1**

Electrical Life:

Test Current: 400A  
Ambient Temp: 20°C  
Test Interval: 5.4s OFF, 0.6s ON

Test Voltage: 48VDC, 60VDC (DLVC400)  
Electrical Life: 9000 ops

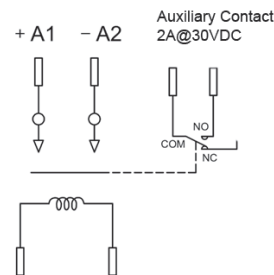
Test Voltage: 80VDC  
Electrical Life: 8000 ops\*

Test Voltage: 120VDC (DLVC400M)  
Electrical Life: 3000 ops

\* Extrapolated data

## Connection Diagram

**Fig. 2**

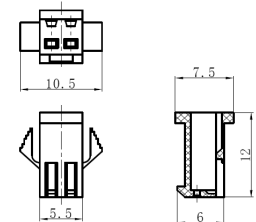


NB:  
DLVC400 - Non-polarised power terminals  
DLVC400M - Power terminals are polarised

## Mini-Fit Connector

**Fig. 3**

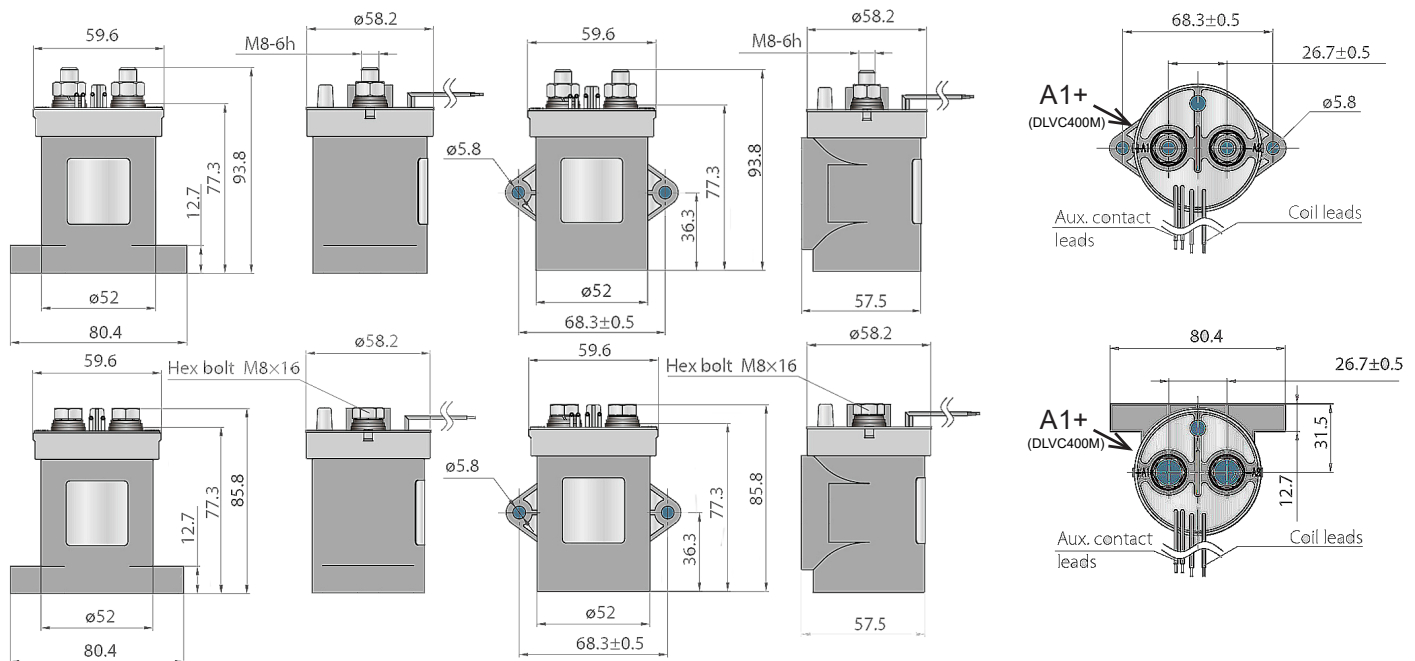
Optional connector for coil and auxiliary contact.



Dimensions in mm

## Dimensions

**Fig. 4**



Notes:

- 1: Polarity sensitive type, DLVC400M: Observe contact polarity as indicated. Contactor life will be severely reduced if incorrectly connected.
- 2: Nominal dimensions in mm.
- 3: Tolerances (nominal), <10mm:  $\pm 0.3\text{mm}$ , 10 ~ 50mm:  $\pm 0.6\text{mm}$ , >50mm:  $\pm 1.0\text{mm}$ .
- 4: Power contact (M8) nut torque = 8 ~ 10Nm, Installation/mounting torque = 1.7 ~ 3.5Nm.
- 5: Coil wire length and terminations can be customised upon request.
- 6: Coil and auxiliary contact wires: Teflon insulated UL1887 20AWG
- 7: Main contacts should be connected with cable section of more than 240mm<sup>2</sup>, if used at maximum rated current.