



- 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



## 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 (VDC) $U_s$	Coil operating range (V)	Must operate voltage max. (VDC)	Must release voltage min. (VDC)	Coil Resistance $\pm 10\% \Omega @ 20^\circ\text{C}$
1012	12	$0.85U_s \sim 1.2U_s$	9	1	11
1024	24	$0.85U_s \sim 1.2U_s$	18	2	44
1048	48	$0.85U_s \sim 1.2U_s$	36	4	170
1060	60	$0.85U_s \sim 1.2U_s$	45	5	275

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

### Electrical Performance

Fig. 1

Electrical Life:

Test Current: 400A  
Ambient Temp:  $20^\circ\text{C}$   
Test Interval: 5.4s OFF, 0.6s ON

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

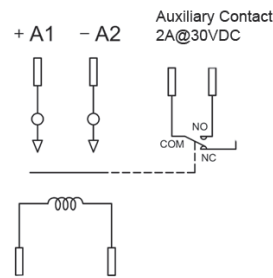
Test Voltage: 80VDC  
Electrical Life: 8000 ops\*

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

\* Extrapolated data

### Connection Diagram

Fig. 2

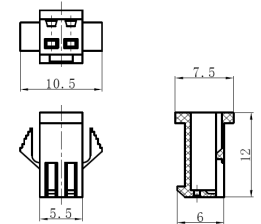


NB:  
DLVC400 - Non-polarised power terminals  
DLVC400M - Power terminals are polarised

### Mini-Fit Connector

Fig. 3

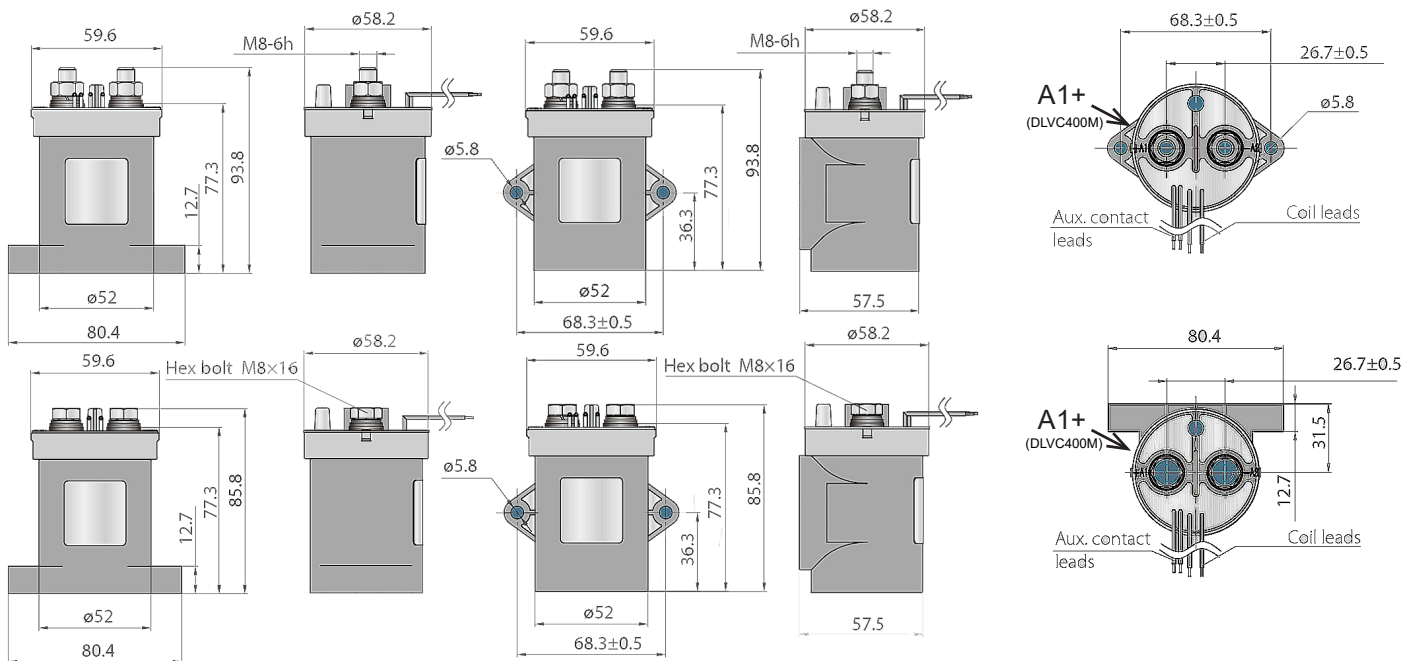
Optional connector for coil and auxiliary contact.



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), <math><10\text{mm}</math>:  $\pm 0.3\text{mm}$ ,  $10 \sim 50\text{mm}$ :  $\pm 0.6\text{mm}$ ,  $>50\text{mm}$ :  $\pm 1.0\text{mm}$ .
- 4: Power contact (M8) nut torque =  $8 \sim 10\text{Nm}$ , Installation/mounting torque =  $1.7 \sim 3.5\text{Nm}$ .
- 5: Coil wire length and terminations can be customized upon request.
- 6: Coil and auxiliary contact wires: Teflon insulated UL1887 20AWG
- 7: Main contacts should be connected with cable section of more than  $240\text{mm}^2$ , if used at maximum rated current.