



- 500A Continuous
- Max. breaking current = 2000A
- Magnet arc blowout
- Auxiliary contact
- Male or female power terminals
- Side or bottom mount
- Available with PWM coil economiser

### Contacts

Contact arrangement	SPST-NO-DM
Contact material	Oxygen Free Copper ( Cu. C10200)
Max. switching voltage	DC 1000VDC (current dependent - see fig. 1)
Rated load (resistive, cos φ=1)	DC1 200A
Max continuous thermal current	DC1 500A with 300mm <sup>2</sup> , or larger, conductors
	30s 600A
Instant peak current	max. 5000A / 10msec
Max switching current	1 time only 2000A @ 320VDC
Terminal temperature rise above ambient	<70°C. IEC EN60947 GB14/14048.4
Contact voltage drop	max. 80mV @ 200A
Auxiliary contact (when fitted)	arrangement SPST-NO (1 Form A)
	max. current 2A @ 24VDC / 3A @ 125VAC
	min. current 100mA @ 8V

### Coil

Nominal voltage	DC 9 ~ 36VDC, 32 ~ 95VDC - see Tables 1 & 2
Rated power consumption	hold 2W approx.

### Insulation

Insulation resistance	initial >1000MΩ @1000VDC
	life end 50MΩ (Min.)
Dielectric strength	coil to contact 3000Vrms / <1mA / 1 min (at sea level)
	contact to contact 1500Vrms / <1mA / 1 min (at sea level)

### General Data

Operating time at 20°C	max. 30ms
Release time at 20°C	max. 10ms
Bounce time at 20°C	max. 5ms
Electrical life	at rated load 10,000 operations @ 270VDC see page 2
Mechanical life	3 x 10 <sup>5</sup>

### Environmental

Ambient temperature	operating -40 to +85°C
Relative humidity	20 to 90%RH
Shock resistance	100G peak, 11ms 1/2 sine, peak
Vibration resistance	20G sine peak (80 to 2000Hz)
Dimensions	see Figs. 4 & 5 (Page 3)
Weight	approx. >450g (will vary according to option)



### Ordering Code

D H V C 2 0 0 - 4 0 6 1 - S 8 - 1 2 3 6 - R 1											
<u>Series</u>				<u>Coil code:</u>							
				See tables 1 & 2							
<u>Contact material</u>											
40: Cu. C10200											
<u>Contact arrangement</u>											
61: SPST-NO*											
71: SPST-NO + Auxiliary*											
81: SPST-NO											
91: SPST-NO + Auxiliary											
* Polarized - see Page 2											
<u>Mounting &amp; terminations</u>											
Bottom mount											
B8: M8 male stud power terminals											
B9: M6 female power terminals											
Side mount											
S8: M8 male stud power terminals											
S9: M6 female power terminals											
<u>Coil wire &amp; auxiliary wire (when fitted) length</u>											
R: 390mm											
T: 150mm											
<u>Coil wire &amp; auxiliary contact termination</u>											
1: None (bare ends)											
3: Mini-fit female (see Fig. 3)											
▲ NB: UL ratings may differ and not all variants are UL approved. Contact Durakool for more information.											

**Coil Data (with PWM economiser)**

**Table 1.**

Coil code	Nominal voltage (V DC) $U_s$	Coil operating range (V DC)	Must operate voltage max. (V DC)	Must release voltage (V DC)	Starting current (A)	Maintain (hold) current (A)
1236	9 ~ 36	9 ~ 36	8 ~ 9	5.5 ~ 7.0	3.8	0.18 @ 12V 0.09 @ 24V
3295	32 ~ 95	32 ~ 95	31 ~ 32	18.0 ~ 20.0	1.4	0.03 @ 48V

PWM Coil economiser: no additional coil surge suppression required. Coil terminals are polarized. DHVC200 with coil code type 3295 is not UL approved.

**Coil Data (no PWM economiser)**

**Table 2.**

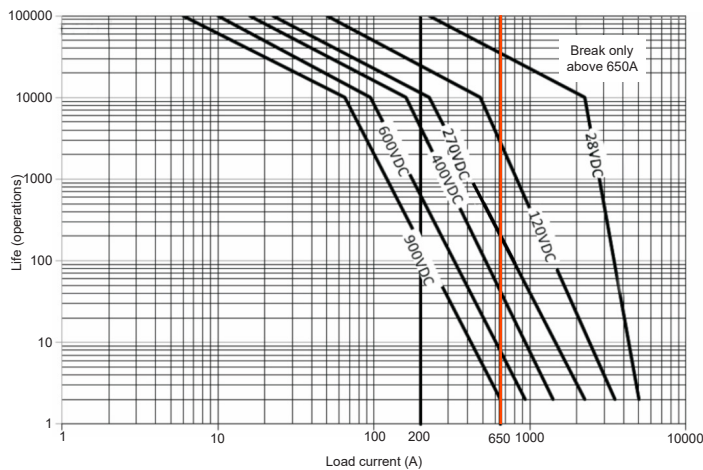
Coil code	Nominal voltage (V DC) $U_s$	Coil operating range (V DC)	Must operate voltage (V DC)	Must release voltage (V DC)	Coil power (W)
1012	12	10.2 ~ 14.4	≤ 9.0	≥ 1.0	12 ~ 15
1024	24	20.4 ~ 28.8	≤ 18.0	≥ 2.0	12 ~ 15
1048	48	40.8 ~ 57.6	≤ 36.0	≥ 4.0	12 ~ 15

Only available with polarized power terminals - contact codes "61" & "71". DHVC200 types without economiser are not UL approved.

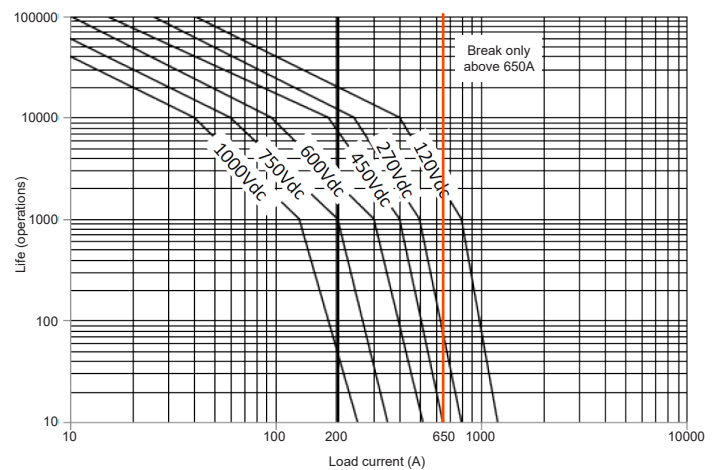
## Electrical performance

**Fig. 1.**

Electrical life: Resistive load, polarized types only



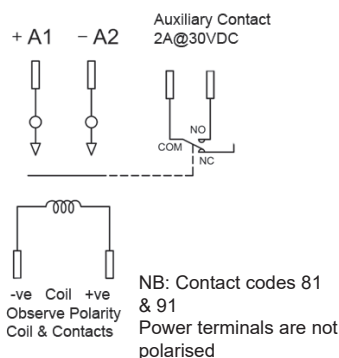
Electrical Life: Resistive load, non-polarized types only



Recommended conductor size of 95mm<sup>2</sup> and terminal temperature rise maximum in accordance with ISO (EN) 60947.1 70°C. Carry current is highly dependent upon conductor size. With 95mm<sup>2</sup>: 200A continuous, 300A 60m, 400A 20m, 800A 30s, 2000A 0.6s. Life estimates are based on tests and extrapolated data. The user is advised to confirm the performance in their application.

## Connection Diagram

**Fig. 2.**

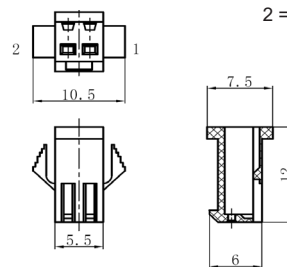


## Optional Mini-fit Connector

**Fig. 3.**

Connector for coil and auxiliary contact (2 x)

- 1 = Coil lead +ve terminal (red)
- 2 = Coil lead -ve terminal (black)

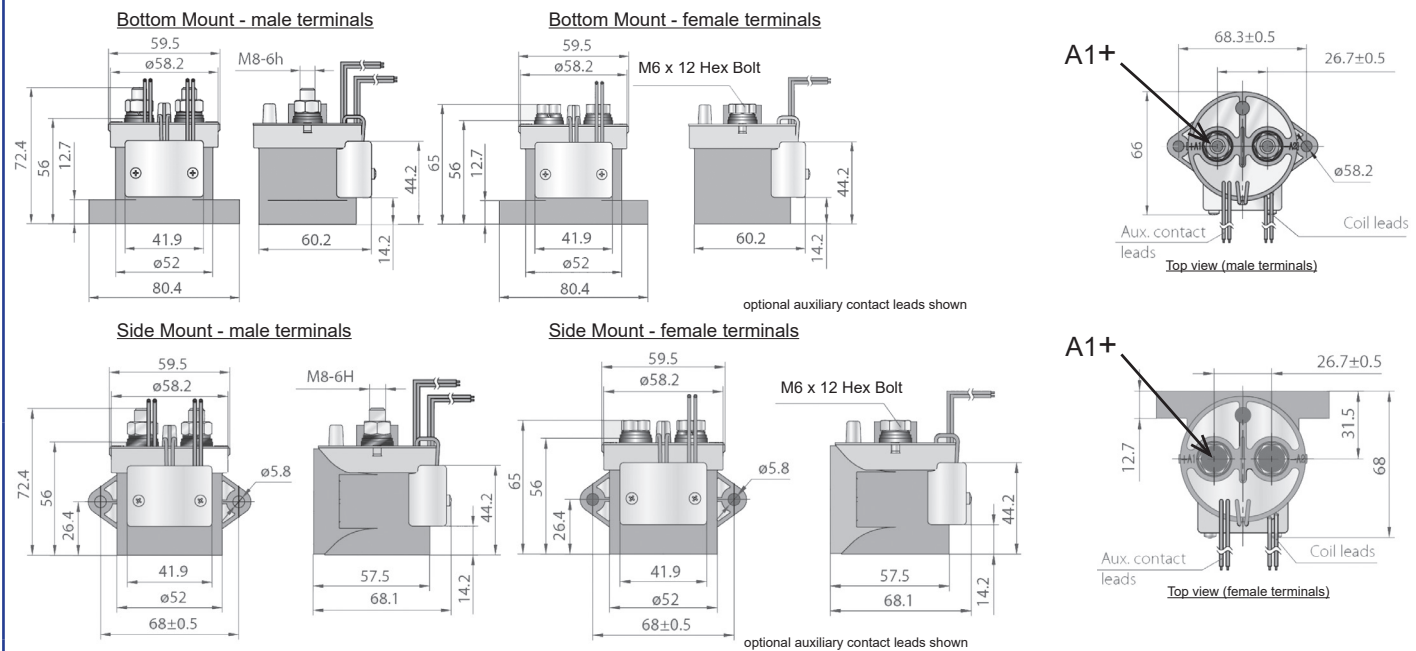


Fitted socket type = SM-2A-HW  
Fitted terminal type = SMY-HW

Dimensions in mm

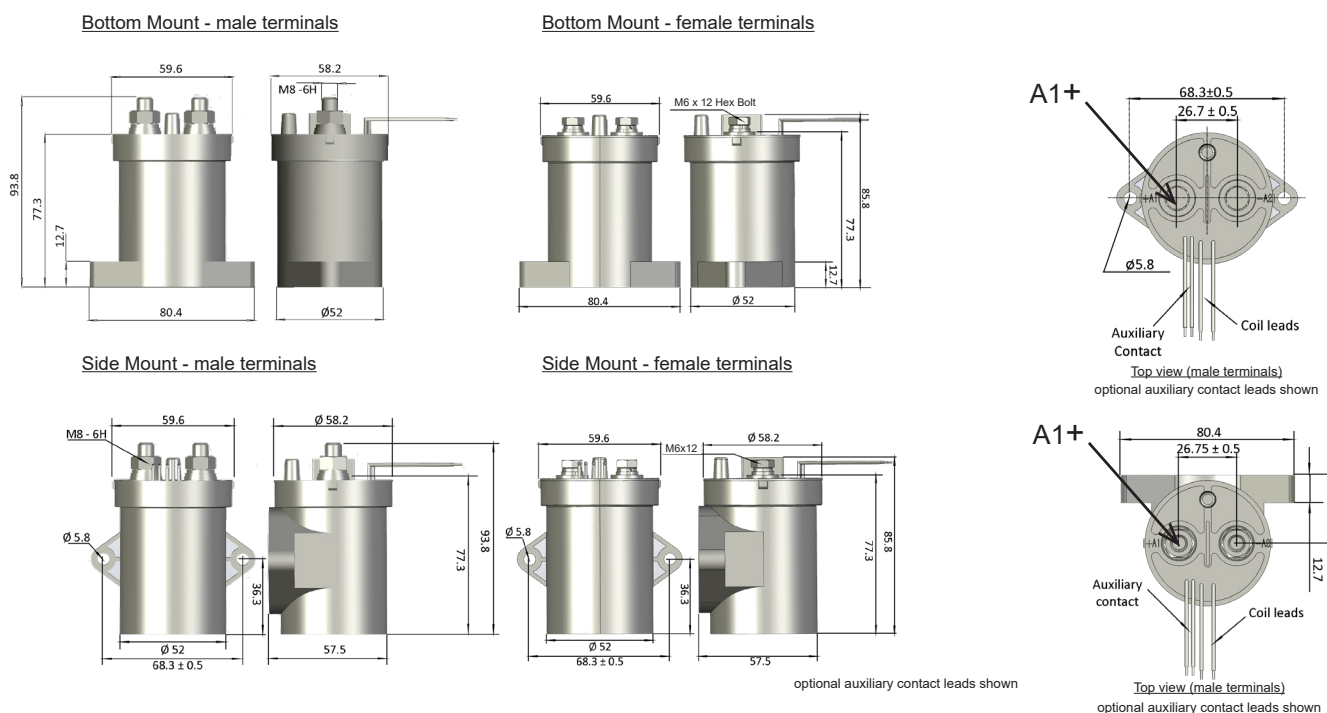
### Dimensions - PWM type (with economiser)

**Fig. 4**



### Dimensions - No PWM type (no economiser)

**Fig. 5**



Notes:

- 1: Polarity sensitive types 61 & 71: Observe contact polarity as indicated. Contactor life will be severely reduced if incorrectly connected.
- 2: The maximum make current is 650A to avoid contact welding.
- 3: Nominal dimensions in mm. 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, Power Contact (M6) nut torque = 6 ~ 8Nm; 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 250mm<sup>2</sup>, if used at maximum rated current.