



- HVDC 300A carry current
- Max. switching current = 2000A
- Contacts sealed in inert gas
- Magnet arc blowout
- Non-polarised power terminals
- Ceramic arc chamber
- Female M6 power terminals



RoHS  
Compliant ✓

### Contacts

Contact arrangement	SPST-NO-DM	
Contact material	Oxygen Free Copper	
Max. switching voltage	AC/DC	1000VDC
Rated load (resistive, $\cos \varphi=1$ )	DC1	300A 750VDC
Max. continuous thermal current at 23°C ambient temperature	60mins	450A (with 100mm <sup>2</sup> conductors)
	20mins	600A (with 100mm <sup>2</sup> conductors)
	30s	900A (with 100mm <sup>2</sup> conductors)
	0.6s	1000A
Max switching current	1 time only	2000A 750VDC (break only)
Initial contact volt drop	max.	≤ 150mV @ 300A

### Coil

Nominal voltage (see page 2)	DC	12VDC, 24VDC
Rated power consumption	6.5W	

### Insulation

Insulation resistance	initial	≥ 1000MΩ (Min.) (1000VDC, 1 minute)
Dielectric strength	coil to contact	4000Vrms / 10mA / 1 min (at sea level)
	contact to contact	3000Vrms / 10mA / 1 min (at sea level)

### General Data

Operate time at 20°C	max.	≤ 30ms (excluding bounce time)
Bounce time	max.	≤ 5ms
Release time	max.	≤ 10ms
Electrical life	ops.	Voltage and current dependent - see fig. 1
		300A / 450VDC ≥ 1000 operations
		300A / 750VDC ≥ 500 operations
Mechanical life	ops.	>2 x 10 <sup>5</sup>

### Environmental

Ambient temperature	operating	-40 to +85°C
Relative humidity		5 to 85%RH
Shock resistance	impact	>50G, 490m/s <sup>2</sup> 6ms 1/2 sine
	stability (malfunction <10μs)	On: 196m/s <sup>2</sup> (20G)
		Off: 147m/s <sup>2</sup> (10G)
Vibration resistance		>5G, 49m/s <sup>2</sup> , 10Hz ~ 500Hz
Dimensions	L x W x H	84.5 x 42.5 x 73.5mm (max.)
Weight	approx.	500g

### Ordering Code

C H V - 3 0 1    12VDC Coil - see Table 1

C H V - 3 0 2    24VDC Coil - see Table 1

### Coil Data

Table 1

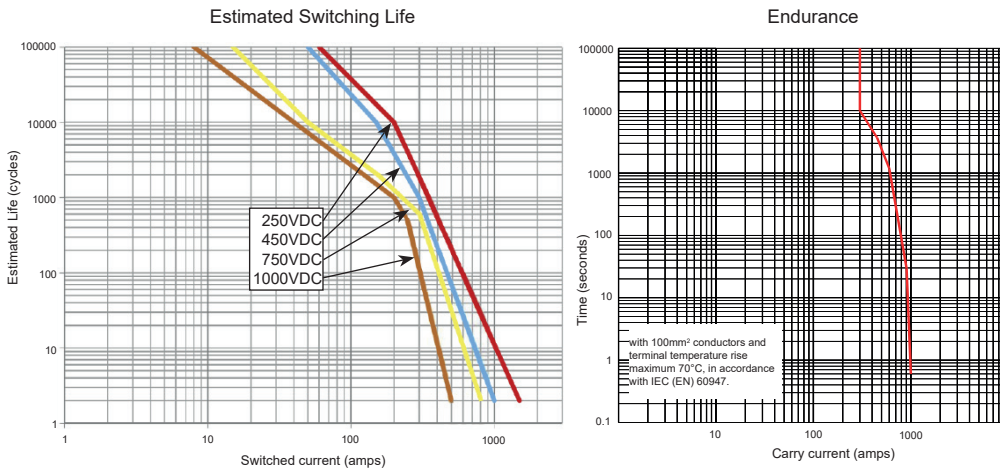
Order code	Nominal voltage (VDC)	Must operate voltage max. (VDC)	Max. allowable voltage (VDC)	Must release voltage min. (VDC)	Nominal Current ±10% (A)	Rated Coil Power
CHV-301	12	9	16	1	0.5	6.5W
CHV-302	24	18	32	2	0.25	

For coil back EMF suppression, please use a varistor with a voltage rating 1.5x to 2x the rated coil voltage. Diode is not recommended.

Other coils available upon special request.

### Electrical Performance

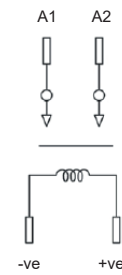
Fig. 1



Estimates are based on tests and extrapolated data. The user is advised to confirm the performance in their application.

### Circuit Diagram

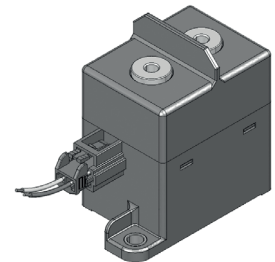
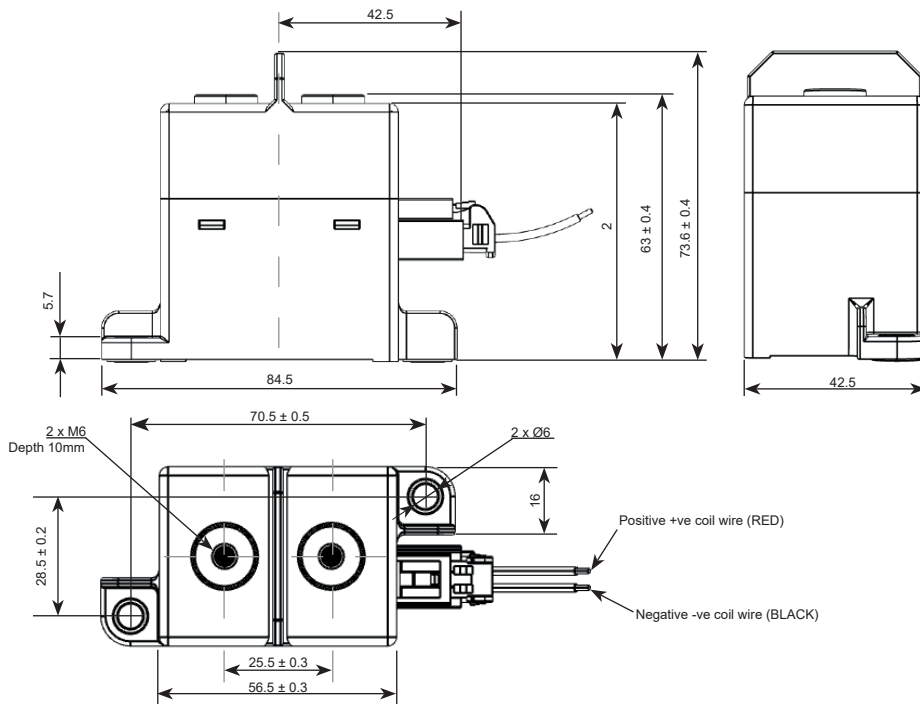
Fig. 2



Contact terminals are not polarised.  
Coil terminals are polarised.

### Dimensions

Fig. 3



Female Power Terminals  
Recommended Terminal Screws (not supplied):  
M6 x 1 x 10  
M6 spring washer  
M6 flat washer

Minimum Conductor: ≥100mm<sup>2</sup>.

Torque settings  
Terminals: 6 ~ 8Nm  
Base Mounting: 3 ~ 4Nm

- Notes:
- Note coil polarity
  - Nominal dimensions in mm.
  - Tolerances (nominal), <10mm: ± 0.3mm, 10 ~ 50mm: ± 0.6mm, >50mm: ± 1.0mm.
  - Coil wire length = 400mm
  - Coil wire length and terminations can be customized upon request.