



- HVDC 1000A carry current (600s)
- Max. switching current = 3000A / 800VDC
- Contacts sealed in inert gas
- Magnet arc blowout
- Non-polarized power terminals
- Ceramic arc chamber
- Dual coil economiser as standard



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	800A 1000VDC (break only above 350A)
Max. continuous thermal current at 23°C ambient temperature	600s	1000A (with 300mm <sup>2</sup> conductors)
	4s	3000A (with 300mm <sup>2</sup> conductors)
	10ms	8000A (with 300mm <sup>2</sup> conductors)
Max switching current	(1 time only)	3000A / 800VDC
Initial contact volt drop	max.	240mV @ 800VDC

### Coil

Nominal voltage (see page 2)	DC	12VDC, 24VDC (with dual coil economiser)
Rated power consumption	hold	<9W

### Insulation

Insulation resistance	initial	≥ 1000MΩ (Min.) (1500VDC, 1 minute)
Dielectric strength	coil to contact	3000Vrms / ≤1mA / 1 min (at sea level)
	between main contacts	4000Vrms / ≤1mA / 1 min (at sea level)

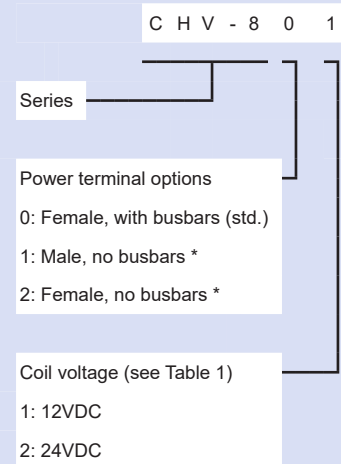
### General Data

Operate time at 20°C	max.	50ms
Release time at 20°C	max.	30ms
Bounce time at 20°C	max.	10ms
Electrical life (On: 1s / Off: 9s)	300A 750VDC	≥ 6000 ops.
	600A 750VDC	≥ 600 ops.
	600A 1000VDC	≥ 150 ops
Electrical life	ops.	Voltage and current dependent - see also fig. 1
Mechanical life	ops.	≥ 2 x 10 <sup>5</sup>

### Environmental

Ambient temperature	operating	-40 to +85°C
Relative humidity		5 to 85% RH (No icing, no condensation)
Altitude		≤4000m (derate by 0.83 between 3000 & 4000m)
Shock resistance	impact	>50G, 590m/s <sup>2</sup>
	stability (malfunction <10μs)	On: >20G, 196m/s <sup>2</sup> , 11ms ½ sine
		Off: >10G, 98m/s <sup>2</sup> , 11ms ½ sine
Vibration resistance	sine wave	>5G, 49m/s <sup>2</sup> , 10Hz ~ 500Hz (malfunction <10μs)
Dimensions	L x W x H	145.2 x 66.6 x 132.8mm (max.)
Weight	approx.	1800g

### Ordering Code



\* Consult factory

### Coil Data

Table 1

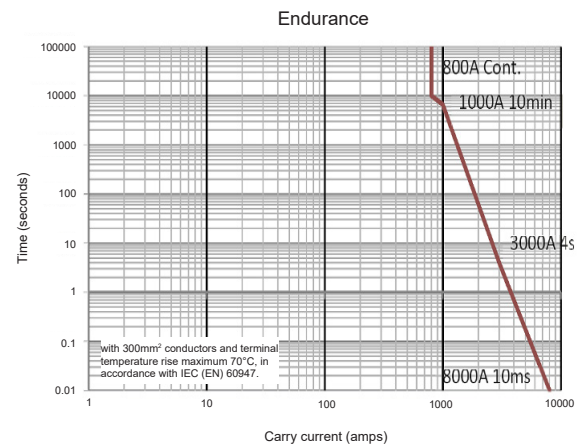
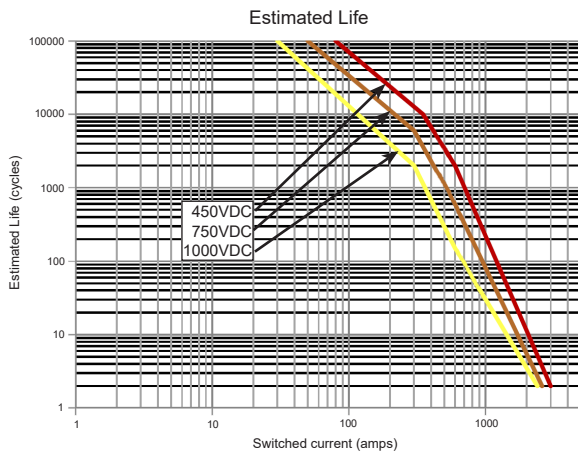
Order code	Nominal voltage (VDC)	Must operate voltage max. (VDC)	Max. allowable voltage (VDC)	Must hold voltage max.* (VDC)	Must release voltage min. (VDC)	Inrush Current ±10% (A)	Hold Current ± 10%(A)	Rated Coil Power
CHV-801	12	9	16	7.8	1.0	4.2	0.75	9W (Hold)
CHV-802	24	18	32	15.6	2.0	2.1	0.375	50W, 0.2s (Operate)

Twin coil economiser standard. No additional coil back emf suppression required. Other coils available upon special request.

\* Max. Non-release voltage @ 85°C and max. continuous current load, pre-energized at 1.1Un

### Electrical Performance

Fig. 1



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

The above data is tested at 85°C ambient temperature.

### Dimensions

Busbar terminals (standard)

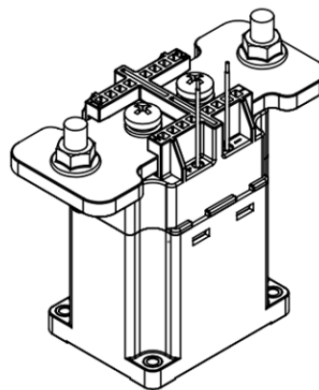
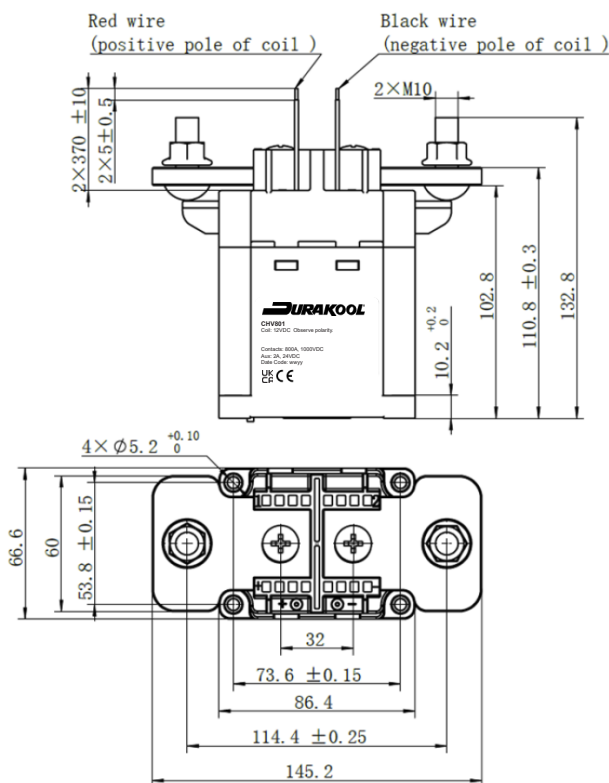
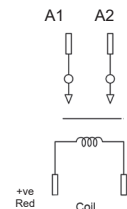


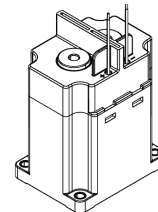
Fig. 2

### Circuit Diagram

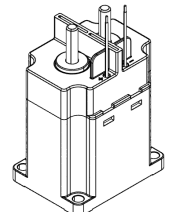
Fig. 3



Contact terminals are not polarized.  
Coil terminals are polarised.



Female terminals (consult factory)



Male stud terminals (consult factory)

#### Notes:

- Note coil polarity
- Nominal dimensions in mm.
- Tolerances (nominal), <10mm: ± 0.3mm, 10 ~ 50mm: ± 0.6mm, >50mm: ± 1.0mm.
- Coil wire length = 370mm ± 10mm
- Recommended minimum conductor: 300mm<sup>2</sup>  
Preferred conductor: 320mm<sup>2</sup>
- Torque settings  
Terminals: 9.0-12.0Nm  
Base Mounting: 1.8 to 3.5Nm