CHV1000P Series

HVDC Contactor 1000A / 1500VDC

*image is for illustrative purposes. Please refer to datasheet for detail.

- HVDC 2000A carry current (10s)
- Max. switching current = 2000A / 1000VDC
- Contacts sealed in inert gas
- Magnet arc blowout
- Non-polarised power terminals
- Ceramic arc chamber
- Dual coil economiser as standard
- Auxiliary contact as standard

CE UK CA cULus E305753 RoHS Compliant

Contacts		
Contact arrangement		SPST-NO-DM
Contact material		Oxygen Free Copper
Max. switching voltage		1500VDC
Rated load	DC1	1000A 1500VDC
Max. continuous thermal current	15min	1200A
	3min	1100A
	10s	2000A
	15ms	8000A
Max. switching current	1 time only	2000A 1000VDC
Initial contact resistance	max.	0.3mΩ @ 20A / 6VDC
Auxiliary Contact	arrangement	SPST-NO (1 Form A)
	max. current	2A @ 24VDC
	min. current	5mA @ 12VDC
	resistance	≤300mΩ
Coil		
Nominal voltage (see page 2)		12VDC, 24VDC
Rated power consumption	hold	<5W
Insulation		
Insulation resistance	Initial (min.)	≥1000MΩ, 1000VDC, 1 min*
Dielectric strength	coil to contact	4000Vrms / ≤10mA / 1 min*
	open contacts	4000Vrms / ≤10mA / 1 min*
General data		
Operate time at 20°C	max.	50ms
Bounce time at 20°C	max.	10ms
Release time at 20°C	max.	30ms
Electrical life (1s on/ 1s off)		Voltage and current dependant - see fig 1.
Mechanical life		≥ 2 x 10^5 ops.
Environmental		
Environmental seal	power contacts	IP67
Ambient temperature	operating	-40 to 85°C
Relative humidity		5 to 85%RH
Altitude		≤4000m
Shock resistance	function	20G peak x-y axis, 10G peak z axis, 11ms ½ sine
	destructive	50G peak, 6ms ½ sine
Vibration resistance	(malfunction <10µs)	10Hz ~ 55Hz, single amplitude 1.5mm 55Hz ~ 2000Hz, 5G
Dimensions	L x W x H	104.0 x 70.0 x 108.1 mm
Weight	approx.	1100g

Ordering code

C H V 1 0 0 1 P

Series

Power Terminal Options
0: Female M8 (standard)

Coil Voltage (see table 1)
1: 12VDC
2: 24VDC

Version
P: Power

Notes:
1: All parameters, unless otherwise specified, are measured at ambient temperature of 23°C.
2: Product can be oriented in any position.
3: Contacts are not polarised
4: Coil is polarised

*6000Vrms / ≤1mA/ 2s

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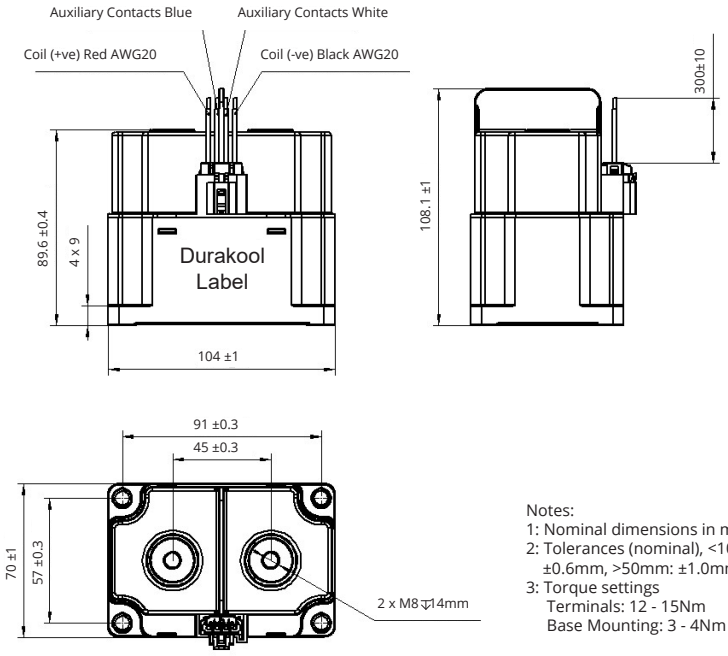
Coil data — table 1

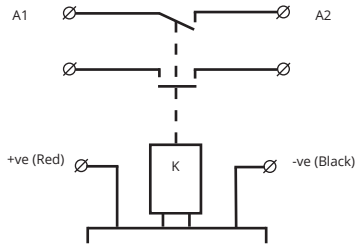
Coil code	Nominal coil voltage (VDC)	Must operate voltage max. (VDC)	Max. allowable voltage (VDC)	Must release voltage min. (VDC)	Making current (±10%) (A)	Holding Current (±10%) (A)	Rated coil power (W)	
							Operate	Hold
CHV1001P	12.0	8.0	16.0	1.2	4.2	0.42	50.0 0.3s	5.0
CHV1002P	24.0	16.0	32.0	2.4	2.1	0.21		
Dual coil product has been configured with coil surge absorption circuit, engineers do not need to configure.								

Dimensions (mm) — fig. 1

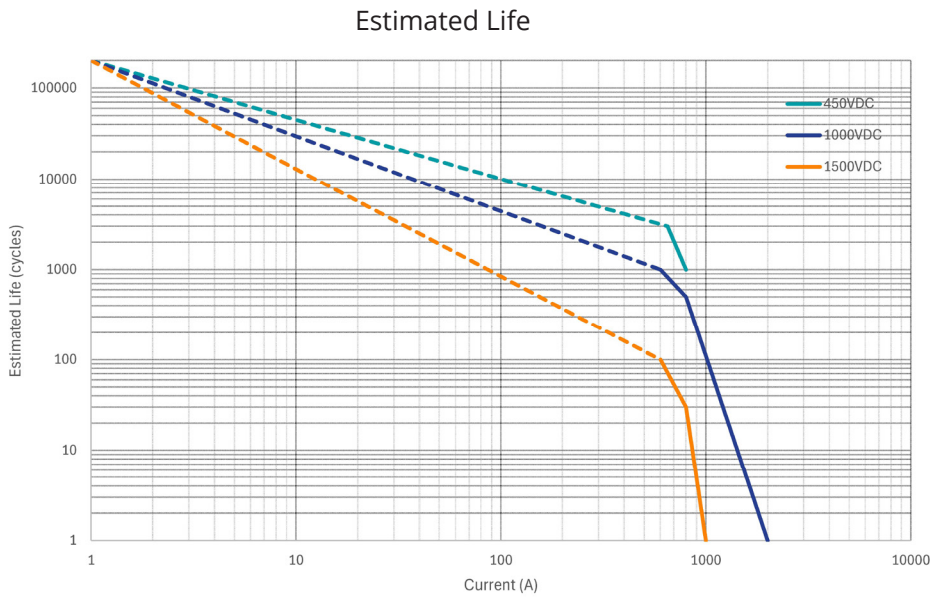


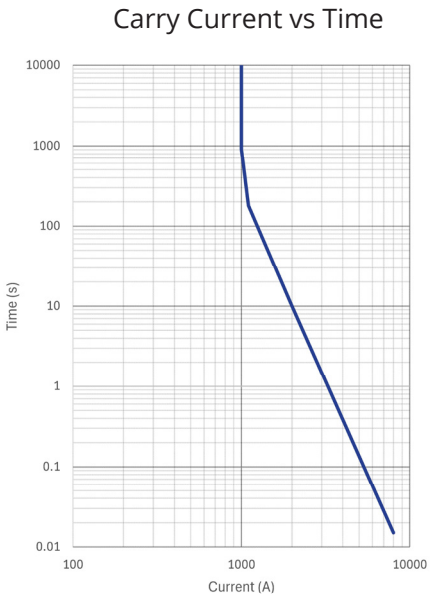
Notes:
1: Nominal dimensions in mm.
2: Tolerances (nominal), <10mm: ±0.3mm, 10 ~ 50mm: ±0.6mm, >50mm: ±1.0mm.
3: Torque settings
Terminals: 12 - 15Nm
Base Mounting: 3 - 4Nm

Circuit diagram — fig. 2



Electrical perfomance - Life and Endurance — fig. 3





Notes:
1. Electrical performance estimates are based on tests and extrapolated data (extrapolated data can be seen with dotted line). The user is advised to confirm the performance in their application.
2. Carry current data was tested at 85°C ambient temperature with bus bar ≥650mm². The data is for reference only and should not be used to select fuses directly.
3. Dual coil economiser as standard.