



- HVDC 20A carry current
- Max. switching voltage = 1500VDC
- Contacts sealed in inert gas
- Magnet arc blowout
- Non-polarised terminals
- Ceramic arc chamber
- Industry standard QC terminals



Contacts

Contact arrangement	SPST-NO-DM
Contact material	Oxygen Free Copper
Max. switching voltage	1500VDC
Rated load (resistive, $\cos \varphi=1$)	DC1 20A 1500VDC
Max. continuous thermal current at 23°C ambient temperature	1hr 30A (with $\geq 4\text{mm}^2$ conductors)
	20m 40A (with $\geq 4\text{mm}^2$ conductors)
	30s 80A (with $\geq 4\text{mm}^2$ conductors)
	10s 120A
	0.6s 200A
Initial contact volt drop	max. 80mV @20A

Coil

Nominal voltage (see page 2)	DC 12VDC, 24VDC
Rated power consumption	3W

Insulation

Insulation resistance	initial	1000M Ω (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.	$\leq 30\text{ms}$ (excluding bounce time)
Bounce time	max.	$\leq 5\text{ms}$
Release time	max.	$\leq 10\text{ms}$
Electrical life	40A / 1500VDC.	≥ 10000 operations (make)
	15A / 1500VDC	≥ 6000 operations (make and break) ¹
		¹ 1s ON / 9s OFF
Mechanical life	ops.	$>2 \times 10^5$

Environmental

Ambient temperature	operating	-40 to +85°C
Relative humidity		5 to 85%RH
Shock resistance	impact	$>50\text{G}$, 590m/s ² 6ms 1/2 sine
	stability (malfunction $<10\mu\text{s}$)	On: 196m/s ² ($>20\text{G}$)
		Off: 98m/s ² ($>10\text{G}$)
Vibration resistance		$>5\text{G}$, 49m/s ² , 10Hz ~ 500Hz
Dimensions	L x W x H	78 (over mounting flange) x 40.5 x 48.2mm (max.)
Weight	approx.	160g

Ordering Code

C H V - 2 1 12VDC Coil - see Table 1

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

Coil Data

Table 1

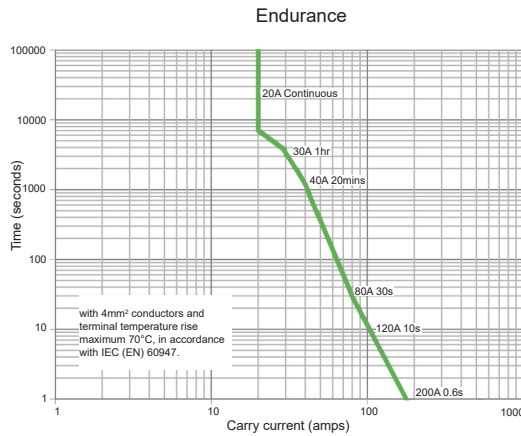
Order code	Nominal voltage (VDC)	Must operate voltage max. (VDC)	Max. allowable voltage (VDC)	Must release voltage min. (VDC)	Rated Current ±10% (A)	Rated Coil Power
CHV-21	12	9	16	1	0.25	3W
CHV-22	24	18	32	2	0.125	

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

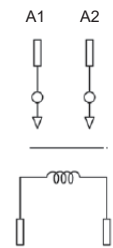
Fig. 1



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

Circuit Diagram

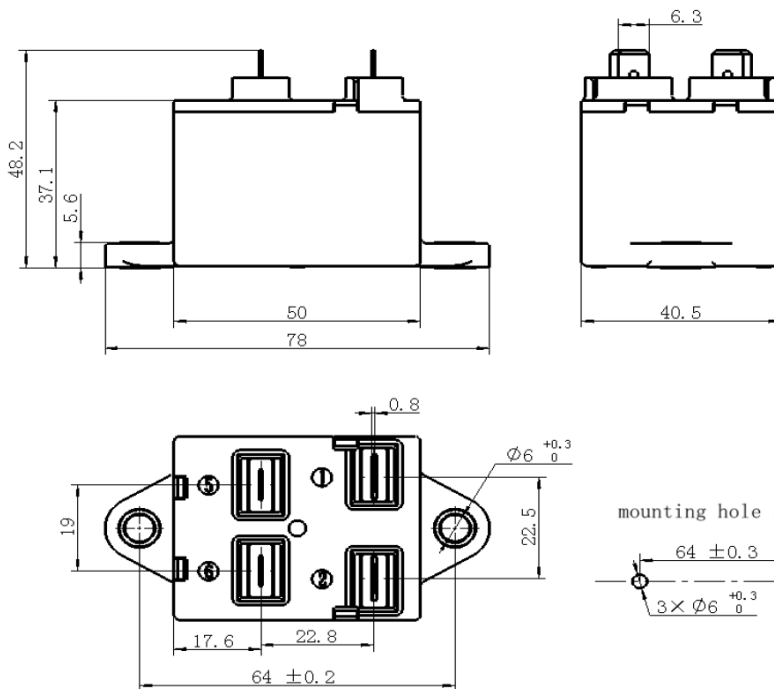
Fig. 2



Coil & Contact terminals are not polarised.

Dimensions

Fig. 3



Terminals
6.3mm QC Male connectors

Extraction/Insertion Force:
49Nm

Minimum Conductor: >4mm².

Torque settings
Base Mounting: 3 ~ 4Nm
M5 screw (not supplied)

Notes:
1: Nominal dimensions in mm.
2: Tolerances (nominal), <10mm: ± 0.3mm, 10 ~ 50mm: ± 0.6mm, >50mm: ± 1.0mm.