CHV20 Series
HVDC Contactor 20A / 1500VDC



- 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

UK CA CE c UL us E305753 RoHS Compliant

Contacts		
Contact arrangement		SPST-NO-DM
Contact material		Oxygen Free Copper
Max. switching voltage		1500VDC
Rated load (resistive, cos φ=1)	DC1	20A 1500VDC
Max. continuous thermal current at 23°C ambient temperature	1hr	30A (with ≥ 4mm² conductors)
	20m	40A (with ≥ 4mm² conductors)
	30s	80A (with ≥ 4mm² 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	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	40A / 1500VDC.	≥ 10000 operations (make)
	15A / 1500VDC	≥ 6000 operations (make and break)[1]
		[1]1s ON / 9s OFF
Mechanical life	ops.	>2 x 10^5
Environmental		
Ambient temperature	operating	-40 to +85°C
Relative humidity		5 to 85%RH
Shock resistance	impact	>50G, 590m/s² 6ms 1/2 sine
	stability (malfunction <10μs)	On: 196m/s² (>20G)
		Off: 98m/s² (>10G)
Vibration resistance		>5G, 49m/s², 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

Specifications are subject to change without notice. E&OE.

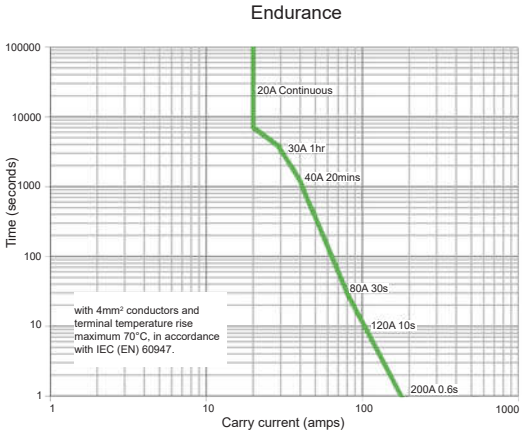
Coil Data — Table 1

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.

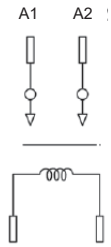
Other coils available upon special request.

Electrical Performance — Fig. 1



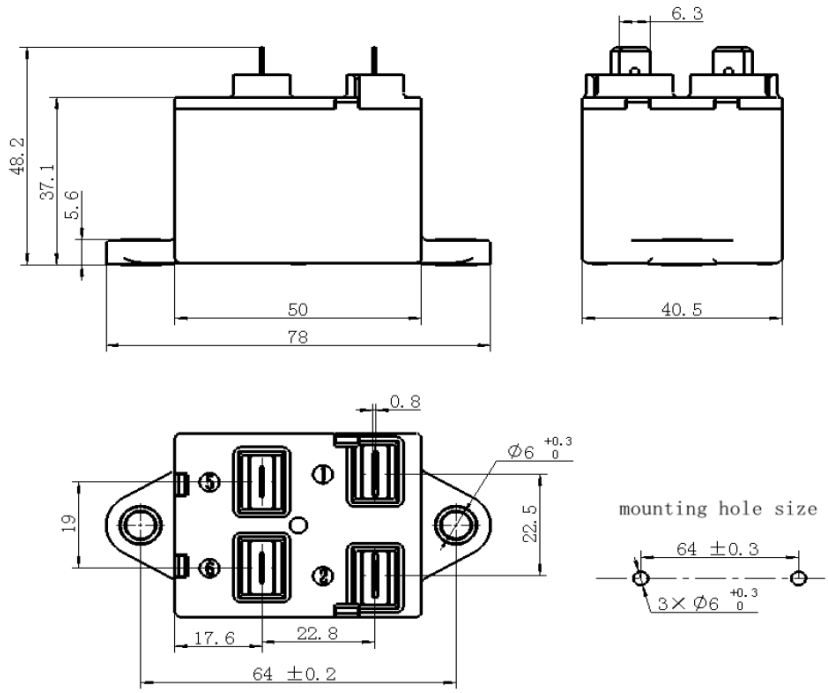
Estimates are based on tests and extrapolated data.
The user is advised to confirm the performance in their application.

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.

Specifications are subject to change without notice. E&OE.