

# **CHV800P Series**

#### HVDC Contactor 800A / 1500VDC

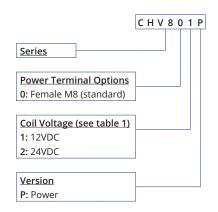


\*image is for illustrative purposes. Please refer to datasheet for detail.

- 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



### **Ordering code**



Contacts           Contact arrangement         SPST-NO-DM           Contact material         Oxygen Free Copper           Max. switching voltage         1500VDC           Rated load         DC1         800A 1500VDC           Max. continuous thermal current         15min 850A           3min 1000A         100 2000A           4 15ms 8000A         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 5m3 @ 20A / 6VDC         5mA @ 12VDC           Auxiliary Contact         fmin. current 5mA @ 12VDC           min. current 5m3 @ 20M0 @         5mW           Coil           Nominal voltage (see page 2)         12VDC, 24VDC           Rated power consumption         hold 5W           Insulation           Insulation         s1000MΩ, 1000VDC, 1 min           Insulation resistance         Initial (min.) ≥1000MΩ, 1000VDC, 1 min           Dielectrics terngth         coil to contact 4000Vrms / ≤10mA / 1 min           General data         Operate time at 20°C         max.         50mS           Bounce time at 20°C	*image is for illustrative purposes. F	rease refer to datastreet for detail.			
Contact material         Oxygen Free Copper           Max. switching voltage         1500VDC           Rated load         DC1         800A 1500VDC           Max. continuous thermal current         15min         850A           1000A         2000A         15ms           8000A         15ms         8000A           Max. switching current         1 time only         2000A 1000VDC           Initial contact resistance         max.         0.3mΩ @ 20A / 6VDC           Auxilliary Contact         arrangement         5FST-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 <sw< td="">           Insulation resistance         Initial (min.)         ≥1000MΩ, 1000VDC, 1 min           Insulation resistance         Initial (min.)         ≥1000MΩ, 1000VDC, 1 min           Dielectric strength         coil to contact         4000Vrms / s10mA / 1 min           General data           Operate time at 20°C         max.         50ms           Bounce time at 20°C         <td< td=""><td>Contacts</td><td></td><td></td></td<></sw<>	Contacts				
Max. switching voltage         1500VDC           Rated load         DC1         800A 1500VDC           Max. continuous thermal current         15min         850A           Journal of Max. switching current         1 time only         2000A           Initial contact resistance         max.         0.3mΩ @ 20A / 6VDC           Auxiliary Contact         arrangement arrangement arrangement spST-NO (1 Form A)           Max. current to family form and family family form and family family form and family fam	Contact arrangement		SPST-NO-DM		
Rated load         DC1         800A 1500VDC           Max. continuous thermal current         15min         850A           3min         1000A         2000A           15ms         8000A         3000A           Max. switching current         1 time only         2000A 1000VDC           Initial contact resistance         mx.         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           General data           Operate time at 20°C         max.         50ms           Bounce time at 20°C         max.         50ms           Bounce time at 20°C         max.         50ms           Environmental	Contact material		Oxygen Free Copper		
Max. continuous thermal current   15min   850A   3min   1000A   100   2000A   15ms   8000A   15ms   8000A   3min   1000A   15ms   8000A   3min   1000A   15ms   8000A   3min   1000A   3min   1000A   3min   2000A 1000VDC   3min   2000A 1000VDC   3min   2000A 1000VDC   3min   2min	Max. switching voltage		1500VDC		
3min   1000A   10s   2000A   10s   2000A   15ms   8000A   8000A   15ms   8000A   15ms   8000A   8000A   15ms   8000A   800	Rated load	800A 1500VDC			
10s 2000A  15ms 8000A  Max. switching current 1 time only 2000A 1000VDC  Initial contact resistance max. 0.3mΩ @ 20A / 6VDC  Auxilliary Contact arrangement 5PST-NO (1 Form A)  max. current 2A @ 24VDC  min. current 5mA @ 12VDC  300mΩ   Coil  Nominal voltage (see page 2) 12VDC, 24VDC  Rated power consumption hold <5W  Insulation  Insulation esistance Initial (min.) ≥1000MΩ, 1000VDC, 1 min open contacts 4000Vrms / ≤10mA / 1 min open contacts 50ms  General data  Operate time at 20°C max. 50ms  Bounce time at 20°C max. 10ms  Electrical life (1s on/1s off) voltage and current dependant see fig 1.  Mechanical life  ≥ 2 x 10° ops.  Environmental  Environmental seal power contacts 1P67  Ambient temperature operating 4000m  Shock resistance function 10Hz ~ 55Hz, single amplitude 1.5mm ½ sine  destructive 50G peak, 6ms ½ sine  Vibration resistance (malfunction 10μs) 5Hz × x 1000Hz, 5G  Dimensions Lx W x H 104.0 x 70.0 x 108.1 mm	Max. continuous thermal curr	850A			
15ms   8000A     Max. switching current   1 time only   2000A 1000VDC     Initial contact resistance   max   0.3mΩ @ 20A / 6VDC     Auxilliary Contact   arrangement   SPST-NO (1 Form A)     max. current   2A @ 24VDC     min. current   5mA @ 12VDC     satisfance   300mΩ     Coil		1000A			
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         s300mΩ       s300mΩ         Coil         Nominal voltage (see page 2)       12VDC, 24VDC         Rated power consumption       hold <5W		10s	2000A		
Initial contact resistance  Auxiliary Contact  Au		8000A			
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 coil to contact dopon contacts open contacts dopon contacts domon decimal from the de	Max. switching current	Max. switching current 1 time only			
max. current2A @ 24VDC min. currentCoilNominal voltage (see page 2)12VDC, 24VDCRated power consumptionhold<5WInsulationInsulation resistanceInitial (min.)≥1000MΩ, 1000VDC, 1 minDielectric strengthcoil to contact4000Vrms / ≤10mA / 1 minOperate time at 20°Cmax.50msBounce time at 20°Cmax.30msRelease time at 20°Cmax.10msElectrical life (1s on/ 1s off)Voltage and current dependant - see fig 1.Mechanical life≥ 2 x 10° ops.EnvironmentalEnvironmentalP67Ambient temperatureoperating40 to 85°CRelative humidity5 to 85%RHAltitude≤4000mShock resistancefunction10Hz ~ 55Hz, single amplitude 1.5mm 55Hz ~ 2000Hz, 5GVibration resistance(malfunction <10µs)10Hz ~ 55Hz, single amplitude 1.5mm 55Hz ~ 2000Hz, 5GDimensionsL x W x H104.0 x 70.0 x 108.1 mm	Initial contact resistance	max.	0.3mΩ @ 20A / 6VDC		
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resistance       ≤300mΩ         Coil         Nominal voltage (see page 2)       12VDC, 24VDC         Rated power consumption       hold       <5W		2A @ 24VDC			
Coil         Nominal voltage (see page 2)       12VDC, 24VDC         Rated power consumption       hold       <5W		5mA @ 12VDC			
Nominal voltage (see page 2)       12VDC, 24VDC         Rated power consumption       hold       <5W		≤300mΩ			
Insulation       Initial (min)       ≥1000MΩ, 1000VDC, 1 min         Dielectric strength       coil to contact       4000Vrms / ≤10mA / 1 min         General data       4000Vrms / ≤10mA / 1 min         Operate time at 20°C       max.       50ms         Bounce time at 20°C       max.       30ms         Release time at 20°C       max.       10ms         Electrical life (1s on/1s off)       Voltage and current dependant - see fig 1.         Mechanical life       ≥ 2 x 10⁵ ops.         Environmental       IP67         Ambient temperature       operating -40 to 85°C         Relative humidity       5 to 85%RH         Altitude       ≤4000m         Shock resistance       function         destructive       50G peak x-y axis, 10G peak z axis, 11ms ½ sine         Vibration resistance       (malfunction          Vibration resistance       (malfunction          Vibration resistance       10Hz ~ 55Hz, single amplitude 1.5mm	Coil				
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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  Electrical life (1s on/ 1s off) Voltage and current dependant - see fig 1.  Mechanical life ≥ 2 x 10⁵ ops.  Environmental  Environmental seal power contacts IP67  Ambient temperature operating -40 to 85°C  Relative humidity 5 to 85%RH  Altitude Shock resistance function characteristics for peak x y axis, 10G peak z axis, 11ms ½ sine destructive 50G peak, 6ms ½ sine  Vibration resistance (malfunction < 10Hz ~ 55Hz, single amplitude 1.5mm 55Hz ~ 2000Hz, 5G  Dimensions L x W x H 104.0 x 70.0 x 108.1 mm					
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Release time at 20°C max. 10ms  Electrical life (1s on/ 1s off) Voltage and current dependant - see fig 1.  Mechanical life $\geq 2 \times 10^5$ ops.  Environmental  Environmental seal power contacts IP67  Ambient temperature operating -40 to 85°C  Relative humidity 5 to 85%RH  Altitude $\leq 4000m$ Shock resistance function $\leq 20G$ peak x-y axis, $\leq 10G$ peak z axis, $\leq 11m$ ½ sine destructive $\leq 10H$ z $\leq 10H$	•				
Electrical life (1s on/ 1s off)  Mechanical life $\geq 2 \times 10^{5}$ ops.  Environmental  Environmental seal power contacts IP67  Ambient temperature operating -40 to 85°C  Relative humidity 5 to 85%RH  Altitude $\leq 4000m$ Shock resistance function 20G peak x-y axis, 10G peak z axis, 11ms ½ sine destructive 50G peak, 6ms ½ sine  Vibration resistance (malfunction <10 µs) 10 µz ~ 55 µz, single amplitude 1.5 mm 55 µz ~ 2000 µz, 5G  Dimensions L x W x H 104.0 x 70.0 x 108.1 mm					
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Environmental  Environmental seal power contacts IP67  Ambient temperature operating -40 to 85°C  Relative humidity 5 to 85%RH  Altitude	Electrical life (1s on/ 1s off)				
	Mechanical life	≥ 2 x 10 <sup>5</sup> ops.			
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	Environmental				
Relative humidity       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)	Environmental seal	power contacts	IP67		
Altitude $\leq$ 4000m  Shock resistance function $\frac{20G \text{ peak x-y axis, }10G \text{ peak z axis, }11ms \( \frac{1}{2} \) sine destructive \frac{1}{2} \text{ SOG peak, } 6ms \( \frac{1}{2} \) sine \frac{1}{2} \text{ SOG peak, } 6ms \( \frac{1}{2} \) sine }{10 \text{ Hz} \sim 55 \text{Hz, single amplitude } 1.5 \text{ mm} \\ 55 \text{ Hz} \sim 2000 \text{ Hz, } 5G}  Dimensions \text{L} \times \text{W} \times \text{H} \frac{1}{2} \text{ 104.0} \times 70.0 \times 108.1 \text{ mm}$	Ambient temperature	operating	-40 to 85°C		
	Relative humidity				
tunction11ms ½ sinedestructive50G peak, 6ms ½ sineVibration resistance(malfunction <10μs)					
$ \begin{array}{c} \text{Vibration resistance} & \text{(malfunction} \\ <10 \mu \text{s)} & 10 \text{Hz} \sim 55 \text{Hz}, \text{ single amplitude} \\ 1.5 \text{mm} \\ 55 \text{Hz} \sim 2000 \text{Hz}, 5G \\ \\ \text{Dimensions} & \text{L} \times \text{W} \times \text{H} & 104.0 \times 70.0 \times 108.1 \text{ mm} \\ \end{array} $	Shock resistance	function	20G peak x-y axis, 10G peak z axis, 11ms ½ sine		
<ul> <li>&lt;10μs)</li> <li>1.5mm</li> <li>55Hz ~ 2000Hz, 5G</li> <li>Dimensions</li> <li>L x W x H</li> <li>104.0 x 70.0 x 108.1 mm</li> </ul>		destructive	50G peak, 6ms ½ sine		
	Vibration resistance		1.5mm		
Weight approx. 1100g	Dimensions	LxWxH	104.0 x 70.0 x 108.1 mm		
	Weight	approx.	1100g		

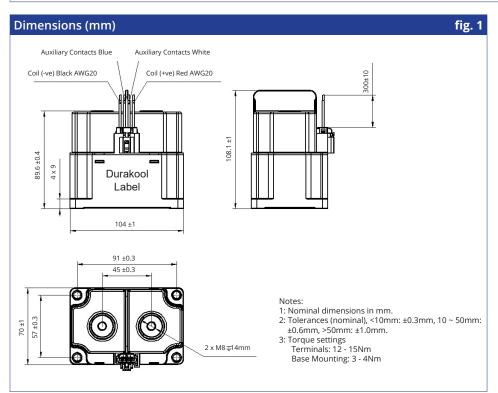
- Notes: 1: All parameters, unless otherwise specified, are measured at ambient
- temperature of 23°C.
  2: Product can be oriented in any position.
- 3: Contacts are not polarised
- 4: Coil is polarised

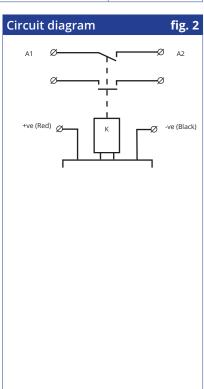


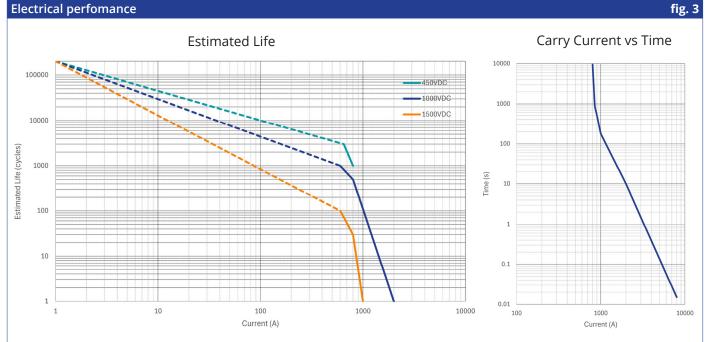
# **CHV800P Series**

### HVDC Contactor 800A / 1500VDC

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%)	nt Rated coil powe (W)	
						(A)	Operate	Hold
CHV801P	12.0	8.0	16.0	1.2	4.2	0.42	50.0 0.3s	5.0
CHV802P	24.0	16.0	32.0	2.4	2.1	0.21		
Dual coil product has b	Dual coil product has been configured with coil surge absorption circuit, engineers do not need to configure.							







#### 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 ≥480mm². The data is for reference only and should be used to select fuses directly.

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