High Voltage DC Contactor
CBVC8 SERIES DC CONTACTOR

1 PRODUCT FEATURES

Type	**CBVC8P-20**
Outline Dimensions	See5.1
Unit Weight	Approx.156±15g
Seal type	Ceramic seal
Contact Arrangement	1 Form A
Contact Material	Copper Alloy
Auxiliary contact Arrangement	Nil

2 ORDERING INFORMATION

CBVC8 ① P ② - 20 ③ /1000 ④ - 12 ⑤ - H ⑥ Q ⑦ 2 ⑧ A ⑨ （XXX） ⑩

①	Type	**CBVC8**
②	Application	P：Photovoltaic and energy storage
③	Lode Current	20：20A
④	Lode Voltage	1000：1000 Vd.c. 1500：1500 Vd.c.
⑤	Coil Voltage	12：12 Vd.c. Single-coil 24： 24 Vd.c. Single-coil
⑥	Contact Type	H: 1 Form A
⑦	Coil Termination	Q：QC Termination P： PCB Termination
⑧	Load Termination	2： QC Termination Nil： PCB Termination
⑨	Mounting boss	Nil： no mounting boss A： mounting boss
⑩	Special Code	Customer demand(Only for special requirements)

3 COIL RATING

Rated Voltage（Vd.c.）	12	24
Driving Mode	Single-coil	
Max. Operating Voltage（Vd.c.）	16	32
Operate Voltage (Vd.c.) (at 23℃)	≤9	≤18
Release Voltage (Vd.c.) (at 23 ℃)	≥1	≥2
Coil Resistance (Ω) (at 23 ℃)	56×(1±7%)	224×(1±7%)
Rated Power (W) (at 23 ℃)	Approx. 2.6	

4 SPECIFICATION

Contact Specification	Contact Rating	20A（≥4 mm^2 wire）	
	Working Voltage Range	12~1500V	
	Max. Breaking Current	200A 1000Vd.c. (1 op)	
	Min. Applicable Load	6 Vd.c. 1 A	
	Contact Resistance	≤5 mΩ (at 20 A 23℃)	
	Current Endurance 85℃，4 mm^2）	20A out 30A 1h 40A 20min 80A 30s 120A 10s 200A 0.6s	
	Operate Time	≤30 ms	
	Release Time	≤10 ms	
	Bounce Time	≤5 ms	
Electrical Endurance	CBVC8P- 20/1000 23℃，0.6s on : 5.4s off）	Making &Breaking： ±15A 1000Vd.c. 1×10^4 ops Making： ±20A 1000Vd.c. 1.5×10^4 ops	
	CBVC8P- 20/1500 23℃，0.6s on : 5.4s off）	Making & Breaking： ±15A 1500Vd.c. 1×10^4 ops Making： ±40A 1500Vd.c. 1.5×10^4 ops	
Mechanical Endurance	23℃，0.5s on : 0.5s off	2×10^5 ops	
Safety insulation	Insulation Resistance	Between main open contacts:	Initial：≥1000MΩ(1000 Vd.c. 1min）
		Between main contact and coil	Initial：≥1000MΩ(1000 Vd.c. 1min）
	Dielectric Strength (Leak Current:≤1 mA)	Between main open contacts:	Initial：≥3000 Va.c. (50/60 Hz 1min)
		Between main contact and coil	Initial：≥4000 Va.c. (50/60 Hz 1min)

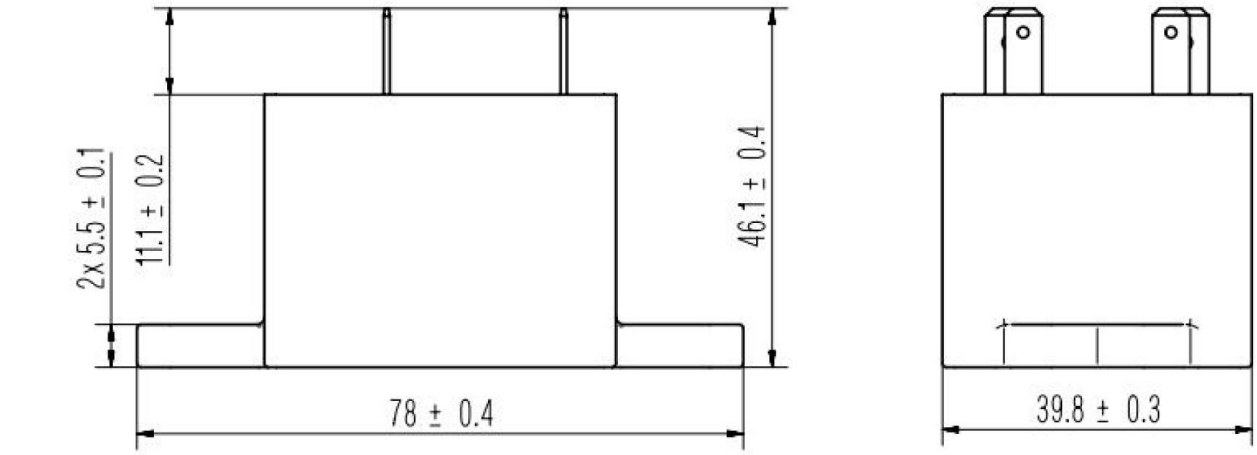
Mechanical property	Vibration	49m/s², 10～55Hz，sine wave
	Shock-Functional	Off：98m/s² 11ms ，half sine wave On：98m/s² 11ms，half sine wave
	Shock-Destructive	490m/s² 6ms， half sine wave
Operating Condition	Maximum allowable temperature of contacts	130℃（Suitable for continuous system）
		180℃（Suitable for Short-time system）
	Temperature	-40 ℃ ～ 85 ℃
	Humidity	5 % ～ 85 % RH
	Mounting Direction	Vertical
	Note: The ambient environment of application shall not cause any dewing or icing inside the relay. Otherwise, the relay may fail to work consequently.	

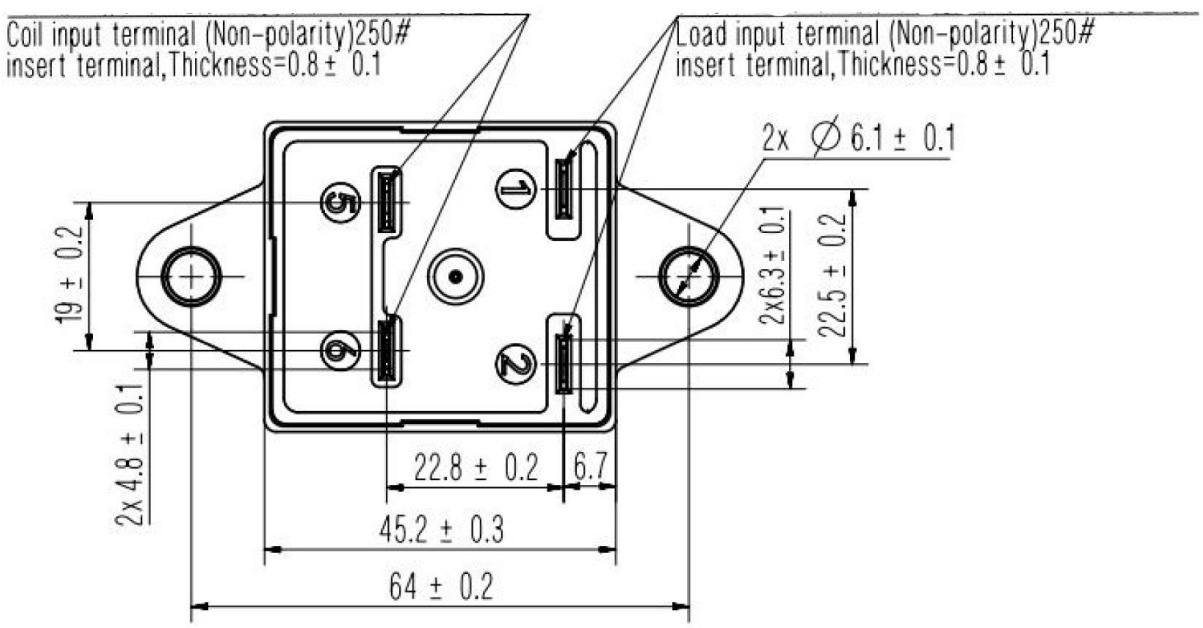
Storage Condition	Temperature	-40 ℃ ～ 85 ℃
	Humidity	5 % ～ 85 % RH
	Storage Life	12 12 Months (Original Package)
	Environment	1.Store in locations where the product is not exposed to corrosive gas.
		2. Keep product is not exposed to the direct ray of the sun.

5 CONFIGURATION

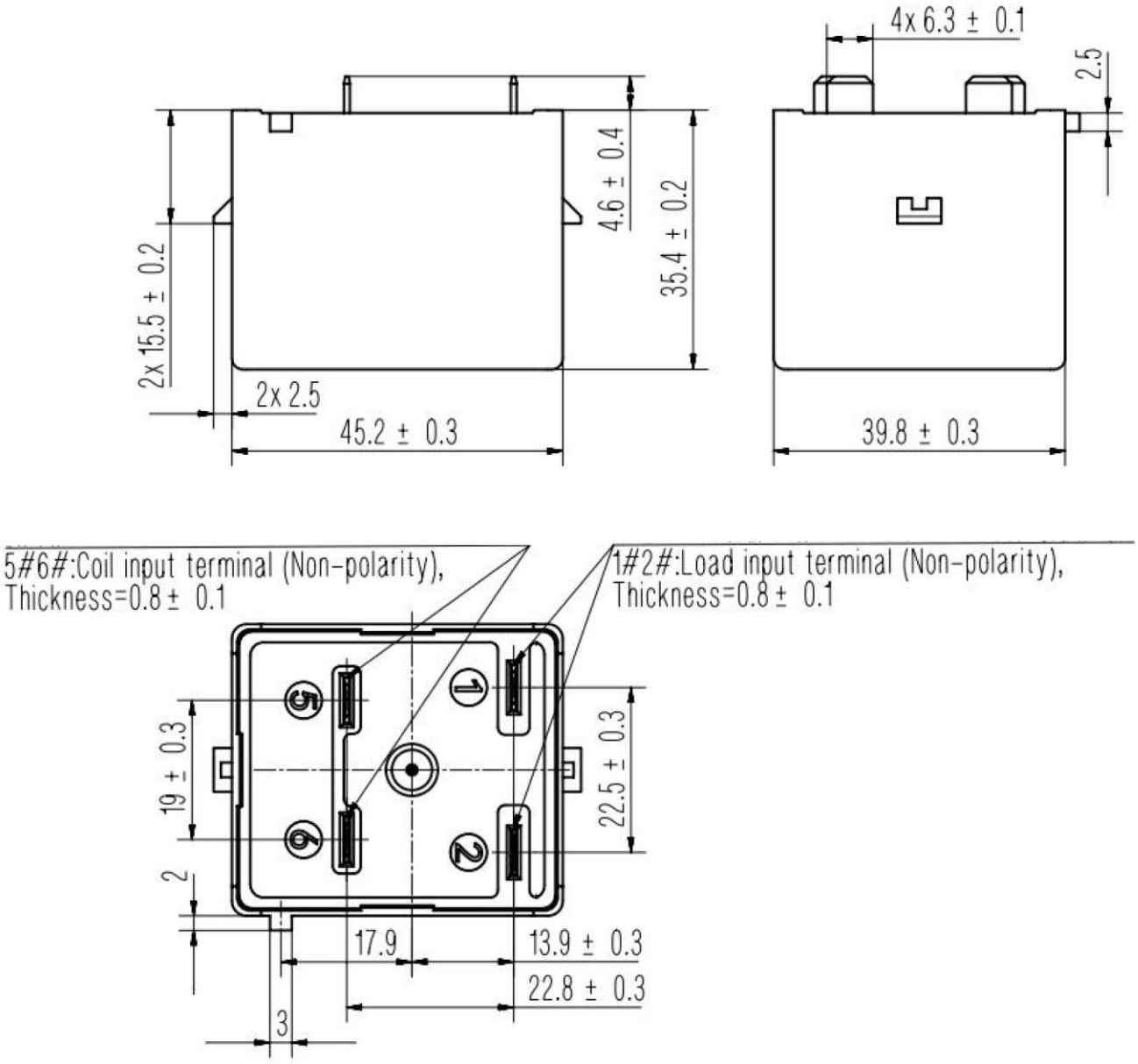
5.1 Outline Dimensions:

CBVC8P-20/XXXX-XX-HQ2A（XXX）

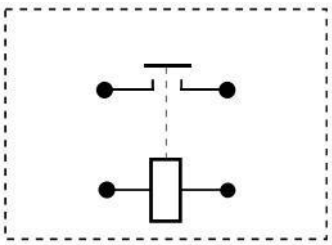




CBVC8P-20/XXXX-XX-HP(XXX)



5.2 Wiring Diagram



No polarity on the load and coil

Notes:

1. All unspecified tolerance according to following table.

Dimension	＜10	10~50	＞50
Tolerance	±0.3	±0.5	±0.8

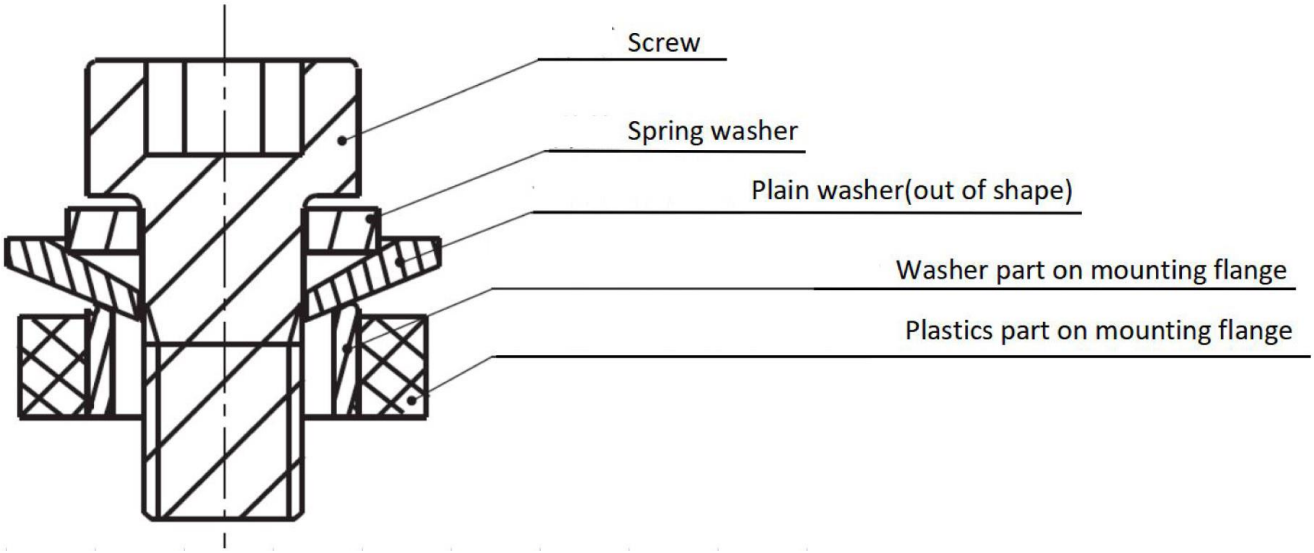
2. By default, the product is shipped without installation accessories such as connectors and assembly screws.

6 Notes

6.1 Application Description

6.1.1 To prevent loosening, use flat and elastic pads when installing the contactor.

6.1.2 When using the M5 screw, the locking torque shall be controlled at 3 N·m ~ 4 N·m to ensure that the thickness and strength of the washer are sufficient, otherwise it will deform and burst the shell.



6.1.3 Allowable pulling or pushing force for the terminal:(1)load terminal 49N;(2)coil terminal 49N. Damage may occur when it is beyond the range.

6.1.4 PCB welding parameters: manual welding (380±20）℃,time（3～5）s;wave soldering (265±5）℃,time（3～5）s.

6.1.5 When the contactor is used at L/R≥1ms inductive load (L load), please take parallel surge absorption measures. Otherwise, it may cause a decrease in electrical life and bad cutting.

6.1.6 When the contactor is used with a capacitive load, take measures such as pre-charging, and it is recommended that the closing pressure difference of the contactor be controlled within 20V. Otherwise, it may cause contact fusion welding.

6.1.7 For products without an energy-saving plate, it is recommended to install a varistor or TVS tube to suppress the reverse electromotive force of the contactor coil. If the diode is used, the contactor release time will be greatly extended, which will certainly lead to a decline in cutting performance.

6.1.8 The contactor contacts are sealed and filled with gas. When the contact temperature changes, there is internal gas penetrating characteristic. contactors are forbidden to be used at the temperature beyond our suggestion -40 ℃～85 ℃ for long time.

6.1.9 Please avoid installation near the strong magnetic boundary (around the transformer and magnet), otherwise it may cause poor electrical performance and cutting performance of the contactor;

6.1.10 Do not install in the vicinity of hot objects (such as fuses, diverters, etc.); otherwise, the contact end of the temperature rise supercontactor may overheat.

6.1.11 Please avoid grease and other foreign matter in the terminal， please use the connecting wire with a cross section area ≥4 mm^2, or they may cause overheating to the terminal part.

6.1.12 In principle, please do not use it when the contactor has fallen down.

6.2 Others

6.2.1 CBV products are all RoHS compliant.

6.2.2 All the performance data listed in the datasheet are the initial values tested under standard testing condition.

6.2.3 CBV could not evaluate all the performance and all the parameters for every potential application. The customer can choose the right product according to the specific usage conditions and requirements. If there is any queries, please contact CBV for the technical service. However, customer will responsible for what they choose and it is the user's responsibility to determine which product should be used.

6.2.4 CBV reserves the right to make changes. Customers should reconfirm the contents of the specification before first orders and ask for us to supply a new specification if necessary.

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