High Voltage DC Contactor

CBVC8 SERIES DC CONTACTOR

1 Product Features

Type	**CBVC8-250E**
Outline Dimensions	See5.1
Unit Weight	Approx.400±15g
Seal type	Ceramic seal
Contact Arrangement	Form A
Contact Material	Copper Alloy
Auxiliary Contact Type	Form A
Auxiliary Contact Material	Copper Alloy

2 Model Information

CBVC8 P - 250 E / 1500 – 24D - H A C 5 （XXX）

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ④

①	Type	**CBVC8**
②	Application	Pv and energy storage
③	Lode Current	250：250A
④	Series Breakdown	E:E series
⑤	Lode Voltage	1000：1000 Vd.c. 1500：1500 Vd.c.
⑥	Coil Voltage	12D:12 Vd.c Double coil 24D:24 Vd.c.Double coil
⑦	Contact Type	H: 1 Form A
⑧	Auxiliary Contact Type	A： 1 Form A
⑨	Coil Termination	C: Connector
⑩	Load Termination	5: Bolt terminal Female
④	Special Code	customer demand(Only for special requirements)

3 Coil Parameter

Rated Voltage（Vd.c.）	12	24
Driving Mode	Dual-coil	Dual-coil
Max. Operating Voltage（Vd.c.）	18	36
Operate Voltage (Vd.c.) (at 23 ℃)	≤9.6	≤19.2
Operate Voltage (Vd.c.) (at 23 ℃)	≥1.2	≥2.4
Coil Resistance (Ω) （at 23 ℃）	Driving：4×(1±7%) Holding：24×(1±7%)	Driving：16×(1±7%) Holding：96×(1±7%)
Rated Power (W)	Driving Power：Approx 36 Holding Power：Approx 6	Driving Power：Approx 36 Holding Power：Approx 6

4 Specification

Main contact Specification	Contact Rating	250 A （≥80 mm^2 wire）
	Working Voltage Range	12~1500V
	Max. Breaking Current	2000A 1000Vd.c. (1 op)
	Applicable Load	6 Vd.c. 1 A
	Contact Resistance	≤0.5 mΩ (at 250A 23℃)
	Current Endurance （85℃, 80mm^2）	250A cont. 350A 300s 500A 60s 900A 10s 2000A 100ms
	Operate Time	≤50 ms
	Release Time	≤30 ms
	Bounce Time	≤5 ms
Aux contact Specification	Contact Resistance	≤100mΩ(at 1A 23℃)
	Contact Rating	6 Vd.c. 0.1 A

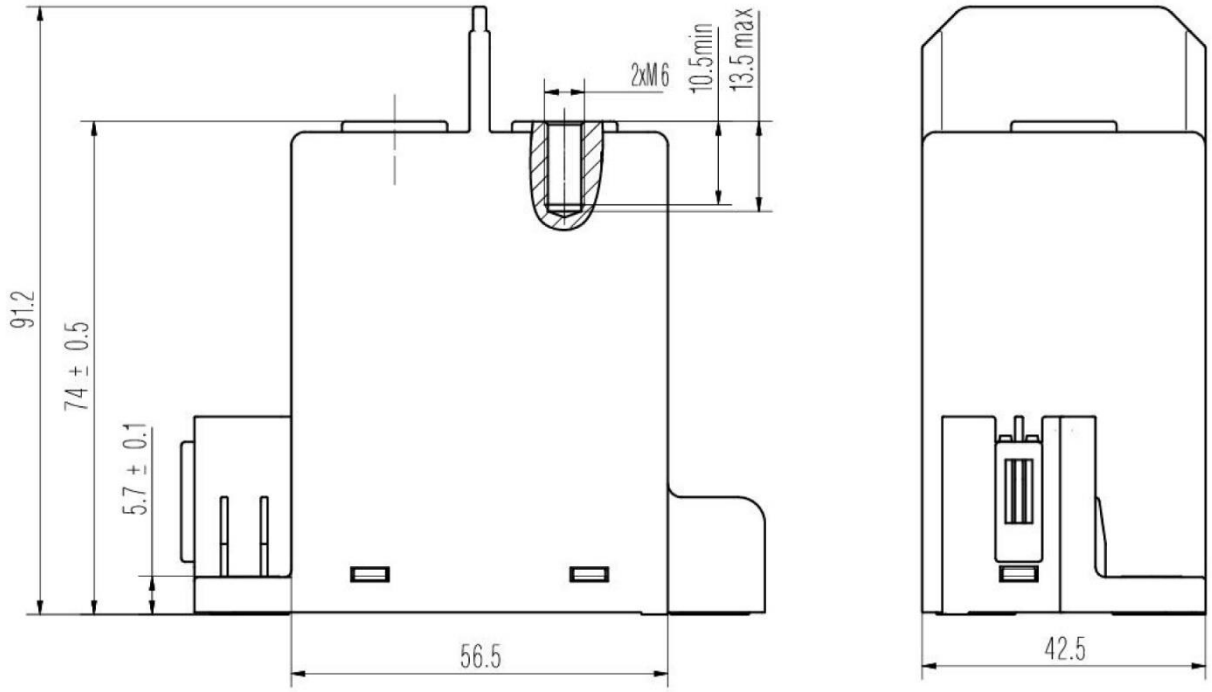
Endurance	Electrical Endurance	Breaking： 250A50Vd.c. 1.5×10^4 ops Breaking： 250A 1000Vd.c. 1×10^3 ops Breaking： 140A 1500Vd.c. 1×10^3 ops Breaking： 250A1500Vd.c. 100 ops Breaking： 800A 1500Vd.c. 1 op Breaking： 2000A 1000Vd.c. 1 op	
	Anti-short circuit	8000A 5ms With no fire or explosion	
	Mechanical Endurance	2×10^5 ops	
Safety insulation	Insulation Resistance	Between open contacts：	Initial： ≥1000MΩ(1500 Vd.c. 1min)
		Between main and auxiliary contacts：	Initial： ≥1000MΩ(1500 Vd.c. 1min)
		Between main contacts and coils：	Initial： ≥1000MΩ(1500 Vd.c. 1min)

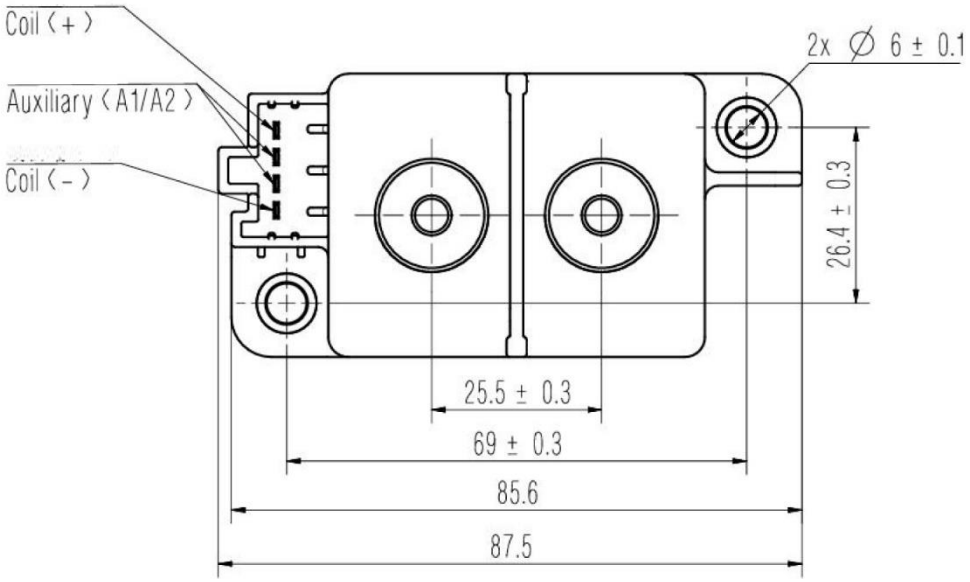
	Dielectric Strength (Leak Current:≤1 mA)	Between open contacts：	Initial： ≥4000 Va.c. (50/60 Hz 1 min)
		Between main and auxiliary contacts：	Initial： ≥4000 Va.c. (50/60 Hz 1 min)
		Between main contacts and coils：	Initial： ≥4000 Va.c. (50/60 Hz 1 min)
Mechanical property	Vibration	49m/s², 10～55Hz, sine 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	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.		
	Temperature	-40 ℃ ～ 85 ℃	
Storage Condition	Humidity	5 % ～ 85 % RH	
	Storage Life	12 Months (Original Package)	
	Environment	1.Store in locations where the product is not exposed to corrosive gas.	
		1.Keep product is not exposed to the direct ray of the sun.	

5 Product Structure

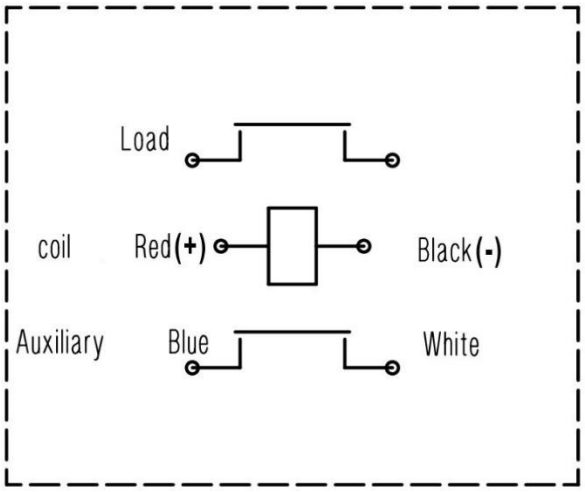
5.1 Outline Dimensions :

CBVC8-250E/XXX-XX-HAC5





5.2 Wiring Diagram



No palarity on load; Auxiliary contacts are non-polar; palarity on the coil

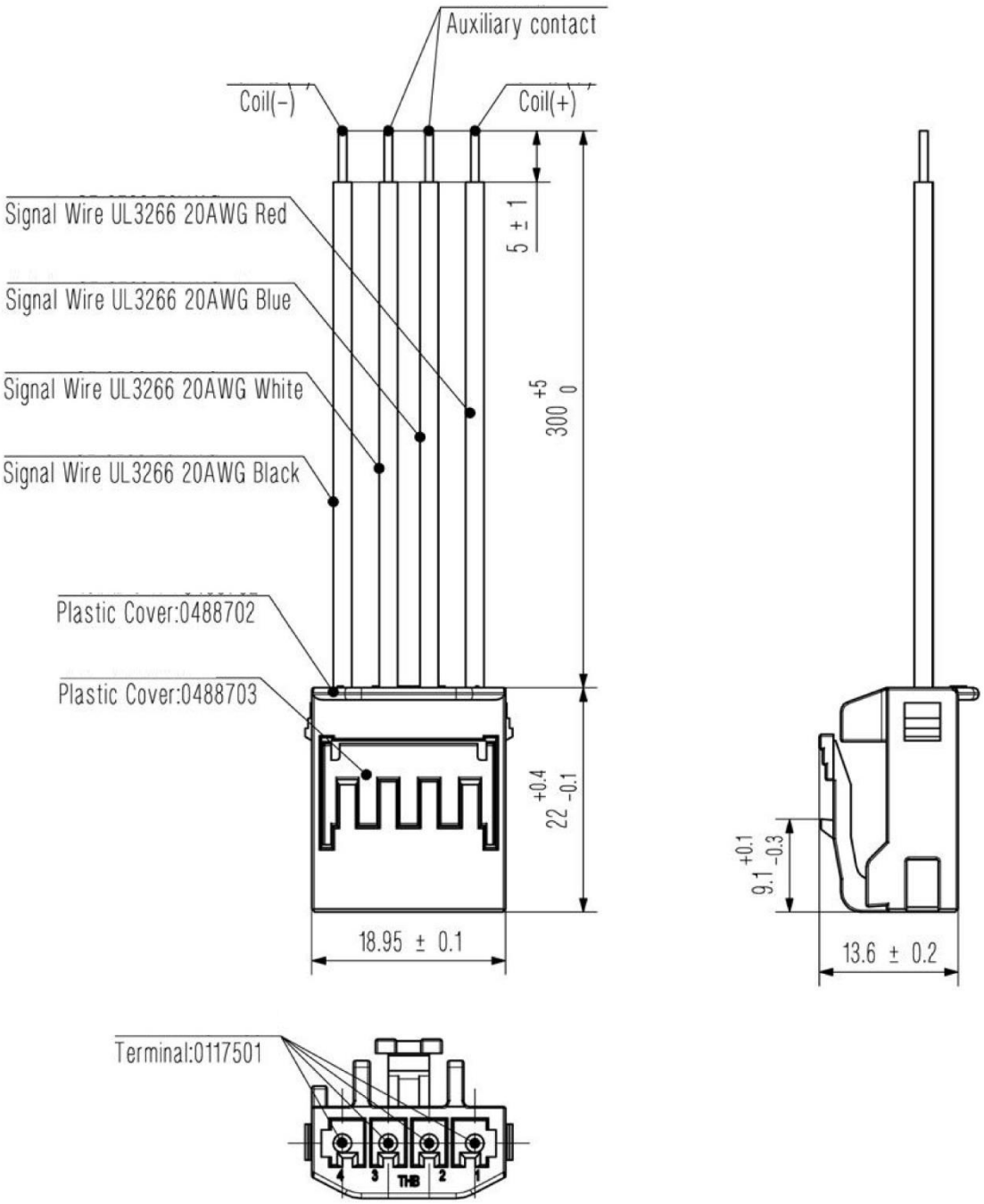
Notes :

1. All unspecified tolerance according to following table.

Outline dimensions hadn't specified tolerance	
Outline Dimensions	**Tolerance**
≤10	±0.3
＞10～50	±0.5
＞50	±0.8

2. The default connector of the product and THB connector can be used, the specific models are as follows：

Brand	Connector number
THB	0488701
Yazaki	7283-1044



3. The default product is shipped with connector harness, without screws, washers, spring washers and other installation accessories.

6 Others

a. Supplier

Component Basics

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

c. **Notes**

i. 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.

ii. Without special note, the load we commit to the load is the rating load . CBV doesn't response for any usage beyond our guarantee.

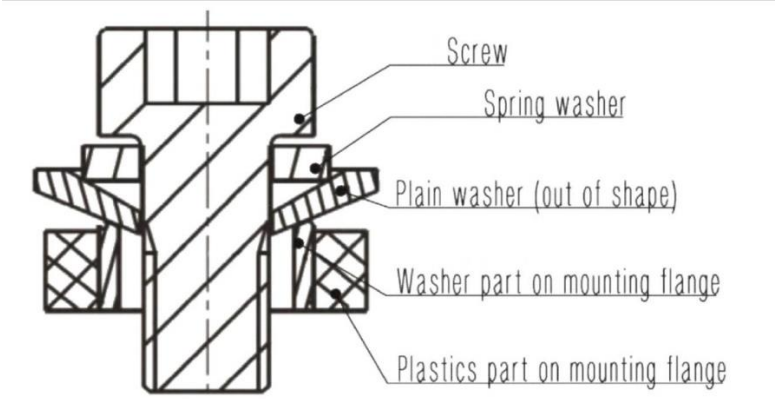
iii. The rating load of contact is resistive load. Please assure a surge absorption device together with inductive load when using the L/R≥1ms inductive load (L Load), otherwise it may lead to the decrease of electrical endurance and defective switch.

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

v. Please avoid installation in strong magnetic field(around the transformers & the magnet)and the heating objects nearby.

vi. In order to prevent loosening, please use the washer when installing the relay. Please use the M5 screws to install relay, screw locking torque within 3N·m～4N·m.

vii. When use M5 screw, make sure the washer's thickness and strength are enough. Otherwise it will be out of shape, and the case will be broke.



viii. Please avoid grease and other foreign matter in the terminal, please use the connecting wire with a cross section area ≥80 mm^2, or they may cause overheating to the terminal part .

ix. Please pay attention to the thickness of copper bars and the value of the torque. If it goes beyond the recommended values in the below table, it will cause thread slide or installation is not tight. To avoid short circuit or fire it's not suggest fix two copper bus bar at same side.

screw on load terminal	the thickness of copper bus bar	suggest hole dimension of copper bus bar	Torque
Screw Terminal M6	3 mm	Φ6.0mm～Φ6.5mm	6 N·m～8 N·m

x. In principle, please do not use it when the relay has fallen down.
xi. Environmental Protection CBV products are all RoHS compliant.
xii. 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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