

High Voltage DC Contactor

CBVC10 SERIES DC CONTACTOR



● PRODUCT FEATURES

Type	CBVC10P-1000
Outline Dimensions	See 5.1
Unit Weight	Approx. 1100±15g
Seal type	Ceramic seal
Contact Arrangement	1 Form A
Auxiliary Contact Type	1 Form A

● ORDERING INFORMATION

CBVC10 P - 1000 / 1000 - 24D - H A C 5 (XXX)

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

①	Type	CBVC10
②	Application	P : Pv and energy storage
③	Lode Current	1000 : 1000A
④	Lode Voltage	1000 : 1000 Vd.c.
⑤	Coil Voltage	12D:12 Vd.c.Double coil 24D:24 Vd.c.Double coil
⑥	Contact Type	H: 1 Form A
⑦	Auxiliary Contact Type	A : -1 Form A
⑧	Coil Termination	C: Connector
⑨	Load Termination	5: Bolt terminal Female
⑩	Special Code	customer demand(Only for special requirements)

● COIL RATING

Rated Voltage (Vd.c.)	12	24	48
Driving Mode	Dual-coil	Dual-coil	Dual-coil
Max. Operating Voltage (Vd.c.)	18	36	72
Operate Voltage (Vd.c.) (at 23 °C)	≤9.6	≤19.2	≤38.4
Release Voltage (Vd.c.) (at 23 °C)	≥1	≥2	≥4
Coil Resistance (Ω) (at 23 °C)	Driving 3.2×(1±7%) Holding 28.8×(1±7%)	Driving 12.8×(1±7%) Holding 115×(1±7%)	Driving 51.2×(1±7%) Holding 480.8×(1±7%)
Rated Power (W)	Driving Power : Approx 50 Holding Power : Approx 5	Driving Power : Approx 50 Holding Power : Approx 5	Driving Power : Approx 50 Holding Power : Approx 5

● SPECIFICATION

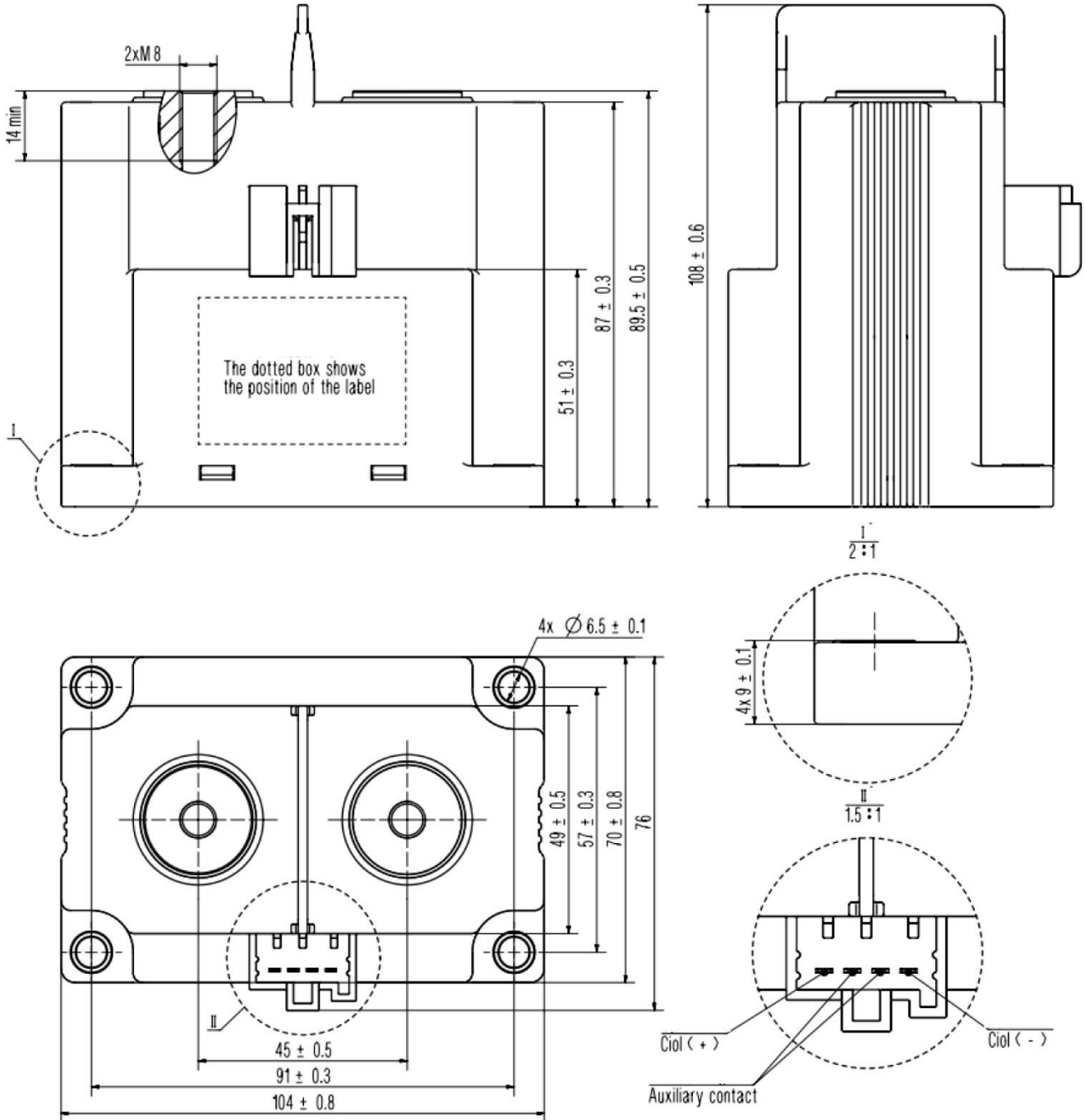
Main contact Specification	Contact Rating	1000 A (≥400 mm ² wire)		
	Working Voltage Range	12~1000Vd.c.		
	Max. Breaking Current	2000A 1000Vd.c. (I op)		
	Min. Applicable Load	6 Vd.c. 1 A		
	Contact Resistance	≤0.2 mΩ (at 1000 A 23°C)		
	Current Endurance (85°C, 400 mm ²)	1000A	cont.	
		1500A	75s	
		2000A	45s	
	Operate Time	≤50 ms		
Release Time	≤30 ms			
Bounce Time	≤5 ms			
Aux contact Specification	Contact Resistance	≤100mΩ(at 1A 23°C)		
	Contact Rating	6 Vd.c. 0.1 A		
		Breaking : 150A	1000Vd.c.	5×10 ³ ops
		Breaking : 600A	1000Vd.c.	1×10 ³ ops
Electrical Endurance	CBVC10P-1000/1000 (23°C, 0.6s on : 5.4s off)	Breaking : 800A	1000Vd.c.	100 ops
		Breaking : 1000A	1000Vd.c.	10 ops
		Breaking : 2000A	1000Vd.c.	1 op
	Anti-short circuit	8000A 5ms No burning,no frying		
Mechanical Endurance	23°C, 0.5s on : 0.5s off	2×10 ⁵ ops		
		Between main open contacts:	Initial : ≥1000MΩ(1000 Vd.c.)	
	Insulation Resistance	Between main contact and Auxiliary contact	Initial : ≥1000MΩ(1000 Vd.c.)	

		Between main contact and coil	Initial : ≥1000MΩ(1000 Vd.c.)
Safety insulation		Between main open contacts:	Initial : ≥4000 Va.c. (50/60 Hz 1 min)
	Dielectric Strength (Leak Current:≤1 mA)	Between main contact and Auxiliary contact	Initial : ≥4000 Va.c. (50/60 Hz 1 min)
		Between main contact and coil	Initial : ≥4000 Va.c. (50/60 Hz 1 min)
Mechanical property	Vibration	49m/s ² , 10~55Hz, sine wave	
	Shock-Functional	98m/s ² , 11ms half sine wave	
	Shock-Destructive	490m/s ² , 6ms half sine wave	
Operating Condition	Maximum allowable temperature of contacts	130°C (Suitable for continuous system)	
		180°C (Suitable for Short-time system)	
	Temperature	-40 °C ~ 85 °C	
	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 °C ~ 85 °C	
	Humidity	5 % ~ 85 % RH	
	Storage Life	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.	

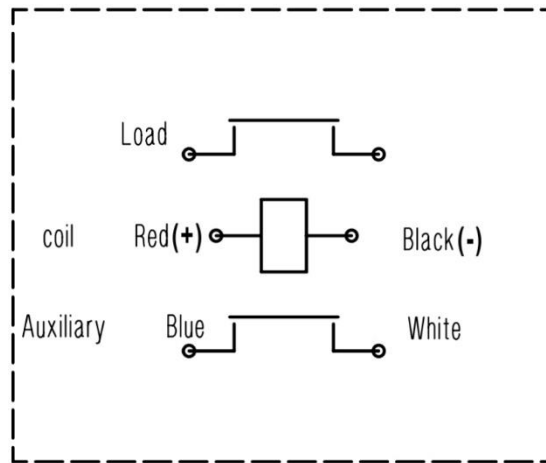
● Configuration

1.1 Outline Dimensions :

CBVC10P-1000/xxxx-xxD-HAC5



1.2 Wiring Diagram



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

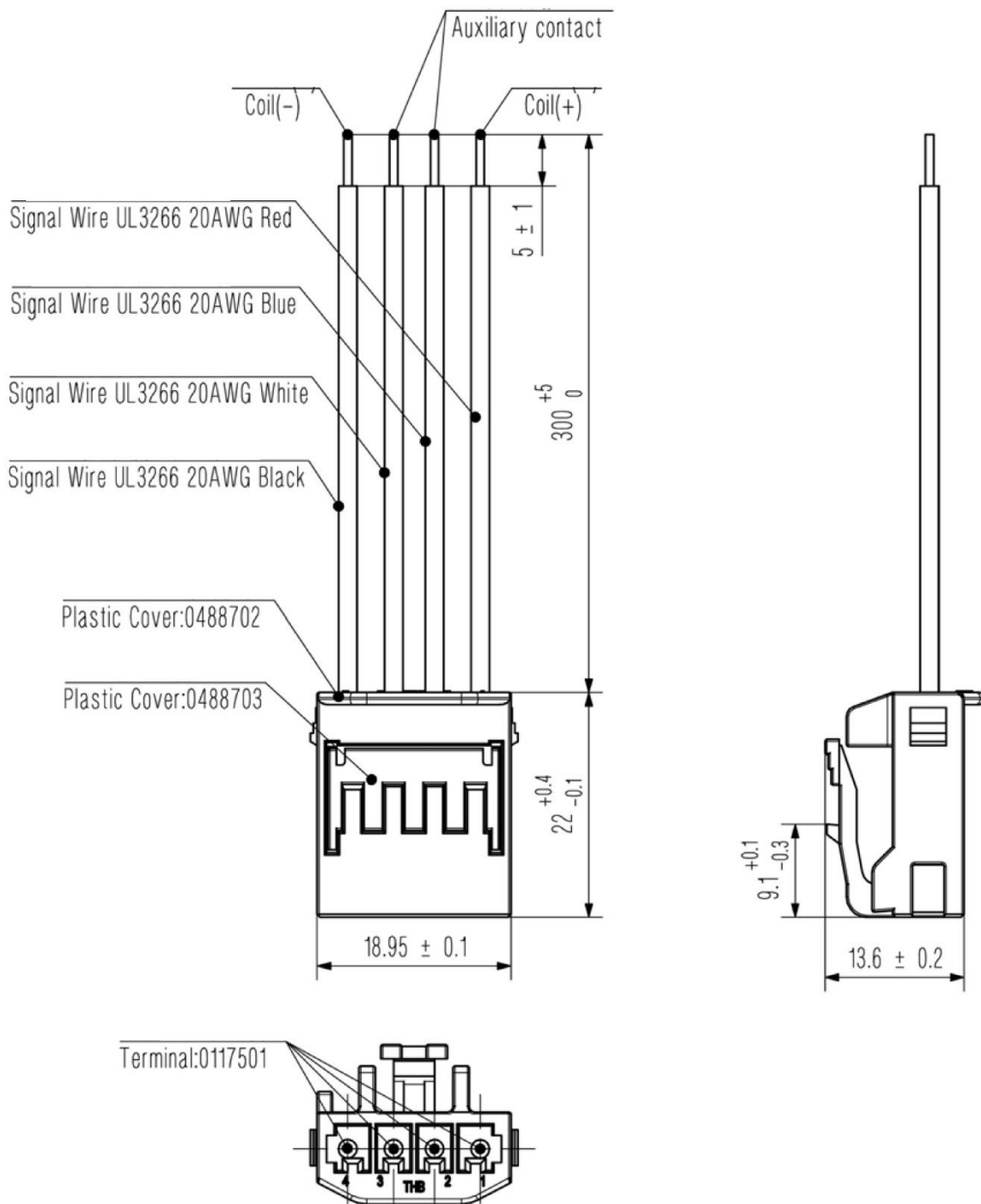
Notes :

1. All unspecified tolerance according to following table.

Outline Dimensions	≤10	>10~50	>50
Tolerance	±0.3	±0.5	±0.8

1. :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



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

2 Notes

2.1 Application Description

2.1.1 To prevent loosening, use flat washers and spring washers when installing contactors.

2.1.2 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.

Installation for terminal with load						Contactor installation	
Installation way	Torque	Recommended copper bar thickness	Recommended copper bar aperture	cable section area	Flatness of copper bar in installation area	Installation way	Torque
M8 screw	8~10N·m	8mm	Φ8.0~8.5mm	≥400mm ²	0.1	M6screw	5~6N·m

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

2.1.4 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.

2.1.5 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 $-40\text{ }^{\circ}\text{C} \sim 85\text{ }^{\circ}\text{C}$ for long time. 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;

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

2.1.7 Please avoid sticking grease and other foreign matter on the extraction sheet, otherwise it will cause abnormal heating of the contactor contact end.

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

2.2 Others

2.2.1 CBV products are all RoHS compliant.

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

2.2.3 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.

2.2.4 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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Mailing Address: Component Basics, 1539, 35-Viking Lane, Toronto, M9B 0A2, ON, Canada.

● CONTACT US

COMPONENT BASICS

1539, 35-Viking Lane, Toronto

M9B 0A2, ON, Canada

Tel.: +1 437 4229280

Email: info@componentbasics.com