

High Voltage DC Contactor

CBVC7 SERIES DC CONTACTOR



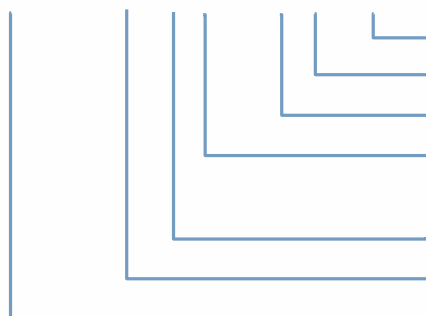
Part Number - CBVC7-30

● PRODUCT FEATURES

- **Safe:** Fully sealed with epoxy resin, contact and coil will not be oxidized, product performance is not affected by external environment, no arc outbursts, can be worked in explosive and harmful environment.
- **Reliable:** Adopt DC high voltage non-polarity design, the breaking capacity is higher and more reliable, convenient and reliable installation or wiring.
- **Good for environment:** All components meet the latest ROHS environmental requirements.
- **Application :** Ordinary, quick charging, auxiliary contactor. Can be used in EV, charging equipment, photovoltaic system, etc.
- **Approval:** UL, CE

● ORDERING

CBVC7-30 T H -12 W /XXX



Customer number

Mounting type: (Nil: Vertical mounting, W: Horizontal mounting)

Rated control supply voltage U_s : (12:12VDC, 24: 24VDC, P: 12/24VDC)

Auxiliary contact type:(H: with normally open, C: with normally closed,
Nil: without)

Contact material: T: Alloy

Rated current: 30A

Company abbreviation:

C: DC Contactor

7: Design number

● BASIC PARAMETER

Contact parameter	
Main Contact	
Rated operational current I_e	30A
Rated operational voltage U_e	12~1000VDC
Min. load	1A12VDC
Main contact type	1SH (SPST NO DM)
Nominal resistance of main circuit	2 m Ω (@30A)
Main contact mounting	M5 internal thread
Connecting torque	3~4N·m
Max. switching current (more than one cycle)	300A320VDC
Auxiliary Contact	
Max. current	30VDC 0.8A
Min. current	8VDC 100mA
Contact resistance	<0.15 Ω

Coil parameter			
Product type	Standard		Energy-saving
Rated voltage U_s (VDC)	12	24	12/24
Operating voltage range (VDC)	9~16	18~32	8~36
Pick up voltage (VDC)	≤ 9	≤ 18	7~8
Release voltage (VDC)	1.2~3.6	2.4~7.2	5~6
Coil power	5.5W	6W	holding: 1.6W
Inrush current	0.46A	0.25A	2A (0.1s)
Holding current	0.46A	0.25A	0.133A@12V 0.067A@24V
Pick up time (@ U_s)	≤ 30 ms		≤ 45 ms
Release time (@ U_s)	≤ 10 ms		
Bounce time (@ U_s)	≤ 5 ms		

Note: The above parameters are normal temperature rating, if other parameters needed, can customize.

Life characteristics		
Mechanical Life	300,000 cycles	
Resistivity load life (L/R ≤ 1 ms)	See next page	
Capacitive load life (RC=1ms, only for connecting)	90A	50,000 cycles

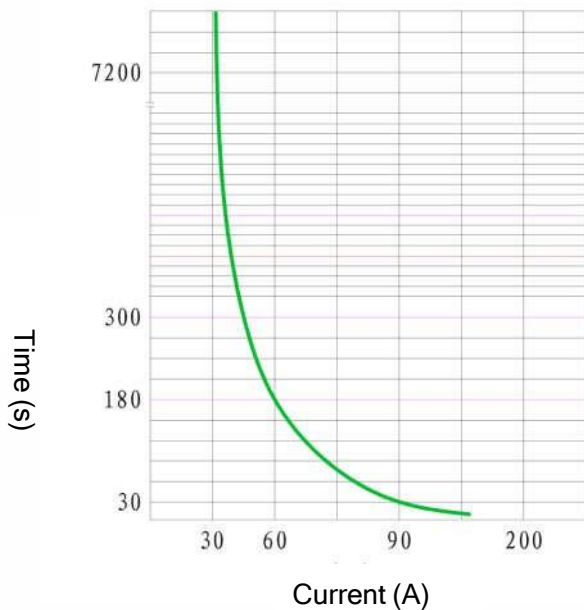
Note: For capacitive load life, when the contactor is used to control the main circuit of charge and discharge, the pre-charge circuit should be added. If there is no pre-charging path, a transient large current will be generated when the contactor closes, which may cause the contactor to stick.

Environmental characteristics		
Shock	Stability test	196m/s ² (20G)
	Strength test	490m/s ² (50G)
Resistance to vibration		10~200Hz, 5G
Operating ambient temperature		-40°C~+85°C
Operating ambient humidity		5%~85% RH
IP Grade		IP67(inner space)
Altitude		≤4000m

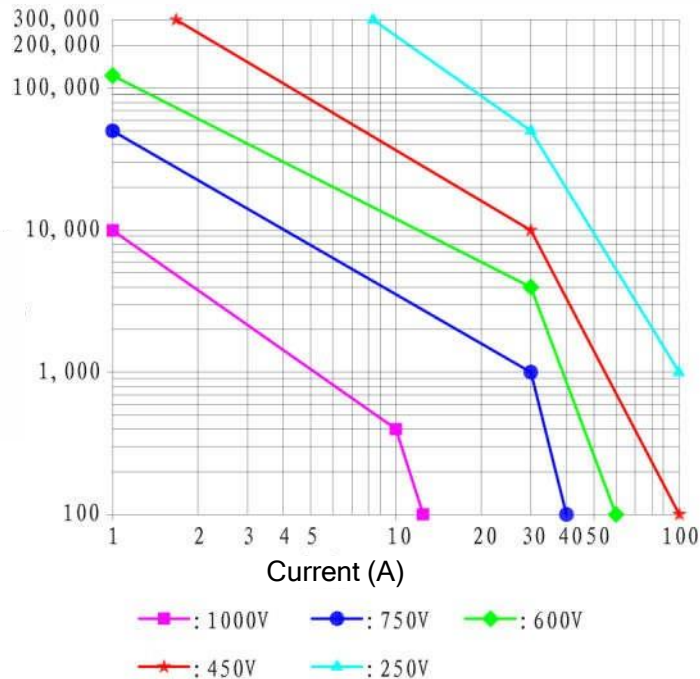
Electrical characteristics	
Dielectric withstand voltage	/AC3000V
Insulation resistance	≥1000MΩ@1000VDC
Nominal insulation voltage Ui	1000V

Other	
Weight	Standard: 190g, with auxiliary 195g Energy-saving: 205g, with auxiliary 210g
The cross sectional area of an external conductor	≥6mm ²
Case mounting hole torque	MAX 2.3 N·m

Short overload capacity curve



Cut-off life curve of resistive load

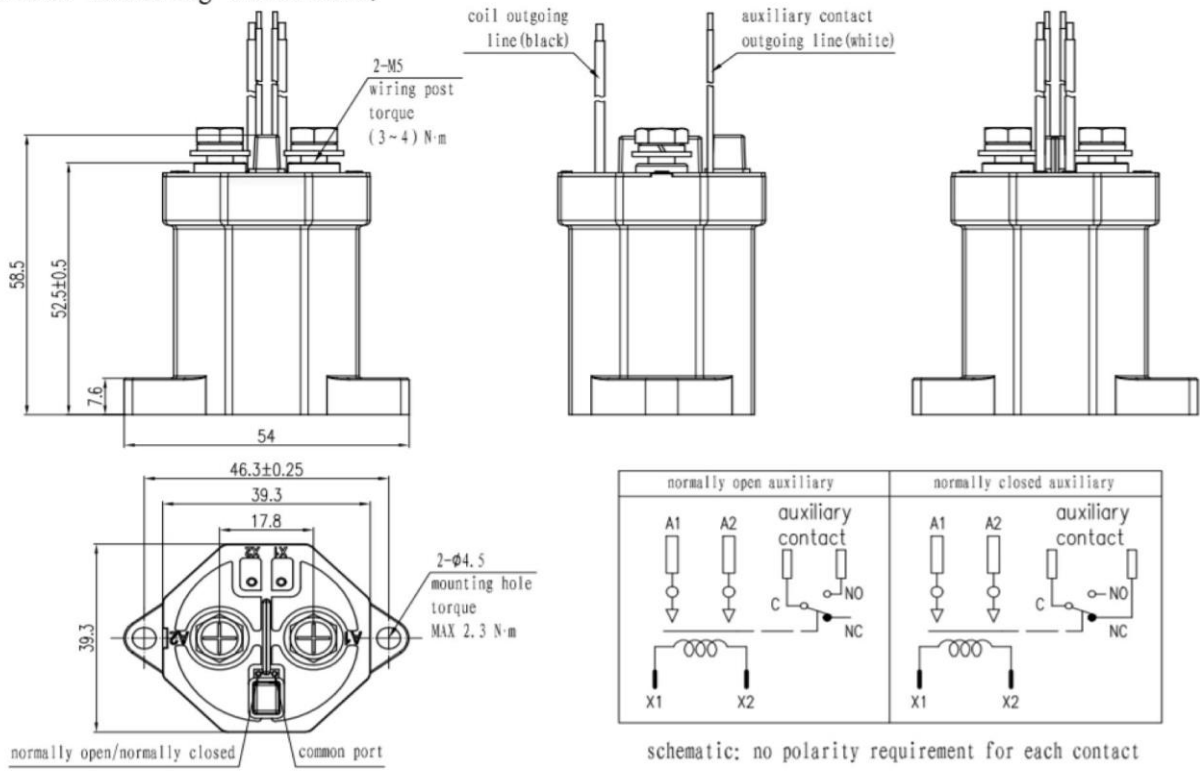


Note: Except for special note, the ambient temperature of electrical durability test is 23°C, and the on-break ratio is: 1s: 9s

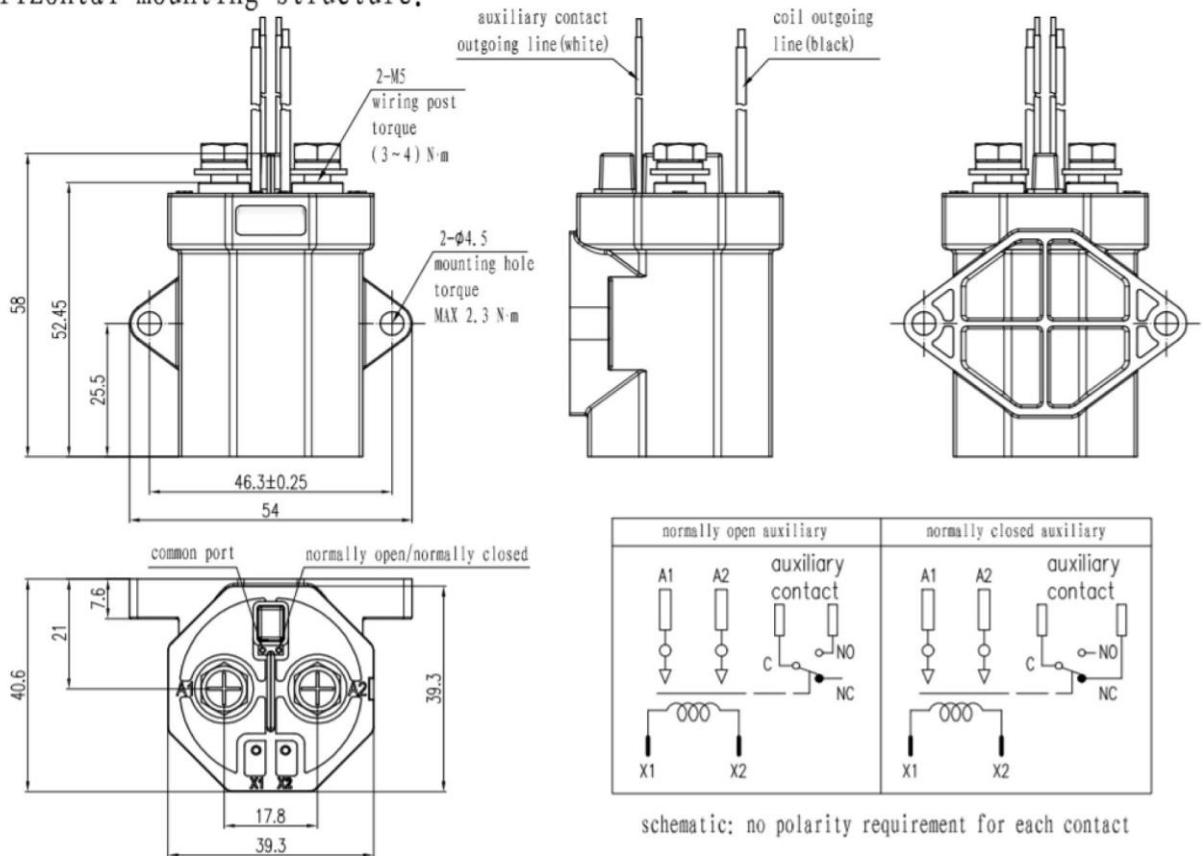
● OUTLINE AND WIRING SCHEMATIC DIAGRAM

Standard

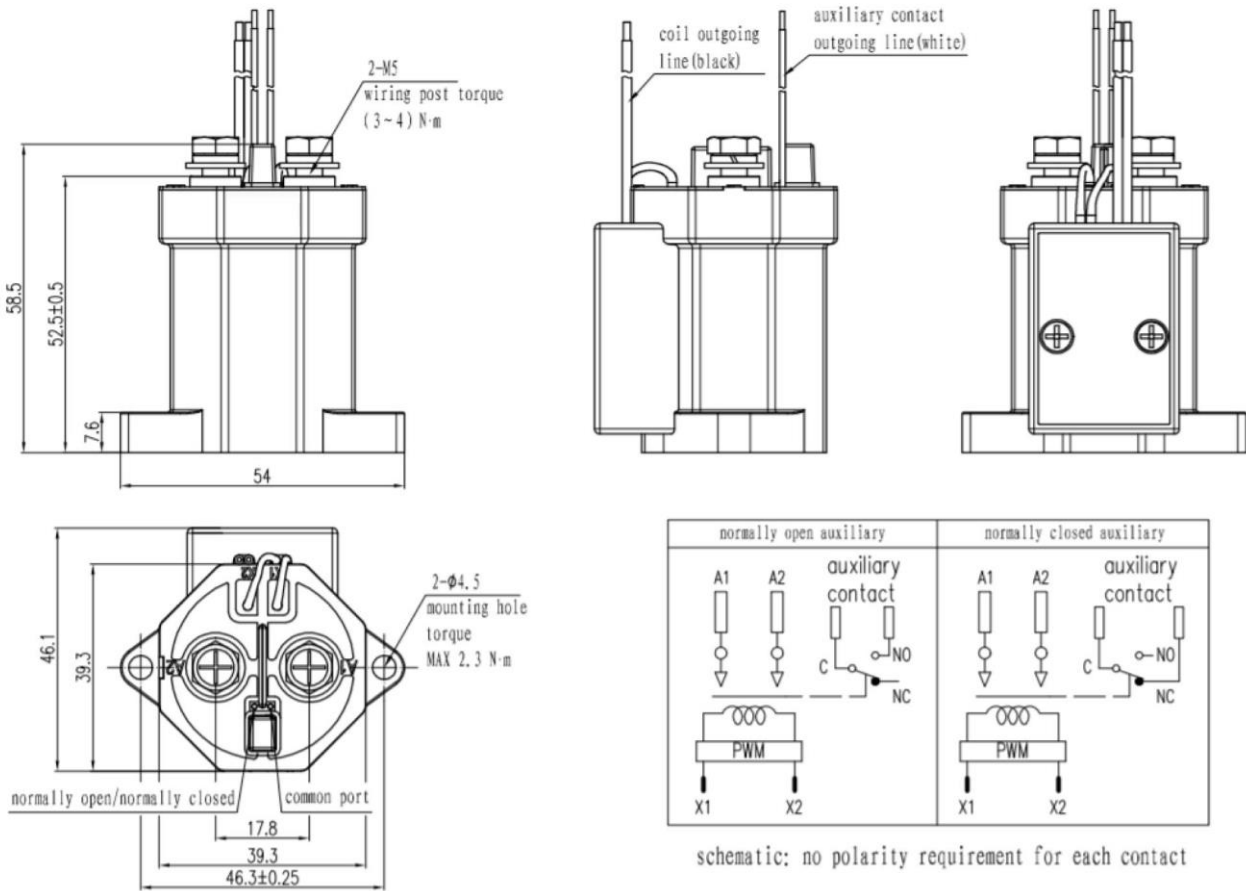
Vertical mounting structure:



Horizontal mounting structure:



● ENERGY-SAVING



Note: Control coil wire length 300±20mm

Product without tolerance, when ≤10mm, tolerance ±0.3mm

When dimension between 10~50 mm, tolerance ±0.5mm

When dimension ≥50mm, tolerance ±0.8mm

● ABOUT US

Component Basics ("CBV") datasheets are solely intended to assist designers ("Buyers") who are developing systems that incorporate CBV products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, valuation, and judgment in designing Buyer's systems and products. CBV datasheets have been created using standard laboratory conditions and engineering practices. CBV has not conducted any testing other than that specifically described in the published documentation for a particular datasheet. CBV may make corrections, enhancements, improvements, and other changes to its datasheets or components without notice.

Buyers are authorized to use CBV datasheets with the CBV component(s) identified in each particular datasheet. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER CBV INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. CBV DATASHEETS ARE PROVIDED "AS IS". CBV MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATASHEETS OR USE OF THE DATASHEETS, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. CBV DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO CBV DATASHEETS OR USE THEREOF.

All products are sold subject to CBV's terms and conditions of sale supplied at www.componentbasics.com. CBV ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY, AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF CBV COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS-RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY CBV.

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

Email: info@componentbasics.com