

High Voltage DC Contactor

CBVC7 SERIES DC CONTACTOR



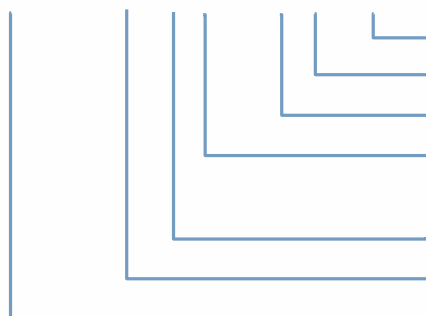
Part Number - CBVC7-100

● 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

CBVC7-100 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: 100A

Company abbreviation:

C: DC Contactor

7: Design number

● BASIC PARAMETER

Contact parameter	
Main Contact	
Rated operational current I_e	100A
Rated operational voltage U_e	12~1000VDC
Min. load	1A12VDC
Main contact type	1SH (SPST NO DM)
Nominal resistance of main circuit	0.4 m Ω (@100A)
Main contact mounting	M5 internal thread
Connecting torque	3~4N·m
Max. switching current (more than one cycle)	1000A320VDC
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)	250A	50,000 cycles

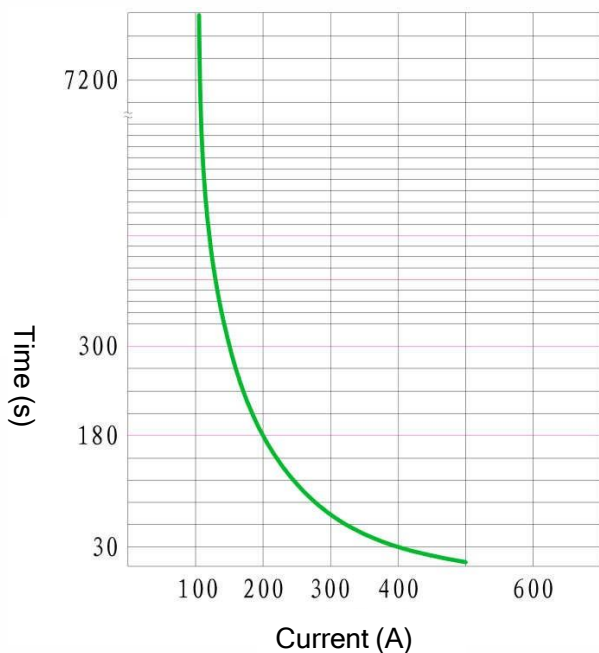
Note: For capacitive load life, when the contactor is used to control the main circuit of charge and discharge, the pre-charge circuit should be added. If there is no pre-charging path, a transient large current will be generated when the contactor closes, which may cause the contactor to stick.

Environmental characteristics		
Shock	Stability test	196m/s ² (20G)
	Strength test	490m/s ² (50G)
Resistance to vibration		10~1000Hz, 10G
Operating ambient temperature		-40°C~+85°C
Operating ambient humidity		5%~85% RH
IP Grade		IP67(inner space)
Altitude		≤4000m

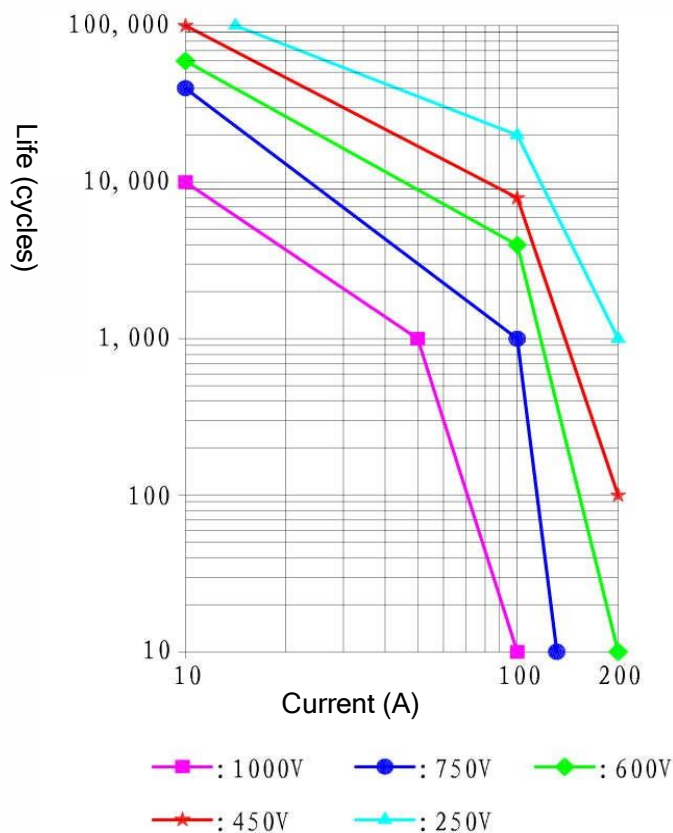
Electrical characteristics	
Dielectric withstand voltage	DC3110V / AC2200V
Insulation resistance	≥1000MΩ@1000VDC
Nominal insulation voltage Ui	1000V

Other	
Weight	Standard: 190g, with auxiliary 195g Energy-saving: 205g, with auxiliary 210g
The cross sectional area of an external conductor	≥35mm ²
Case mounting hole torque	MAX 2.3 N·m

Short overload capacity curve



Cut-off life curve of resistive load

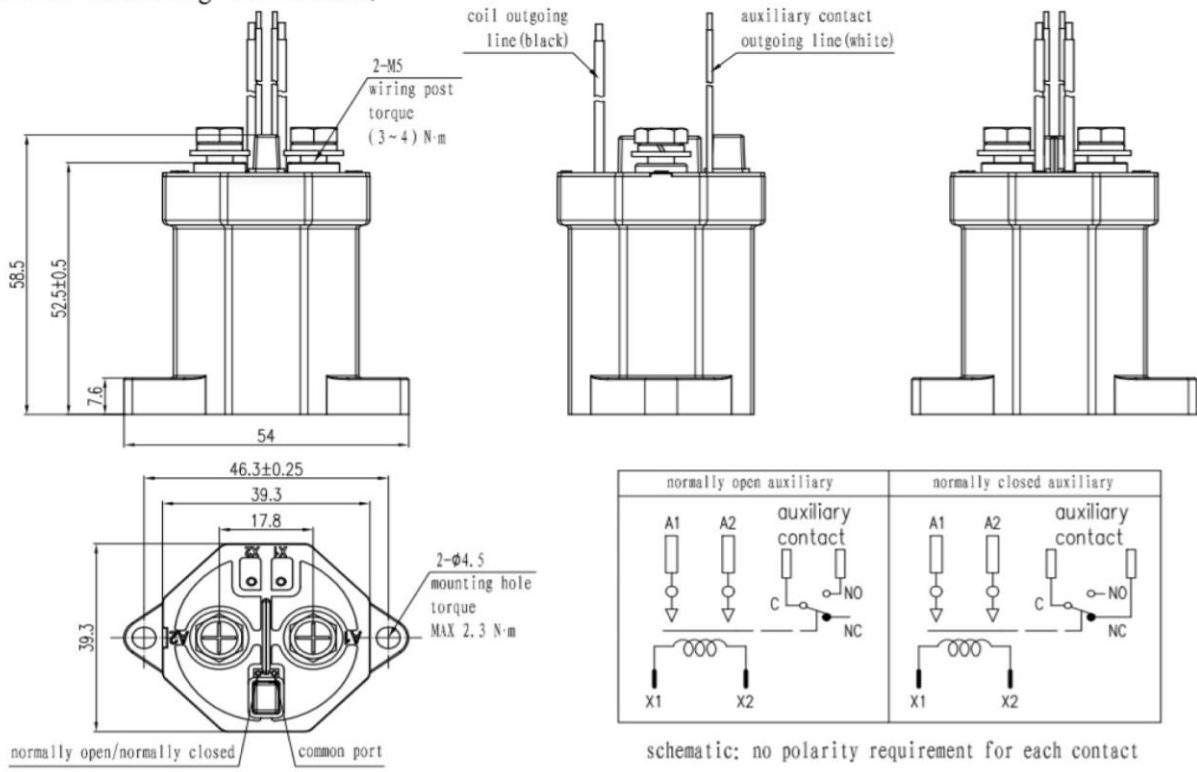


Note: Except for special note, the ambient temperature of electrical durability test is 23°C, and the on-break ratio is: 1s: 9s

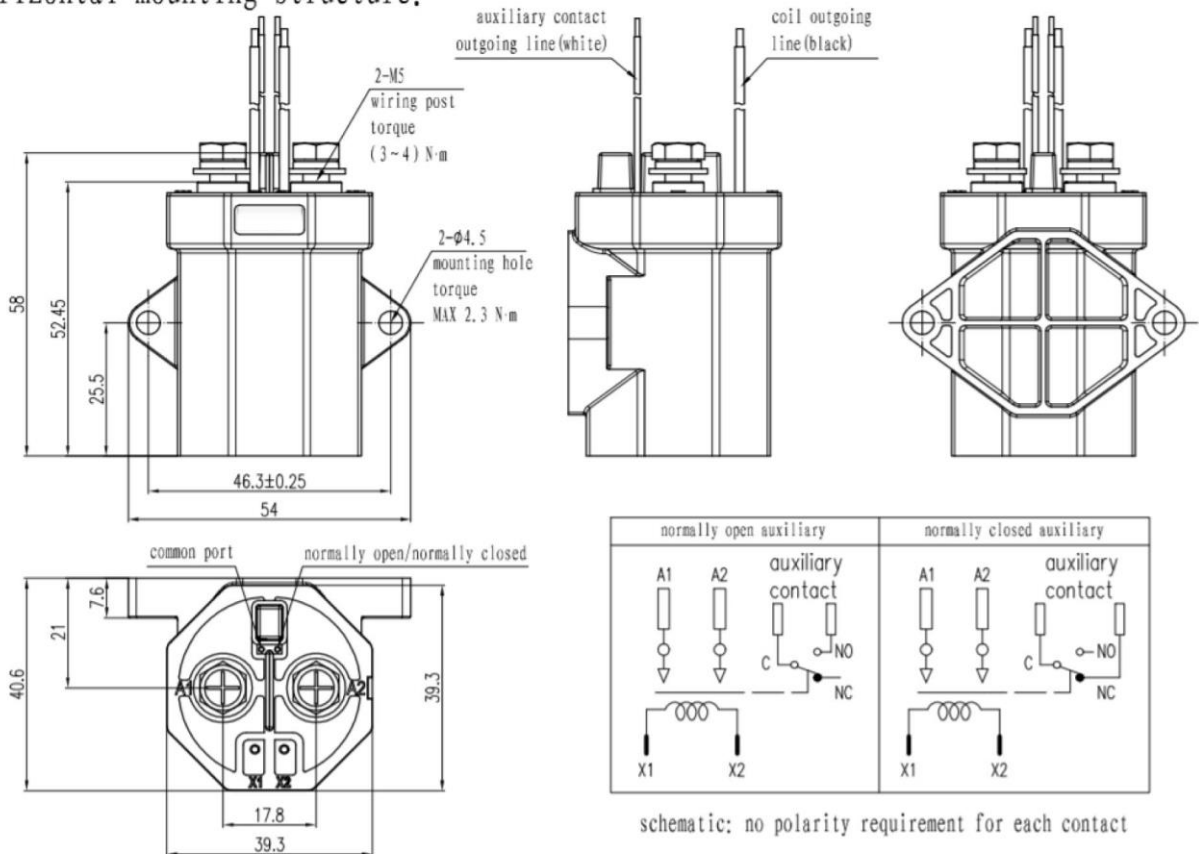
● OUTLINE AND WIRING SCHEMATIC DIAGRAM

Standard

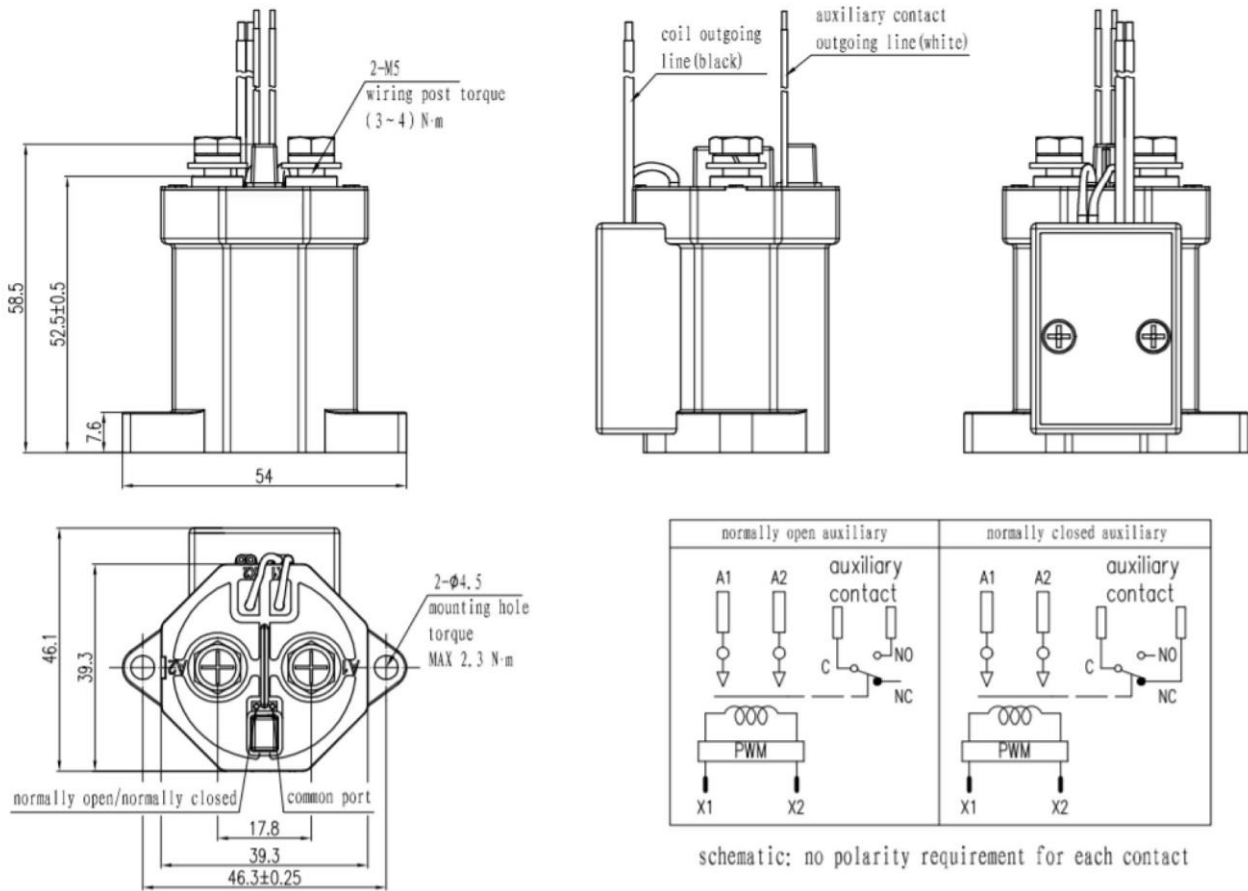
Vertical mounting structure:



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

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