

High Voltage DC Contactor

GL100



✧ Product overview

Ceramic-Metal seal—uses highly reliable ceramic sealing technology and is filled with strong arc cooling ability of gases, which can rapidly cut off the DC load.

Ceramic seal—to prevent the exposure of arc, contact in a sealed environment, contact resistance is low and stable, can work in harsh environment. The internal protection level of contact can reach IP67.

Fully RoHS Compliant—Be friendly to the environment.

Application—For electric vehicles, battery charging and discharging system, hybrid electric vehicles, charging piles etc.

✧ Contact data

Main contact Form	SPST-NO
operating voltage range	12-1000VDC
Rated operating voltage	800VDC
Rated operating current	100A (with 35mm ² wire)
Limiting short-time current	140A 10min 180A 1min 500A 1s Figure 2. Current carrying capacity
Min load	1A 12VDC
Max. break load	800A 400VDC 1 cycle
Contact resistance (Initial at rated current)	<1.5mΩ
Electrical life-resistive load ¹	-50A 400VDC 500 cycles Figure 1 Power switching capacity for resistive
Mechanical Life	300,000 cycles

✧ Note: 1. unless particularly stated, the test conditions is room temperature, operation frequency : 0.6s on, 5.4off.

✧ Performance Data

Insulation Resistance(Initial) 2	>1000MΩ (1000VDC)
Dielectric Strength Between open contacts	2500VAC, 1min (detection current≤1mA)
Dielectric Strength between contacts and coil	2500VAC, 1 min (detection current≤1mA)
Pick-up time (normal coil voltage,at 23℃)	≤25ms
Drop-out time (normal coil voltage,at 23℃)	≤10ms
Shock resistance-functional	half sine shock pulse, 11ms, 196m/s ²
Shock resistance -destructive	half sine shock pulse, 6ms, 490m/s ²
Vibration resistance	10-2000 Hz, 57.9m/s ²
Weight	About 185g

Note 2:The insulation resistance is 50 MΩ after life test.

✧ Environment Data

Operating ambient temperature	-40℃ ~ +85℃
Humidity	5%~95%RH

✧ Coil data

Coil code	B	C	F
Coil type	Single-coil	Single-coil	Single-coil
Rated coil voltage	12VDC	24VDC	48VDC
Max.allowable voltage	16VDC	28VDC	52VDC
Pick-up voltage (23° C)	≤8.5VDC	≤17VDC	≤34VDC
Drop-out voltage (23° C)	≥0.6VDC	≥0.9VDC	≥1.8VDC
Rated coil current (23℃)	0.46A	0.24A	0.12A
Rated coil power	5.5W	5.8W	6.0W

✧ Power switching capacity for resistive load

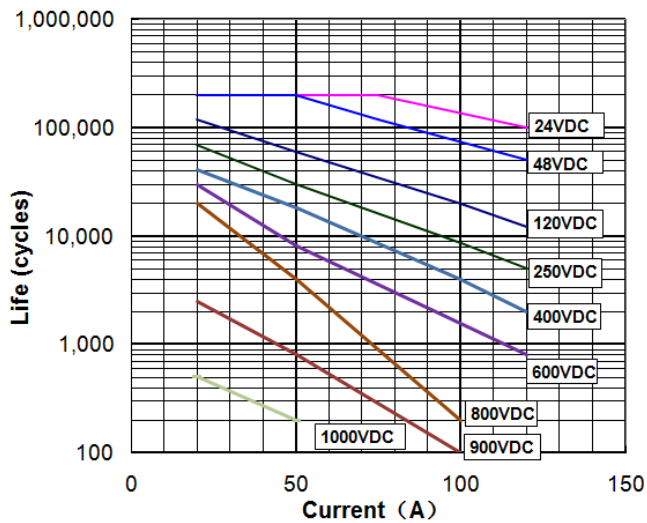


Figure1.Power switching capacity for resistive

✧ Current Carrying capacity

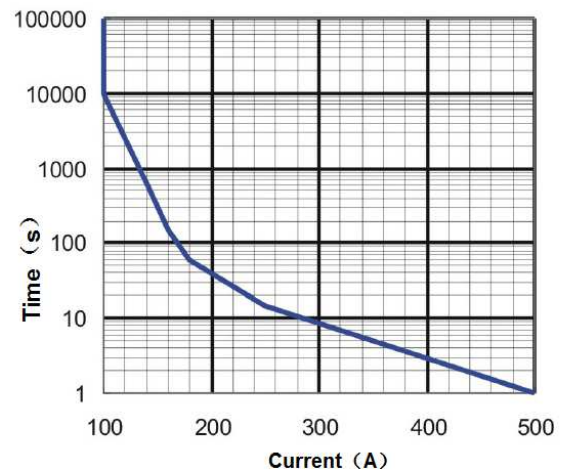


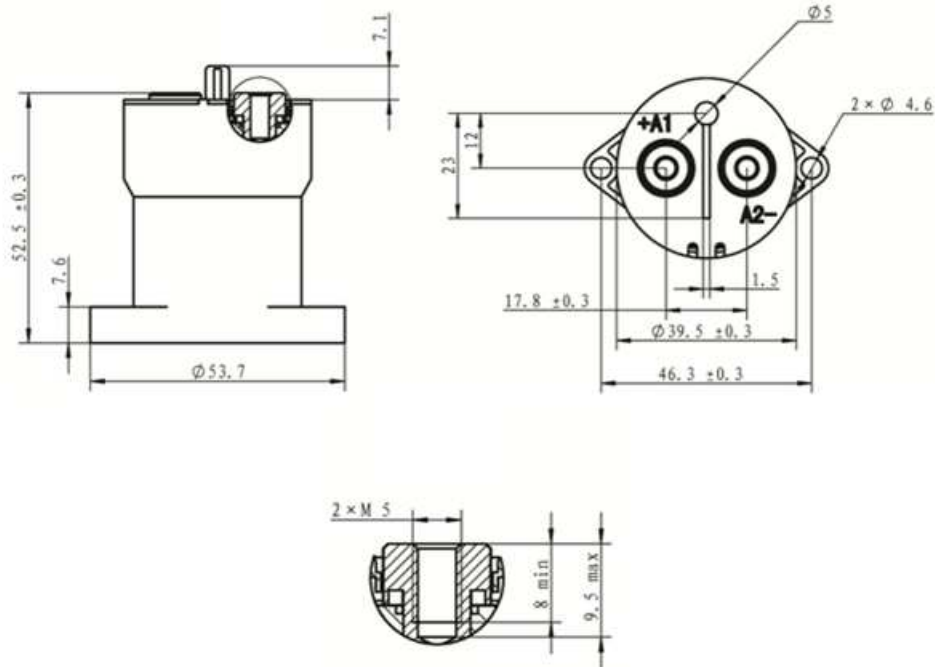
Figure 2.Current carrying capacity

✧ Product Code Structure

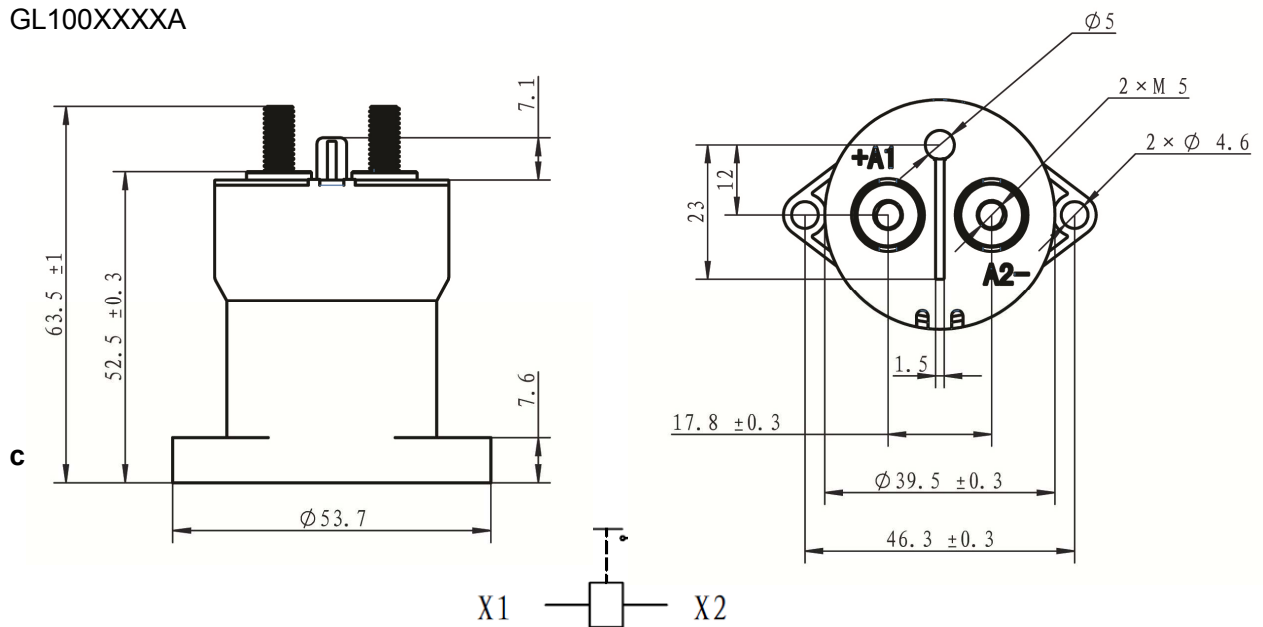
GL100	A	C	A	N	B	XXXXX
contact Form	A:normally pen					
Coil Voltage		B:12VDC C:24VDC F:48VDC				
Coil Wire Length			A:390mm T:customer-specified N: none			
Coil Terminal Connector				K: with connector N: none		
Installation and high current connector					A: Flat installation, screw extraction, B:Flat installation,internal thread	
Customer code						XXXXX

✧ Dimensions

GL100XXXXB



GL100XXXXA

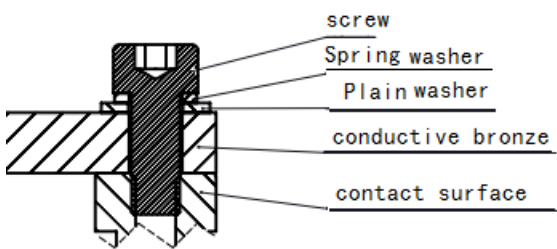
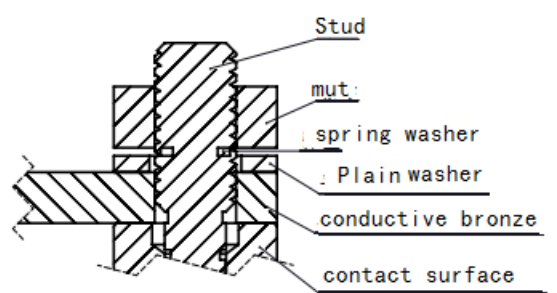


note1. Generally, unnoted tolerance reference $< 10: \pm 0.25$, $10 \sim 50: \pm 0.5$, $> 50: \pm 0.8$.

2. the product line is leaded by wire. the default wire specification is AWM3266 22AWG, and the wire color is black.

✧ Application information

- When the contactor is connected with one conductive copper bar, make sure that the conductive copper bar is tightly attached to the contact end face (multiple copper bars should make sure that the high-current conductive copper bar is closest to the contact end face, followed by the low-current conductive copper bar), followed by the flat ring, spring washer and nut. Incorrect connection sequence can cause severe overheating.

The product type	Connection diagram
internal thread type	
Stud extraction type	

- Please avoid attaching foreign body grease and corrosive liquid during loading, or it will cause abnormal heat at the contact.
- The locking torque of contactor installation should be controlled within the specified in the following table. Exceeding the range may cause thread damage. detail in the follow chart.

type	Load end mounting section			Contact mounting section	
	Mounting	Torque	suggest	Mounting	Torque
screw extraction	M5-0.8Kmut	3-4Nm	Recommend thickness of bronze ≤ 3mm	M4 screw	1.5-1.7Nm
internal thread	M5screw		Recommend thread length ≥ 7mm		

- The contacts of this contactor have polarity and are divided into “+” and “-” polarity, please mark the connection loading according to the wiring diagram
- The contactor can be operated by the pole-free coil and the care connection
- Parallelleling freewheel diode and coil may cause reduction of the cutting-off ability. it is

recommended to use a TVS tube with claping voltage over 1.5 times of the rated voltage of the coil to suppress the reverse overvoltage of the coil.

7. When the contactor is applied in the capactive load lop,please pay attentionto percharge and other measures,and it is recommended that cantactors' closing pressure differerce be controlled within 20V. otherwise,contact adhesion may be caused.
8. When the contact is used in inductive load loop ,it is recommende to install surge absorption device for inductive load in parallel.otherwise ,the cutting-off ability of the contactor may be reduced.
9. Please avoid contactor bumping or dropping during using or reloading .in order to maintain the performance of contactor,it is not recommended to continue using the contactor which has bumped or dropped.
10. Please refer to GL100XXXXA 3D-V2.0 or GL100XXXXB 3D-V2.0for the product digital model
11. For further information and support ,please contact our dealers.