

GL80

12 to 400 Vdc

Sealed HV DC Contactor - 80Amp Power Switching

RoHS Compliant



● Features

- Hermetic sealed by high reliable ceramic-metal braze process, contacts are fully sealed so the contact resistance is very low and stable. The contactor can work under hard environment.
- Small and easy to mount.
- Built with magnetic blow-out arc distinguishing, no risk of arc exposing, can make and break DC load quickly. It is good for applications of Electrical Vehicle and Hybrid Vehicle.
- Fully RoHS Compliant.

● Product specifications

Parameter	Ratings
Contact Arrangement (main)	SPST-NO
Rated Operating Voltage	12-400VDC
Rated carrying current	80A (See notes 1)
Short term carrying current	2 minutes, 120A, 15 minutes, 180A, (see notes 1) See Figure 3. Current carrying capacity
Minimal switching capacity	1A 12VDC (See notes 2)
Max cut-off current (1 time)	800A@300VDC. (See notes 3) See Figure 2. Cut-off capacity for resistive load at 400VDC.
Overload make and break capacity	120A@400VDC, 50 cycles. (See notes 3)
Reverse direction cut-off capacity	120A@200VDC, 50 cycles. (See notes 3)
Contact Resistance	<3.3 mΩ (By voltage drop at 6V 20ADC)
Insulation Resistance at 500VDC	100 MΩ (50 MΩ after life test)
Dielectric at sea level (between open contacts and between contacts and coil)	2500 VRMS, 1 Minutes, (leakage < 10mA)
Pick-up time, 25°C (tested at nominal coil voltage)	50ms
Release time, 25°C	30ms (See notes 4)
Shock-functional (1/2 Sine, 11ms, detection time, 10 μs)	20G's for on, 10G's for off
Shock-destructive (1/2 Sine, 6ms)	50G's
Vibration-functional (10-200 Hz, detection time, 10 μs)	4.5G's
Vibration-destructive (10-200 Hz)	4.5G's (Time of vibration for each direction; X, Y, Z direction: 4 hours)
Mechanical Life	200, 000 Cycles
Electrical life (resistive load)	1000 cycles 80A@400Vdc (see notes 3) See Figure 1. Power switching capacity for resistive load at 400VDC.
Operating ambient Temp Range	-40°C to 80°C
Storage ambient Temp Range	-40°C to 85°C
Weight, Typical	0.32kg

Notes

1. The minimal cable size is 15mm².

2. This value can change due to the switching frequency, environmental conditions and desired reliability level, please check this in your system.
3. The electrical load performance value based on resistive load and when a varistor or TVS is connected in parallel to the coil. The life will be dramatically reduced when a diode is used.
4. The contactor is tested when no diode is parallel connected to the coil.
5. Contactors with 12 V DC coil and 24 V DC coil have the same specifications.

● **Power switching capacity for resistive load**

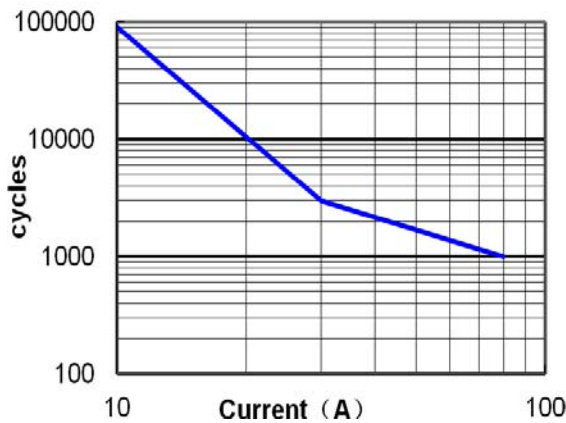


Figure 1 . Power switching capacity for resistive load at 400VDC

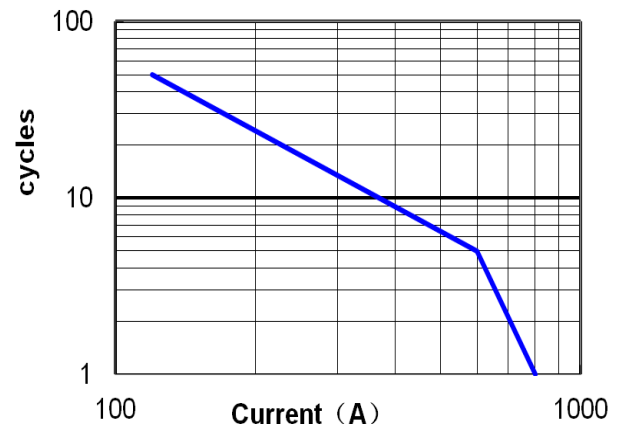


Figure 2 . Cut-off capacity for resistive load at 400VDC. (Positive current, the voltage is 300VDC when the current is higher than 600A)

● **Current carrying capacity**

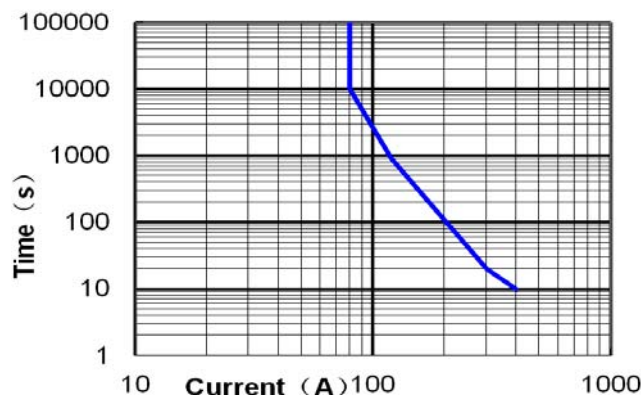


Figure 2、Current Carrying capacity(The highest ambient temperature is 80°C)

● **Coil ratings**

Coil P/N Designation	B	C
Coil Nominal Voltage	12Vdc	24Vdc
Coil Voltage (Max)	16Vdc	32Vdc
Coil current (25°C)– Amps	0.4A	0.2A
Pick-up Voltage @ 25°C, Max	9V	18V
Dropout Voltage @ 25°C, Min	1V	2V

● Part number system

GL80

A

B

Contact Form:

A=Normally Open,

Coil voltage:

B=12vdc

C=24Vdc

● Outline dimension

