

FEATURES

- Ceramic brazing sealed technology guarantees no risk of arc leaking and ensures no fire or explosion
- Filled with gas (mostly hydrogen) to minimize contact oxidation and damage from arcing; the contact resistance is low and stable
- Contact part can meet IP67 protection level
- Current rated load continuously at 85°C
- Insulation resistance is 1000MΩ (1000VDC), and dielectric strength between the coil and contacts is 3.0kV, which meets the requirements of IEC 60664-1



APPLICATION

- Energy storage system
- Construction machinery
- Charging pile
- Solar inverter

CONTACT DATA

Main Contact Arrangement	1 Form A
Initial Contact Voltage Drop	≤100mV at 120 A
Rated Current (resistive load)	120A (@ 50mm ²)
Rated Switching Voltage	1000VDC
Min.Applicable Load	48VDC, 100mA
Max. Switching Power (1500VDC)	120kW
Max. Breaking Current	1200A (450VDC)
Aux. Contact Arrangement	1 Form A
Rated Load of Aux.	30VDC, 2A
Max Load of Aux.	30VDC, 2A

COIL DATA @ 23°C

Nominal Voltage (VDC)	Coil Power (W)	Nominal Current (A)	Coil Resistance (Ω±10%)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)
12	3.6	0.30	43.6	9.0 Max.	1.2 Min.
24	3.6	0.15	174.5	18.0 Max.	2.4 Min.

ENDURANCE

Electrical Life (resistive Load)	Toggle: 6000 ops (1000 VDC, 20A)
	Toggle: 50 ops (1000 VDC, 120A)
Current Enduranc	120A, Cont.
	150A, 2h
	200A, 20min
	900A, 6 s
Mechanical endurance	2x10 ⁵ times, on-off ratio: 0.5s: 0.5s

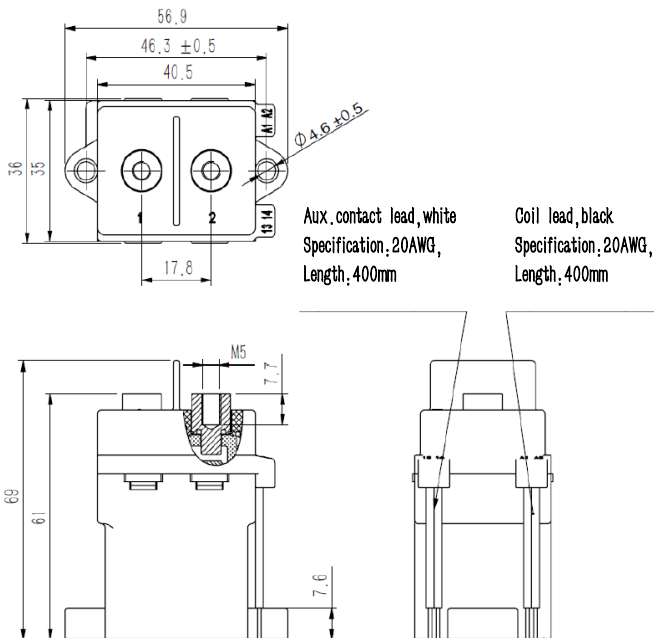
CHARACTERISTICS

Operate Time(at nominal voltage)		≤25ms
Release Time(at nominal voltage)		≤15ms
Insulation Resistance		> 1000 MΩ (at 1000 VDC)
Dielectric Strength	Between Coil and Contacts	3,000 VAC, 50/60 Hz (1min)
	Between Open Contacts	3,000 VAC, 50/60 Hz (1min)
Vibration		10Hz ~ 2000Hz, 20G
Shock Resistance	Functional	40G
	Destructive	40G
Ambient temperature		-40°C ~ 85°C
Humidity		20%RH to 85%RH
Weight		Approx 211g

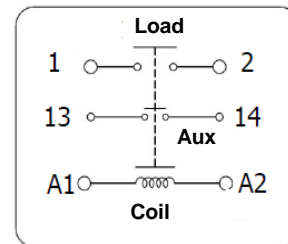
ORDERING INFORMATION

Product Series 产品系列	CHEV	-1	12	N	A	120	.xxx
Contact Type 触点形式	1:1 Form A 1组常开						
Coil Voltage 线圈电压	12:12V Vd.c. 24: 24V Vd.c.						
Load Type 负载类型	N: No polarity 无极性						
Auxiliary Contact 辅助触点	A: With Auxiliary Contact 带辅助触点						
Load Current 负载电流	120: 120A						
Extra numbers or letters 额外的数字或字母	Blank or Other Customer Requirements 空白或 客户其他要求						

OUTLINE DIMENSION



WIRING DIAGRAM



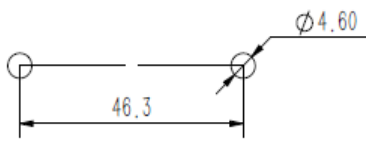
Note: The coil, load and Aux. have no polarity

Note: All unspecified tolerance according to following table.

Outline dimensions hadn't specified tolerance	
Outline Dimensions	Tolerance
≤10	±0.3
10~50	±0.6
>50	±1

INSTALLATION INFORMANTION

Load Terminal Installation				
Installation Mode	Selection Screw	Torque	Copper Busbar Diameter	Copper Busbar Thickness
M5 Screw	M5x10 Combined Bolt	3 N·m ~4N·m	Ø 5.1 mm~Ø 5.5 mm	2.0mm~3.0 mm

Relay Installation		
Mounting Type	Horizontal or vertical direction	Mounting Hole Size
Installation Mode	M4 Screw	
Torque	2.2 N·m Max	

ENGINEERING NOTES

1. Unless otherwise explicitly stated, the standard environment conditions for measurement or testing are listed as followin gs:

Ambient temperature is $23^{\circ}\text{C}\pm 5^{\circ}\text{C}$.

Atmospheric pressure is $96\times (1\pm 10\%) \text{ kPa}$.

Relative humidity is 25% RH ~ 75% RH.

2. In order to curb the reverse electromotive force of coil, a nonlinear resistor is recommended to use (ZNR is recommended, the max energy tolerance: $\geq 1\text{J}$. Voltage: 1.5 ~ 2 times the rated voltage) . Please be noted that a diode will make the release time of relay increase, which should lead to the degradation of cutting-off capability. Relay products with circuit board do not need to add a device to curb the reverse electromotive force of the coil.

3. The rating load of contact is resistive load. Please assure a surge absorption device together with inductive load when using the $L/R\geq 1\text{ms}$ inductive load (L Load), otherwise it may lead to the decrease of electrical endurance and defective switch.