

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 1000M Ω (1000VDC),and dielectric strength between the coil and contacts is 4.0kV ,which meets the requirements of IEC 60664-1

APPLICATION

New energy vehicle
Energy storage
Charging pile
Solar

CONTACT DATA

Main Contact Arrangement	1 Form A
Initial Contact Voltage Drop	$\leq 150\text{mV}$ at 500 A
Rated Current (resistive load)	500 A (@ 200mm ²)
Rated Switching Voltage	1000VDC
Min.Applicable Load	6VDC, 1 A
Max. Switching Power (1000VDC)	500kW
Max. Breaking Current	2000A (450VDC)

COIL DATA @ 23°C

Nominal Voltage (VDC)	Coil Power (W)	Nominal Current (A)	Coil Resistance ($\Omega \pm 10\%$)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)
12	6	0.50	24	9.0 Max.	1 Min.
24	6	0.25	96	18.0 Max.	2 Min.

ENDURANCE

Electrical Life (resistive Load)	Breaking: 50 ops (1000 VDC,500A)
	Breaking: 100 ops (750 VDC,500A)
Electrical Life (Capacitive Load)	接通: 2.5×10^4 ops (37.5 VD, 500A; $\tau=1\text{ms}$, C=1100 μF)
	接通: 1ops (300VD, 1350A; $\tau=1\text{ms}$, C=1100 μF)
Current Enduranc	500A, 持续
	600A, 10分钟
	700A, 1分钟
	2000A, 0.6秒
Mechanical endurance	1×10^6 times, on-off ratio: 0.5s: 0.5s

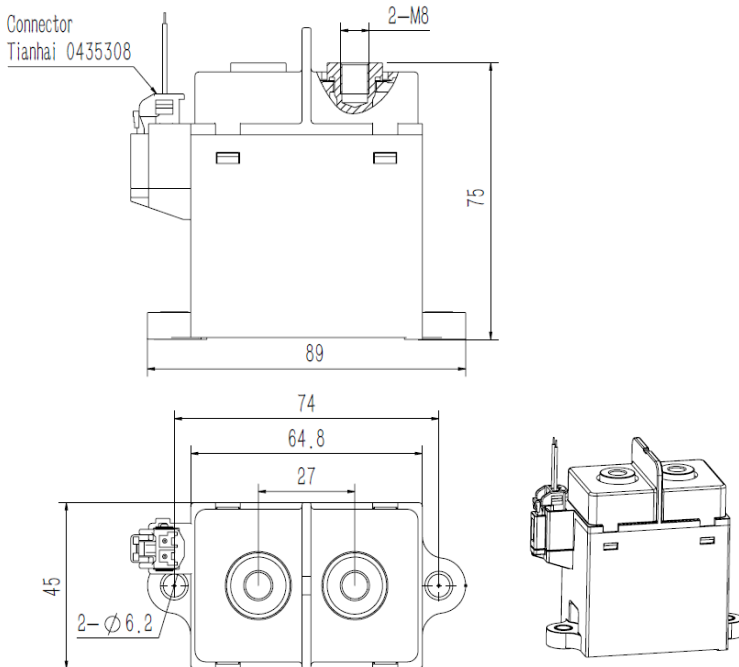
CHARACTERISTICS

Operate Time(at nominal voltage)		$\leq 35\text{ms}$
Release Time(at nominal voltage)		$\leq 15\text{ms}$
Insulation Resistance		$> 1000 \text{ M}\Omega$ (at 1000 VDC)
Dielectric Strength	Between Coil and Contacts	4,000 VAC, 50/60 Hz (1min)
	Between Open Contacts	4,000 VAC, 50/60 Hz (1min)
Vibration		10Hz ~ 500Hz, 49 m/s ²
Shock Resistance	Functional	196 m/s ²
	Destructive	490 m/s ²
Ambient temperature		-40°C ~ 85°C
Humidity		5%RH to 85%RH
Weight		Approx 570g

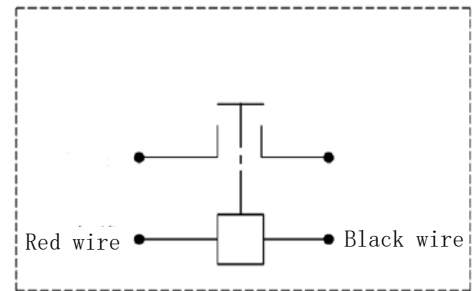
ORDERING INFORMATION

	CH	EV	- P	500	/ E-	12	C	A	1	, XXX
Company Code	CH: Churod									
Application Area	EV: Electric Vehicle									
Series Code	P: P Series									
Load Current	500: 500A									
Load Voltage	E: 1000VDC									
Coil Specification	12: 12VDC; 24: 24VDC									
Coil Termination	C: Connector									
Contact Type	A: Form A									
Load Termination	1: Screw Terminal Female									
Characteristic Code	Blank or Other Customer Requirements									

OUTLINE DIMENSION



WIRING DIAGRAM

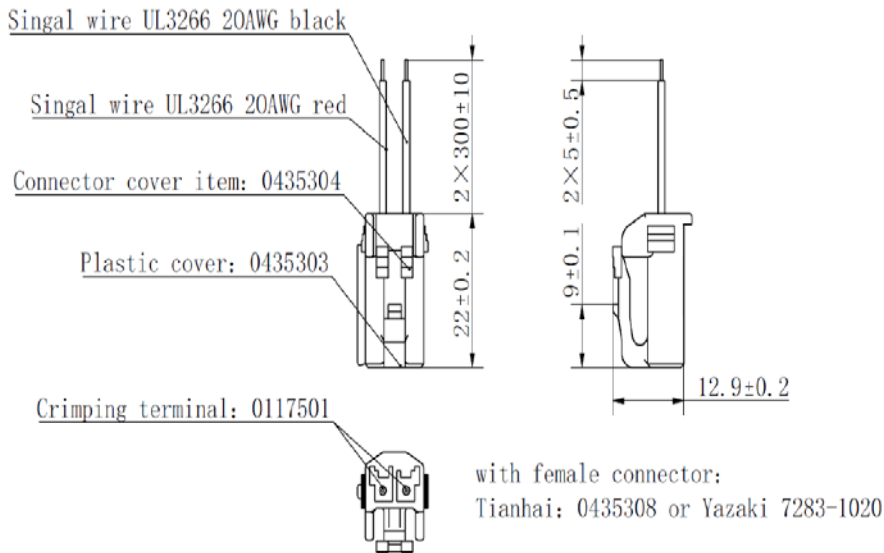


Note: The coil and the load have no polarity

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

COIL TERMINATION:CONNECTOR



INSTALLATION INFORMANTION

Load Terminal Installation				
Installation Mode	Selection Screw	Torque	Copper Busbar Diameter	Copper Busbar Thickness
M8 Screw	M8 Combined Bolt	9 N·m ~11N·m	Ø 8.0 mm~Ø 8.5 mm	3.0mm~5.0 mm

Relay Installation		
Mounting Type	Horizontal or vertical direction	Mounting Hole Size
Installation Mode	M6 Screw	
Torque	3N·m ~4N·m	

ENGINEERING NOTES

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

Ambient temperature is 23°C±5°C.

Atmospheric pressure is 96× (1±10%) 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:≥1J. 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≥1ms inductive load (L Load), otherwise it may lead to the decrease of electrical endurance and defective switch.