

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 4.0kV, 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	≤50mV at 250 A
Rated Current (resistive load)	250 A (@ 100mm ²)
Rated Switching Voltage	1500VDC
Min.Applicable Load	6VDC, 1 A
Max. Switching Power (1500VDC)	375kW
Max. Breaking Current	2000A (1000VDC)
Aux. Contact Arrangement	1 Form A
Rated Load of Aux.	24VDC, 100mA
Max Load of Aux.	24VDC, 300mA

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	Driving 55 Holding 6	Driving 4.6 Holding 0.5	Driving 2.6 Holding 24	9.0 Max.	1 Min.
24	Driving 55 Holding 6	Driving 2.3 Holding 0.25	Driving 10.4 Holding 96	18.0 Max.	2 Min.

ENDURANCE

Electrical Life (resistive Load)	Switching: 400 ops (1000 VDC, 250A)
	Switching: 20 ops (1500 VDC, 250A)
	Breaking: 30 ops (1500 VDC, 250A)
	Breaking: 1 op (1000 VDC, 2000A)
Current Endurance	250A, Cont.
	350A, 10min
	550A, 60 s
	1000A, 30 s
	2000A, 0.6 s
Mechanical endurance	2x10 ⁵ times, on-off ratio: 0.5s: 0.5s

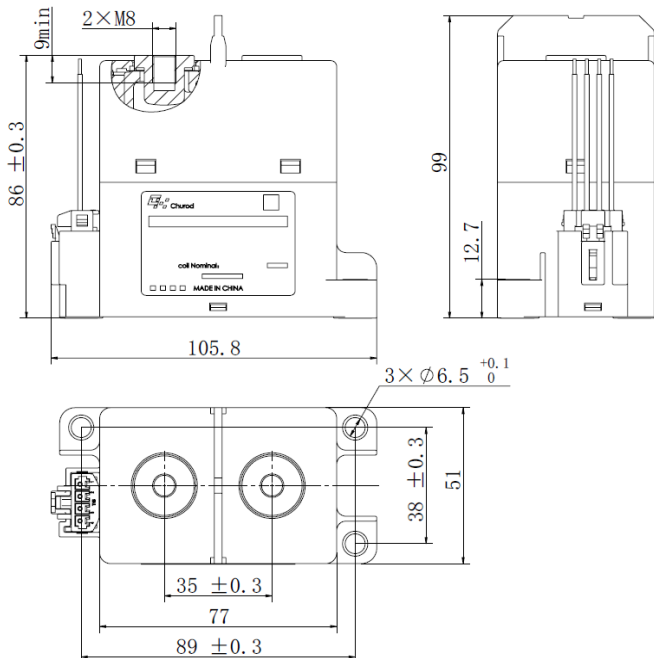
CHARACTERISTICS

Operate Time(at nominal voltage)		≤50ms
Release Time(at nominal voltage)		≤15ms
Insulation Resistance		> 1000 MΩ (at 1000 VDC)
Dielectric Strength	Between Coil and Contacts	4,000 VAC, 50/60 Hz (1min)
	Between Open Contacts	3,000 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 810g

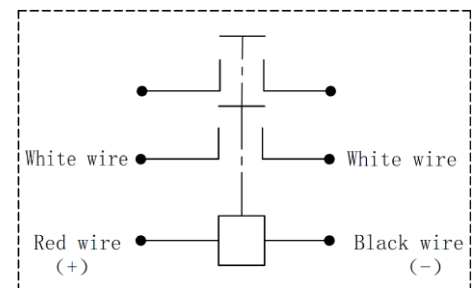
ORDERING INFORMATION

CH	PV	S	250	/ F - 12	C	A	1	- A	C	, XXX
Company Code		Application Area		Series Code		Load Current		Load Voltage		Coil Specification
CH: Churod		PV: Photovoltaic Energy Storage		S: S Series		250: 250A		E: 1000VDC F: 1500VDC		12: 12VDC 24: 24VDC
Application Area		Series Code		Load Current		Load Voltage		Coil Specification		Coil Termination
PV: Photovoltaic Energy Storage		S: S Series		250: 250A		E: 1000VDC F: 1500VDC		12: 12VDC 24: 24VDC		C: Connector
Series Code		Load Current		Load Voltage		Coil Specification		Coil Termination		Contact Type
S: S Series		250: 250A		E: 1000VDC F: 1500VDC		12: 12VDC 24: 24VDC		C: Connector		A: Form A
Load Current		Load Voltage		Coil Specification		Coil Termination		Contact Type		Load Termination
250: 250A		E: 1000VDC F: 1500VDC		12: 12VDC 24: 24VDC		C: Connector		A: Form A		1: Screw Terminal Female
Load Voltage		Coil Specification		Coil Termination		Contact Type		Load Termination		Aux. Contact Type
E: 1000VDC F: 1500VDC		12: 12VDC 24: 24VDC		C: Connector		A: Form A		1: Screw Terminal Female		A: Form A
Coil Specification		Coil Termination		Contact Type		Load Termination		Aux. Contact Type		Aux. Contact Termination
12: 12VDC 24: 24VDC		C: Connector		A: Form A		1: Screw Terminal Female		A: Form A		C: Connector
Coil Termination		Contact Type		Load Termination		Aux. Contact Type		Aux. Contact Termination		Characteristic Code
C: Connector		A: Form A		1: Screw Terminal Female		A: Form A		C: Connector		Blank or Other Customer Requirements
Contact Type		Load Termination		Aux. Contact Type		Aux. Contact Termination		Characteristic Code		
A: Form A		1: Screw Terminal Female		A: Form A		C: Connector				
Load Termination		Aux. Contact Type		Aux. Contact Termination		Characteristic Code				
1: Screw Terminal Female		A: Form A		C: Connector						
Aux. Contact Type		Aux. Contact Termination		Characteristic Code						
A: Form A		C: Connector								
Aux. Contact Termination		Characteristic Code								
C: Connector										
Characteristic Code										
Blank or Other Customer Requirements										

OUTLINE DIMENSION



WIRING DIAGRAM

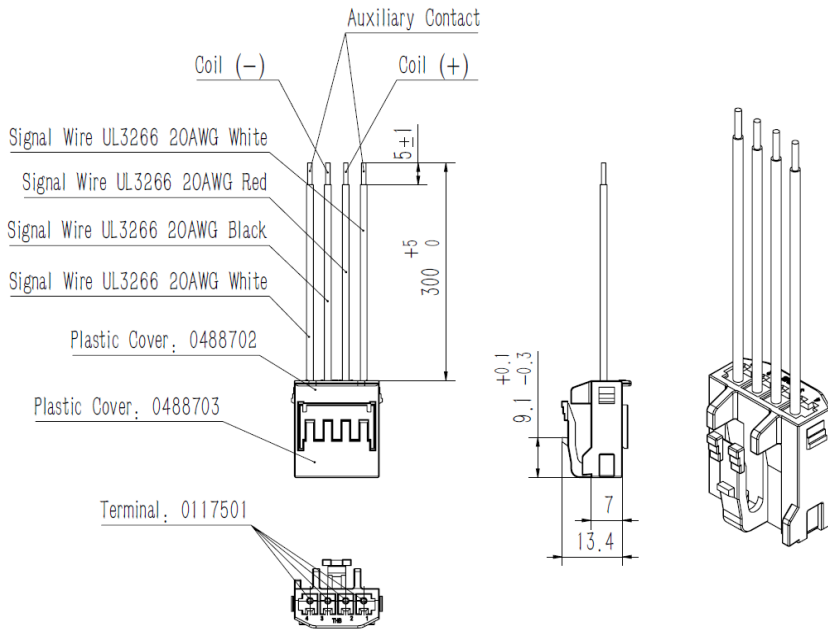


Note: The coil has polarity, The load and Aux. have no polarity

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

COIL TERMINATION:CONNECTOR



INSTALLATION INFORMATION

Load Terminal Installation				
Installation Mode	Selection Screw	Torque	Copper Busbar Diameter	Copper Busbar Thickness
M8 Screw	M8x18 Combined Bolt	9 N·m ~11N·m	Ø 8.0 mm~Ø 8.5 mm	4.0mm~6.0 mm

Relay Installation		
Mounting Type	Horizontal or vertical direction	Mounting Hole Size
Installation Mode	M6 Screw	
Torque	6 N·m ~8N·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.