CHEV-H250E 250A High Voltage Direct Current Relay

Churod Electronics

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	≤60mV at 250 A
Rated Current (resistive load)	250 A (@ 2x80mm^2)
Rated Switching Voltage	1000VDC
Min.Applicable Load	6VDC，1 A
Max. Switching Power (1000VDC)	250kW
Max. Breaking Current	2000A (1000VDC)
Aux. Contact Arrangement	1 Form A
Rated Load of Aux.	6VDC，0.1A
Max Load of Aux.	5VDC，1mA

COIL DATA @ 23℃

Nominal Voltage (VDC)	Coil Power (W)	Nominal Current (A)	Coil Resistance (Ω±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: 30000 ops (50VDC,250A)
	Breaking: 1000 ops (1000 VDC,250A)
	Breaking: 1 op (1000 VDC,2000A)
Current Enduranc	250A, Cont.
	350A, 8 min
	1000A, 20s
	2000A, 1s
Mechanical endurance	5x10^5 times, on-off ratio: 0.5s: 0.5s

CHARACTERISTICS

Operate Time(at nominal voltage)		≤30ms
Release Time(at nominal voltage)		≤10ms
Insulation Resistance		> 1000 MΩ (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℃～85℃
Humidity		5%RH to 85%RH
Weight		Approx 450g

ORDERING INFORMATION

CH	EV	–	H	250	/	E	–	12	C	A	1	–	A	C	,	XXX

Company Code
公司代号
CH：Churod

Application Area
应用领域&类型
EV：New Energy Vehicles

Series Code
系列代号
H：H Series

Load Current
负载电流
250：250A

Load Voltage
负载电压
E:1000VDC

Coil Specification
线圈规格
12：12VDC；24：24VDC

Coil Termination
线圈引出端形式
C：连接器 Connector

Contact Type
触点形式
A：Form A

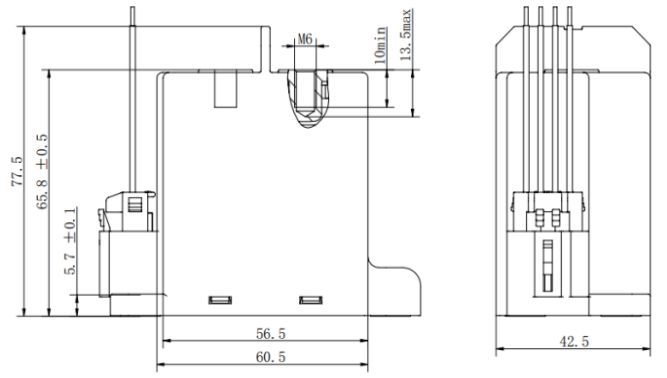
Load Termination
负载引出端形式
1:内螺纹Screw Terminal Female

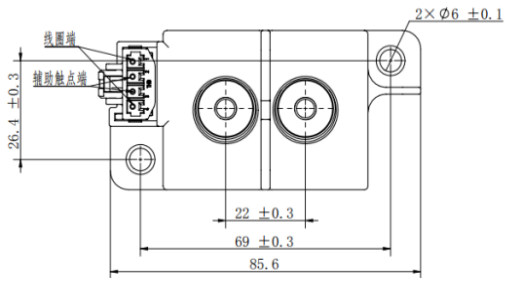
Aux. Contact Type
辅助触点形式
A：Form A

Aux. Contact Termination
辅助触点引出形式
C：连接器Connector

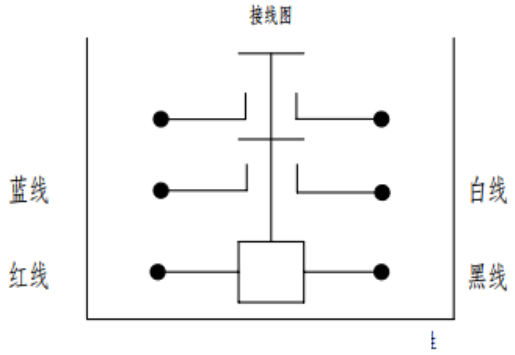
Characteristic Code
特性号
Blank or Other Customer Requirements

OUTLINE DIMENSION





WIRING DIAGRAM

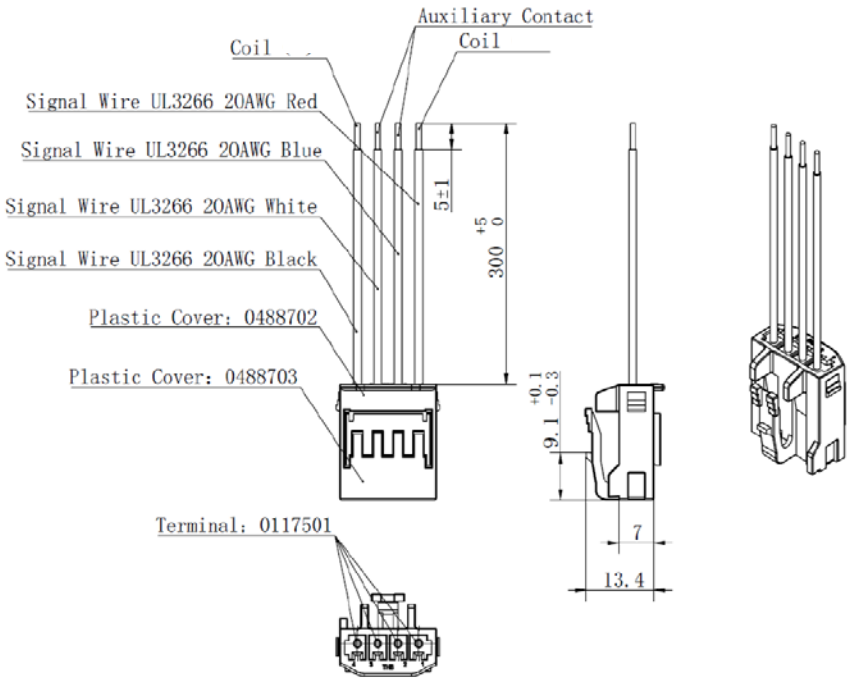


Note: The coil has no polarity，The load and Aux. have no polarity

Note：All unspecified tolerance according to following table.

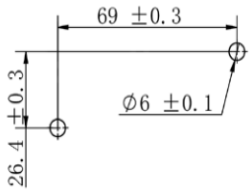
Outline dimensions hadn't specified tolerance	
Outline Dimensions	Tolerance
≤10	±0.3
10～50	±0.6
＞50	±1

COIL TERMINATION:CONNECTOR



INSTALLATION INFORMANTION

Load Terminal Installation				
Installation Mode	Selection Screw	Torque	Copper Busbar Diameter	Copper Busbar Thickness
M6 Screw	M6 Combined Bolt	6 N·m ~8 N·m	Ø 6.0 mm~Ø 6.5 mm	2.0mm~3.0 mm

Relay Installation		
Mounting Type	Horizontal or vertical direction	Mounting Hole Size
Installation Mode	M5 Screw	
Torque	3N·m ~5N·m	

ENGINEERING NOTES

1. Unless otherwise explicitly stated, the standard environment conditions for measurement or testing are listed as followings:
Ambient temperature is 23℃±5℃.
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.