

STE250V-1500

陶瓷密封高压接触器 Ceramic Sealed High-voltage Contactor

特点 Features

- 主触点无极性, 可双向带载切换 The main contact is non-polar and can be switched bidirectional with load
- 采用陶瓷密封结构, 无电弧泄露风险 Ceramic sealed structure, no arc leakage risk
- 250A 85°C长时间载流能力 250A Long-term current carrying capacity at 85 °C
- 触点室内充有保护性气体, 有效防止触点氧化烧损, 触点部分可满足 IP67 防护等级 The contact room is filled with protective gas to effectively prevent contact oxidation and burning, and the contact part can meet the IP67 protection grade



典型应用 Typical application

- 电池充电系统 Battery charging system;
- 大功率直流设备 High power DC equipment;
- 可再生能源存储设备 Renewable energy storage devices;
- 燃料电池 & 太阳能系统 Fuel Cell & Solar Energy Systems;
- 新能源汽车 New energy vehicle ;
- 混合动力汽车 Hybrid electric vehicle.

触点参数 Contact Data

触点形式 Contact Arrangement	1A
最大切换电压 Max. Switching Voltage	1500VDC
最大切换电流 Max. Switching Current	2000A, 1000VDC, 1ops
触点材质 Contact Material	银合金 Ag alloy
接触电阻 Contact Resistance	Max. 0.5mΩ (20A 6VDC)
动作/释放时间 Operate Time/ Release Time	≤50ms/≤30ms
回跳时间 Rebound Time	<5ms
电耐久性 Electrical Endurance	200 ops (1500VDC 250A) 1,500ops (1000VDC 250A)
机械耐久性 Mechanical Endurance	2*10 ⁵ ops.(on:off=1s:1s)

性能参数 Characteristics

绝缘电阻 Insulation Resistance	1000MΩ (at 1000VDC)
介质耐压 Dielectric Strength	断开触点间 Open Load Contacts 4000Vrms 1min
	线圈与触点间 Coil to Load Contacts 4000Vrms 1min
温度范围 Temperature Range	-40~+85 °C
湿度 Ambient Operating Humidity	5% ~ 85%RH
振动 Vibration Resistance	4G 10~500Hz 100m/s ²
冲击 Shock	稳定性 Functional 20G 11ms ½ 正弦波 sine
	强度 Destructive 50G
外形尺寸 Outline Dimension	104X70X108mm

线圈规格 Coil Voltage Specifications

额定电压 Nominal Coil	辅助触点 Auxiliary Contact	动作电压 Must Operate	释放电压 Release Coil	额定功率 Rated Power
VDC	带/不带 Yes/No	VDC	VDC	W
12	带/Yes	≤9	≥ 1.2V	最大60W
24	带/Yes	≤18	≥ 2.4V	保持7.2W

注:

a) 所有数值均为在环境温度+23°C下未预通电的线圈 All the performance data are for coils that are not pre energized at 23°C ambient temperature.

辅助触点规格 Auxiliary Contacts Specifications

辅助触点形式 Auxiliary Contacts Arrangement	1路常开 1 Form A
最大负载 Max. Load	30VDC 2A, 125VAC 3A
最小负载 Min. Load	8VDC 0.1A
接触电阻 Contact Resistance	<0.1Ω

注:

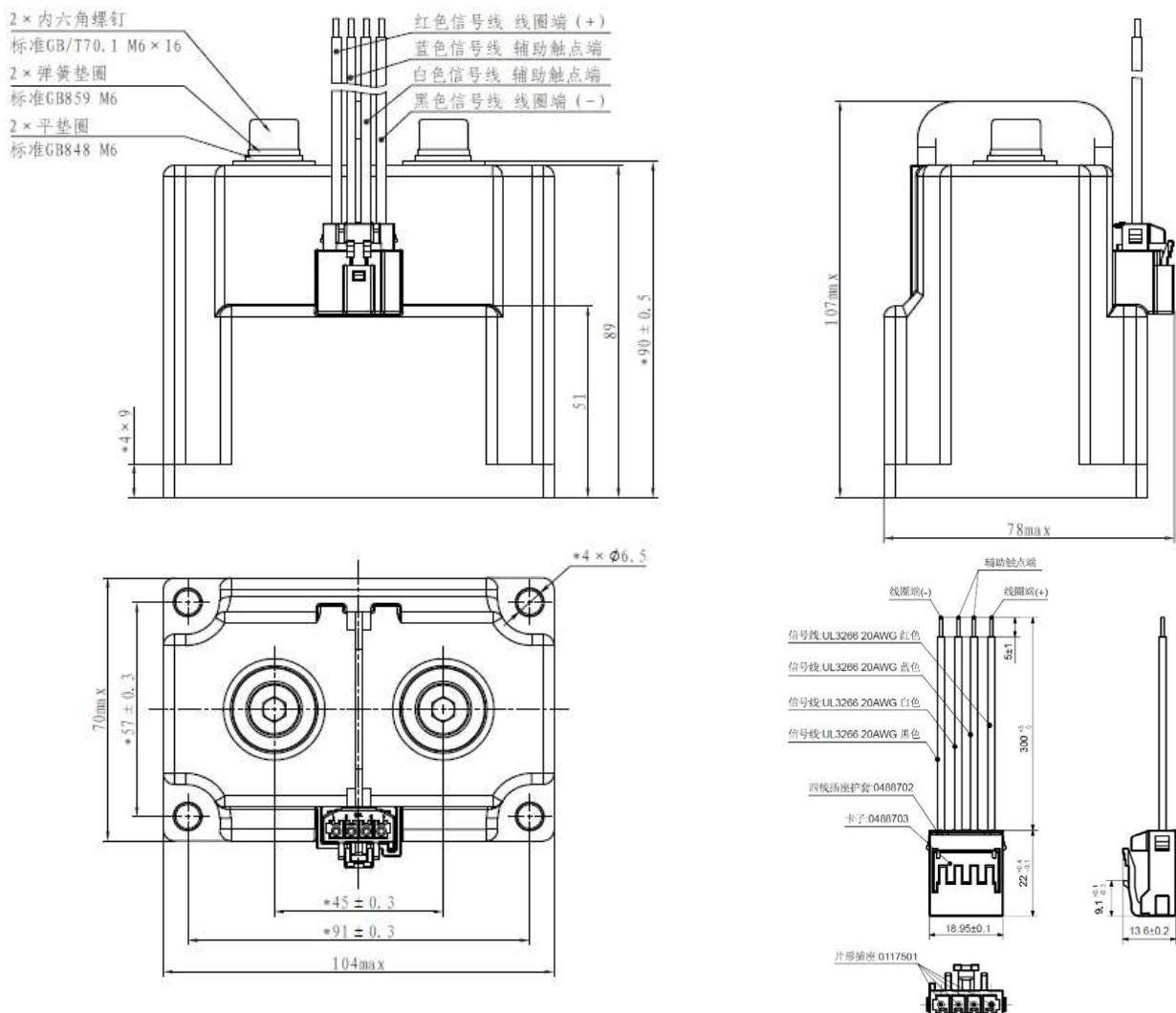
a) 以上值为初始值 All the performance data are initial values.
b) 线圈电阻是在线圈温度23°C, 公差为±10% Coil resistance is tested at 23°C ambient temperature, ±10% tolerance.

■ 型号命名标准 Model Number Legend

STE250V	-1A	S	-12	-1500	,XXX
基本型号 Basic Type: STE250V					
触点结构 Contact Arrangement: A: 1组常开 1 Form A					
辅助触点 Auxiliary Contact: Blank: 标准型不带辅助触点 Standard without Auxiliary Contact S: 带1组常开辅助触点 with 1A Auxiliary Contact					
线圈电压 Coil Voltage: 12: 12VDC 24: 24VDC					
主触点额定电压 Rated Voltage of Main Contact: 1500: 1500VDC					
主触点极性 Main Contact Polarity: Blank: 无极性 Non-polarity					
特殊特性 Special Characteristic: XXX: 客户特殊特性号 Customer Special Feature Number					

■ 外形尺寸、PCB 布局、接线图 Outline Dimensions, PCB Layout, Wiring Diagram (mm)

◆ 外形尺寸 Outline Dimensions

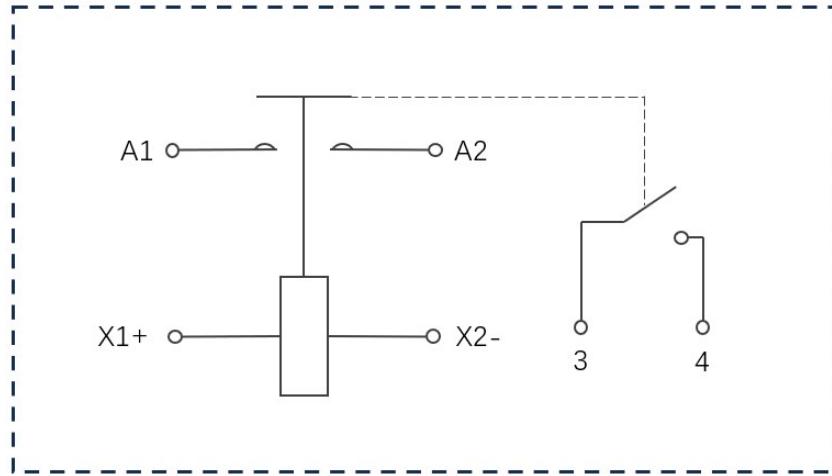


注 Note:

未注尺寸公差 Unspecified tolerance: ≤10mm: ±0.3 mm, 10~50 mm: ±0.5mm, ≥50mm: ±0.8mm;

■ 外形尺寸、PCB 布局、接线图 Outline Dimensions, PCB Layout, Wiring Diagram (mm)

◆ 接线图 Wiring Diagram



说明:

A1、A2 为负载端, X1+、X2-为线圈端, 3、4 为辅助触点, 负载无极性、线圈有极性, 辅助触点无极性。A1, A2 are load terminals, X1+, X2- are coil terminals, 3, 4 are auxiliary contacts. The load has no polarity, the coil has polarity, the auxiliary contacts have no polarity.

■ 使用注意事项 Precautions for Use

1. 规格范围: 应避免规格以上的操作使用, 包括但不限于线圈额定, 主触点额定以及电器寿命等的超规格使用。以避免发生异常发热现象以及烟雾, 火灾等事故。Specification range: Operations above the specification should be avoided, including but not limited to coil rating, main contact rating, and electrical life beyond the specification. To avoid abnormal heating phenomenon and smoke, fire and other accidents
2. 使用 $L/R > 1\text{ms}$ 的感应负载 (L负载) 时, 推荐并联浪涌器件。如未采取措施, 可能会造成电气寿命缩短、切断不良。Parallel surge devices are recommended when $L/R > 1\text{ms}$ inductive load (L load) is used. If no measures are taken, it may cause shortened electrical life and poor cutting
3. 在没有加负载的情况下动作时, 接触电阻可能会上升, 请注意。Please note that the contact resistance may rise when operating without a load
4. 安装与维修: 接触器安装应牢固可靠, 非正常连接时, 容易导致接触器过热与火灾等事故。在安装母线时, 请勿向端子施加过度的负载, 否则可能会造成通断性能的故障。通电时, 安装、维修, 故障检修前, 应事先切断接触器与连接器, 插座等连接部分的电源。Installation and maintenance: The contactor installation should be firm and reliable, abnormal connection, easy to lead to overheating and fire accidents. When installing the bus bar, do not apply excessive load to the terminal. Otherwise, the on-off performance may be faulty. When powered on, before installation, maintenance, and troubleshooting, the power supply of the contactor and connector, socket and other connecting parts should be cut off in advance
5. 对接触器的重复动作, 应充分考虑其动作的间隔时间。为避免引起误动作, 建议接触器的两次动作之间的 时间间隔应大于 0.1s。For the repeated action of the contactor, the interval time of its action should be fully considered. To avoid misoperation, it is recommended that the time interval between two actions of the contactor should be greater than 0.1s
6. 端子拧紧条件: 各个部位的螺钉锁紧扭矩, 请控制在下述的规定范围内。在超过范围的情况下, 可能会造成破损 M6螺钉: $6\text{N}\cdot\text{m} \sim 8\text{N}\cdot\text{m}$ (外负载安装)。Terminal tightening conditions: Screw locking torque of each part should be controlled within the following specified range. In the case of exceedance, damage may be caused. M6 screw: $6\text{N}\cdot\text{m} \sim 8\text{N}\cdot\text{m}$ (External load installation)
7. 配线、母线等, 请参考: 250A: 公称截面积 95mm^2 以上。Distribution, bus, etc., please refer to: 250A: nominal cross-sectional area of 95mm^2 or more
8. 严禁将产品长时间放置在超过产品温度使用范围的环境中。产品使用环境: 温度 $-40^\circ\text{C} \sim 85^\circ\text{C}$, 湿度 $5\% \sim 85\% \text{R.H.}$ 。It is strictly prohibited to place the product in an environment beyond the product temperature range for a long time. Product use environment: temperature $-40^\circ\text{C} \sim 85^\circ\text{C}$, humidity $5\% \sim 85\% \text{R.H.}$
9. 触点连接端子的正确安装: 需按电路图进行接线。Correct installation of contact connection terminals: Connect cables according to the circuit diagram
10. 在接触器意外坠地后, 请不要再使用。Do not use the contactor after it accidentally falls to the ground