

ST161W-43

PCB小型大功率继电器 PCB Miniature High Power Relay

特性 Features

- 50A载流, 43A 277Vac负载开闭能力 50A loading and 43A 277VAC switching capability
- 低线圈保持电压有助于节省设备功耗: Low coil holding voltage contributes to saving energy of equipment
- 1.8mm 接点间隙 1.8mm contact gap (compliant to IEC 62109-2-2011)
- UL绝缘系统:F级 UL insulation system: Class F
- 105°C产品可选 105°C product optional
- 环保产品(符合RoHS标准) Environmental friendly product (RoHS compliant)
- 尺寸 Dimensions: 30.4 x 16.0 x 23.3 mm



典型应用 Application

- 光伏发电系统逆变器/太阳能逆变器/交流/直流电源控制/ UPS /工业控制等。To Inverter used for Photovoltaic Power Generation System / Solar Inverter / AC/DC Power Control / UPS / Industrial Control, etc.

触点参数 Contact Data

触点形式 Contact Arrangement	1A
触点额定 Contact Rating	Making 20A, Loading 50A, Breaking 20A Making 50A, Breaking 20A 43A 277VAC (resistive)
最大切换电压 Max. Switching Voltage	277VAC
最大切换电流 Max. Switching Current	50A (resistive)
触点材质 Contact Material	银合金 Ag alloy
接触电阻 Contact Resistance	Max.100mΩ (1A 5VDC)
电耐久性 Electrical Endurance	5*10 ⁴ ops (Making 20A, Loading 50A, Breaking 20A, 阻性负载 R-Load, 85°C, on:off=1s:9s) 3*10 ⁴ ops (43A 277VAC,阻性负载 R-Load, 85°C, on:off=1s:9s)
机械耐久性 Mechanical Endurance	1*10 ⁵ ops
动作/释放时间 Operate/Release time	≤20ms/≤10ms
最大切换功率 Max. Switching Power	11911VA

线圈参数 Coil Data(3.8W Type)

线圈电压范围 Coil Voltage Range	6~24 VDC
容许最大电压 Max. Continuous	额定电压的110% 110% of Rated Voltage
线圈绝缘等级 Coil Insulation System	Class F
额定线圈功率 Coil Rating Power	约Approx. 3.8W
保持电压 Hold Voltage	100%~110% 额定电压激励时间 100ms, 降压至 55% ~ 65% 保持 The coil is energized at 100% ~ 110% for 100ms, and the voltage is reduced to 55% ~ 65% for holding.

性能参数 Characteristics

绝缘电阻 Insulation Resistance	1000MΩ Min (at 500VDC)
介电耐压 Dielectric Strength	断开触点间 Between Open Contacts 2500Vrms 1min 线圈与触点间 Between Coil and Contact 4500Vrms 1min
线圈触点间浪涌电压 Surge Voltage (Between Contact and Coil)	10kV (1.2/50μs)
温升 Temperature rise (at rated volt.)	≤70K (Contact load current 43A, applied voltage of coil 100% rated voltage for 100ms holding voltage of coil 55% rated voltage, at 85°C)
温度范围 Temperature Range	-40~+85°C/-40~+105°C (Apply holding voltage to coil)
湿度 Ambient Operating Humidity	5% ~ 85%RH
振动 Vibration Resistance	10~55Hz 双振幅 1.5mm double amplitude 1.5mm
冲击 Shock	稳定性 Functional 20G 强度 Destructive 100G
重量 Weight	Approx.25g

线圈规格 Coil Voltage Specifications(3.8W Type)

线圈电压 Coil Voltage	动作电压 Must Operate	释放电压 Release Coil	线圈电阻 Coil Resistance
VDC	VDC	VDC	Ω(±10%)
6	4.50	0.30	9.5
9	6.75	0.45	21.3
12	9.00	0.60	38.0
24	18.00	1.20	152.0

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线圈参数 Coil Data(1.6W Type)	
线圈电压范围 Coil Voltage Range	6~24 VDC
容许最大电压 Max. Continuous	额定电压的110% 110% of Rated Voltage
线圈绝缘等级 Coil Insulation System	Class F
额定线圈功率 Coil Rating Power	约Approx. 1.6W
保持电压 Hold Voltage	100%~110% 额定电压激励时间100ms，降压至 55% ~ 65% 保持 The coil is energized at 100% ~ 110% for 100ms, and the voltage is reduced to 55% ~ 65% for holding.

注 Note:

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

线圈规格 Coil Voltage Specifications(1.6W Type)			
线圈电压 Coil Voltage VDC	动作电压 Must Operate VDC	释放电压 Release Coil VDC	线圈电阻 Coil Resistance Ω(±10%)
6	4.50	0.30	22.5
9	6.75	0.45	50.6
12	9.00	0.60	90.0
24	18.00	1.20	360.0

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℃，公差为±10% Coil resistance is tested at 23℃ ambient temperature, ±10% tolerance.

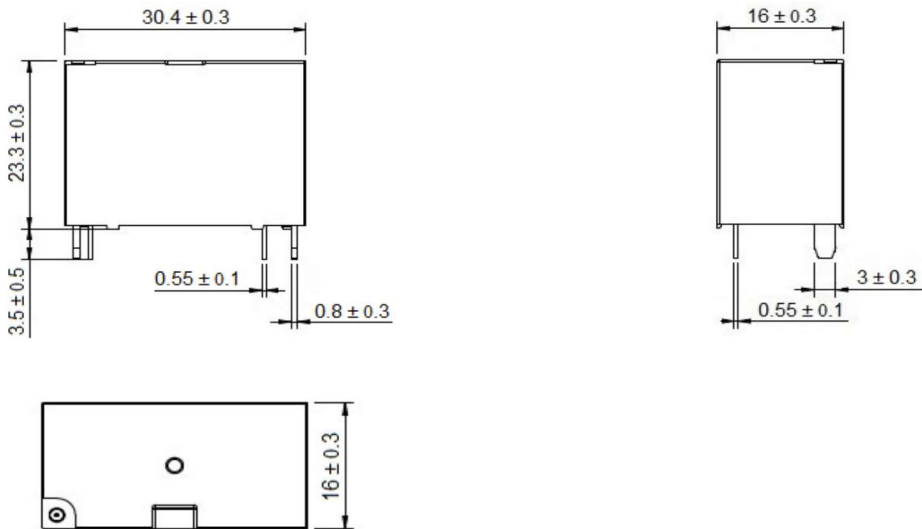
型号命名标准 Model Number Legend

基本型号 Basic Type:	ST161W	-1A	-12	SL	S	F	,XXX
触点结构 Contact Arrangement:							
A: 1组常开 1 Form A							
线圈电压 Coil Voltage:	5, 9, 12, 18, 24VDC						
线圈功耗 Coil Power:	SL: 1.6W; UL:3.8W*						
防护构造 Protective Construction:	Blank: 耐助焊剂型 Flux Tight; S: 塑料密封型 Sealed						
绝缘等级 Insulation Class:	F: F级 F Class						
特殊特性 Special Characteristic:	043: 43A 额定负载 43A Rate Current; T**: 105℃产品 105℃ product; Blank: 标准型Standard; XXX: 客户特殊特性号 Customer Special Feature Number						

*有关3.8W产品请联系斯泰普公司，3.8W Coil power product please contact STEIPU.

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

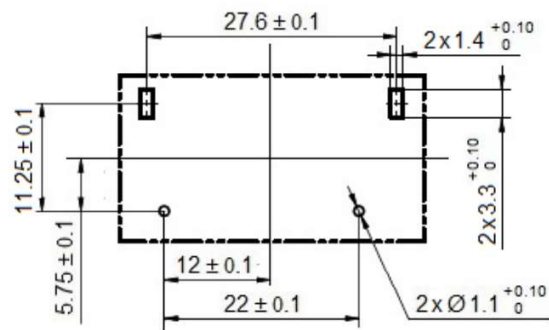
外形尺寸 Outline Dimensions



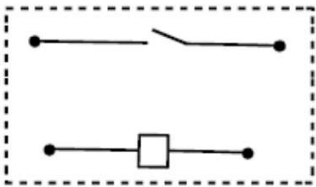
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外形尺寸、PCB 布局、接线图 Outline Dimensions, PCB Layout, Wiring Diagram (mm)

印刷线路板加工尺寸 PCB Outline Dimension Bottom View



接线图 Wiring Diagram Bottom View



注 Note:
未注尺寸公差 Unspecified tolerance : <1mm: ± 0.2 mm, 1~5 mm: ± 0.3 mm, >5mm: ± 0.5 mm ;
安装孔尺寸中未注尺寸公差为 ± 0.1 mm PC board layout dimensions hadn't specified tolerance is ± 0.1 mm.

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