

ST8N 小型汽车继电器 Miniature Automotive Relay

特性 Features

- 25A电机负载 25A motor load
- 超小型 subminiature
- 常开和转换型可选 Normally open and conversion type available
- 单，双继电器可供选择 Single and dual relays are available
- 超薄宽度(7.2mm)，利于布局 Ultra-thin width (7.2mm) for easy layout



典型应用 Application

- 自动门窗、中央门锁、天窗控制、座椅调整、灯控制、喇叭控制、雨刮控制、座椅加热控制。 Automatic door and window, central door lock, skylight control, seat adjustment, light control, horn control, wiper control, seat heating control.

触点参数 Contact Data	
触点形式 Contact Arrangement	1A,1C; 2A,2C
触点额定 Contact Rating	25A 16VDC
最大切换电压 Max. Switching Voltage	16VDC
最大切换电流 Max. Switching Current	30A
触点材质 Contact Material	银合金 Ag alloy
接触电阻 Contact Resistance	Max.100mΩ (1A 5VDC)
动作/释放时间 Operate Time/ Release Time	≤10ms/≤5ms
最小切换负载 Min. switching load	1A 6VDC
电耐久性 Electrical Endurance	见下表 See table below
机械耐久性 Mechanical Endurance	1*10 ⁷ ops. (最大转换频率: 18000次/小时 Maximum conversion frequency: 18000 times/hour)
最大切换功率 Max. Switching Power	480W

线圈参数 Coil Data (标准型 Standard)

线圈电压范围 Coil Voltage Range	5~24 VDC
容许最大电压 Max. Continuous	额定电压的170% 170% of Rated Voltage
额定线圈功率 Coil Rating Power	0.8W

性能参数 Characteristics

绝缘电阻 Insulation Resistance		100MΩ Min (at 500VDC)
介质耐压 Dielectric Strength	断开触点间 Between Open Contacts	500Vrms 1min
	线圈与触点间 Between Coil and Contact	500Vrms 1min
温度范围 Temperature Range		-40~+105°C
湿度 Ambient Operating Humidity		35%~85%RH
振动 Vibration Resistance		10Hz-55Hz, at double amplitude 1.5mm 频率 10Hz-55Hz, 双振幅 1.5mm
冲击 Shock	稳定性 Functional	10G
	强度 Destructive	100G
重量 Weight		Approx.4g(S) 8g(D)

线圈规格 Coil Voltage Specifications (标准型 Standard)

额定电压 Nominal Coil VDC	动作电压 Must Operate VDC	释放电压 Release Coil VDC	线圈电阻 Coil Resistance Ω(±10%)
5	2.7	0.5	31
6	3.2	0.6	45
9	4.8	0.9	101
12	6.5	1.2	180
18	9.7	1.8	405
24	13.0	2.4	720

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线圈参数 Coil Data (灵敏型 Sensitivity)

线圈电压范围 Coil Voltage Range	5~24 VDC
容许最大电压 Max. Continuous	额定电压的170% 170% of Rated Voltage
额定线圈功率 Coil Rating Power	0.64W

注 Note:

- 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.

线圈规格 Coil Voltage Specifications (灵敏型 Sensitivity)

额定电压 Nominal Coil VDC	动作电压 Must Operate VDC	释放电压 Release Coil VDC	线圈电阻 Coil Resistance Ω(±10%)
5	3.0	0.5	39
6	3.6	0.6	56
9	5.4	0.9	126
12	7.2	1.2	225
18	10.8	1.8	506
24	14.4	2.4	900

注 Note:

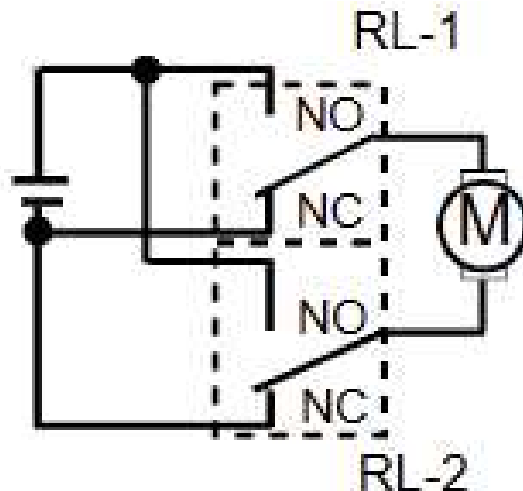
- a) 以上值为初始值 All the performance data are initial values.
b) 线圈电阻是在线圈温度23°C, 公差为±10% Coil resistance is tested at 23°C ambient temperature, ±10% tolerance.

触点负载电 Contact load	负载类型 Load type ⁽²⁾		触点负载电流 Contact Load Current (A)		通断比 On-off ratio		电耐久性 Electrical durability (次ops)	触点接线图 Contact wiring diagram
			1C, 2C		接通 ON	断开 OF		
			常开 NO	常闭 NC	S	S		
13.5VDC	电机负载 Motor Load	接通 ON ⁽¹⁾	25	—	0.5	9.5	1x10 ⁵	见下图 See Figure below
		断开 OFF	25	—				
	模拟车窗升降 Simulated window lift	接通 ON ⁽¹⁾	25	—	0.2	4	1x10 ⁵	
		稳态 Steady	10	—	2.3			
	模拟马达自由运 转 Simulated motor runs freely	断开 OFF	25	—	0.5	1.8	1x10 ⁵	
		接通 ON ⁽¹⁾	27	—	0.02			
		暂态 Temporary	17	—	0.03			
		断开 OFF	8	—	0.15			

备注: (1) 电耐久性是采用其中的常开触点或者常闭触点进行测试的数据。

Note: (1) Electrical durability is tested using the normally open contact or normally closed contact.

图示 Figure



注 Note:

- (1) 接通电流指电机启动峰值电流; On-current refers to the peak starting current of the motor;
(2) 当用于闪光灯负载时, 须按图5极性要求接线, 并须采用特殊触点; When used for flash load, it must be connected according to the polarity requirements of Figure 5, and special contacts must be used.

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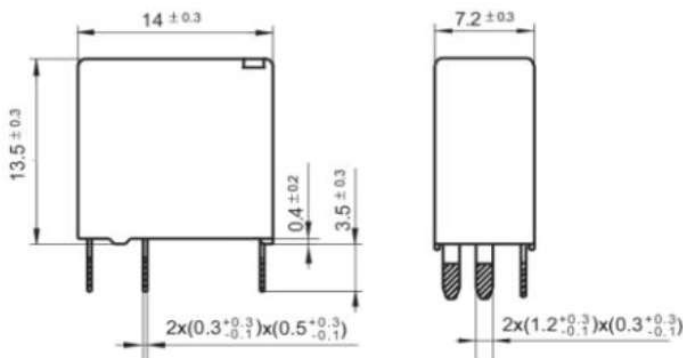
■ 型号命名标准 Model Number Legend

基本型号 Basic Type: ST8N	ST8N	-1C	-12	L	S	,XXX
触点结构 Contact Arrangement: 1A: 1组常开 1 Form A; 1C: 1组转换 1 Form C 2A: 2组常开 2 Form A; 2C: 2组转换 2 Form C						
线圈电压 Coil voltage: 5, 6, 9, 12, 18, 24VDC						
线圈功耗 Coil Power: Blank: 0.8W; L: 0.64W						
防护构造 Protective Construction: Blank: 耐助焊剂型 Flux Tight; S: 塑料密封型 Sealed						
特殊特性 Special Characteristic: Blank: 标准型 Standard; XXX: 客户特殊特性号 Customer Special Feature Number						

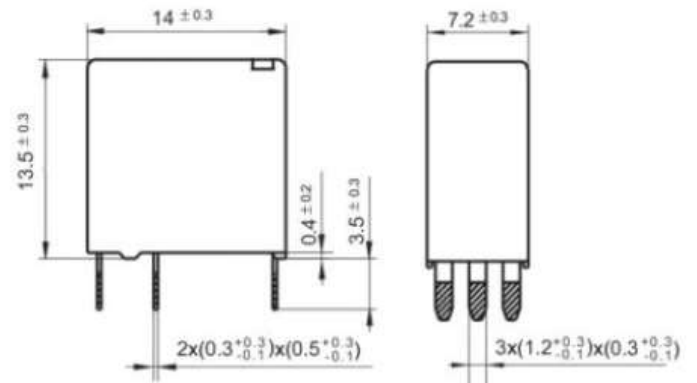
■ 外形尺寸、PCB 布局、接线图 Outline Dimensions, PCB Layout, Wiring Diagram (mm)

◆ 外形尺寸 Outline Dimensions

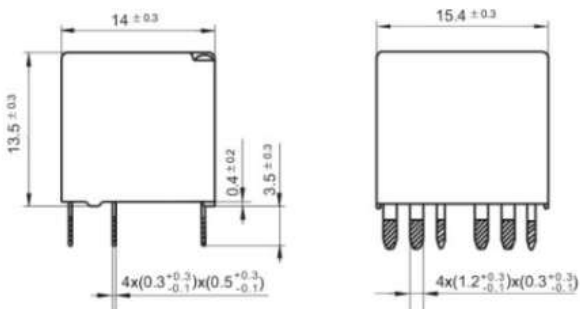
● 1组常开 1 Form A



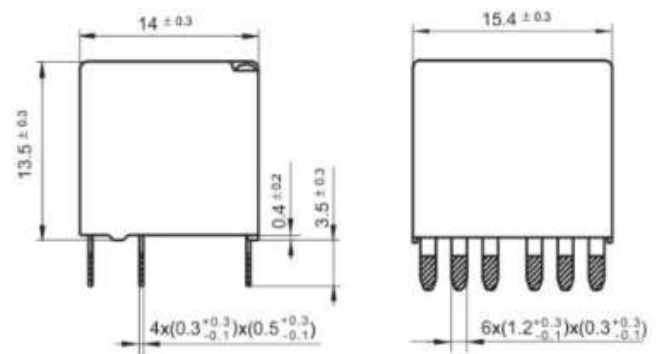
● 1组转换 1 Form C



● 2组常开 2 Form A



● 2组转换 2 Form C

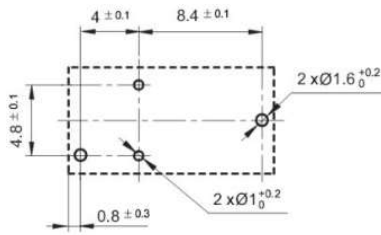


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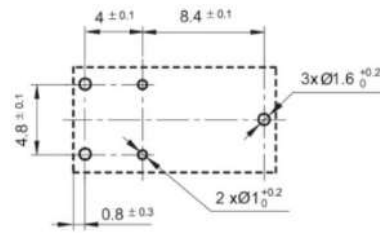
■ 外形尺寸、PCB 布局、接线图 Outline Dimensions, PCB Layout, Wiring Diagram (mm)

◆ 印刷电路板加工尺寸 PCB Outline Dimension Bottom View

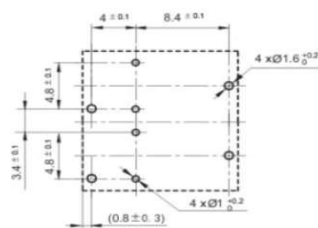
● 1组常开1 Form A



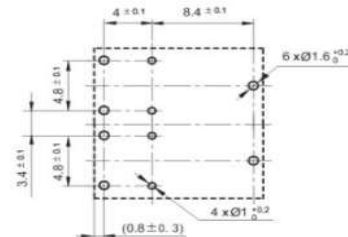
● 1组转换1 Form C



● 2组常开 2 Form A

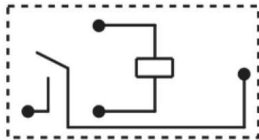


● 2组转换 2 Form C

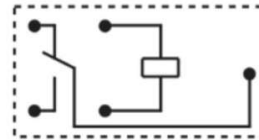


◆ 接线图 Wiring Diagram Bottom View

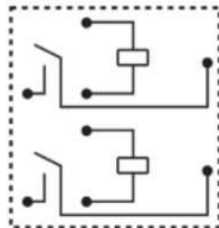
● 1组常开1 Form A



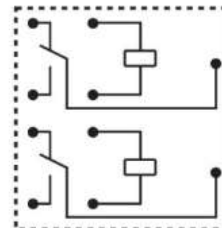
● 1组转换1 Form C



● 2组常开 2 Form A



● 2组转换 2 Form C



注 Note:

未注尺寸公差 Unspecified tolerance : <1mm: ±0.2 mm, 1~5 mm: ±0.3mm, >5mm: ±0.5mm ;

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 ±0.1mm.

免责声明:

本说明书仅供参考。

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