

ST98N 汽车继电器 Automotive Relay

特性 Features

- 40A, 70A, 80A, 100A触点切换能力可选 40A, 70A, 80A, 100A contact switching capability optional
- 1组常开 & 1组转换触点结构 1 Form A & 1 Form C contact arrangement *
- 可提供塑料支架和金属支架 Plastic Bracket & Metal Bracket Available
- 环境温度范围:-40℃~ 125℃ Ambient temperature range: -40℃ to 125℃
- 环保产品(符合RoHS标准) Environmental friendly product (RoHS compliant)
- 可用于PC板安装和直接插入安装 Available for PC board mounting & direct insert mounting
- 尺寸Dimension:26.0 x 26.0 x 22.7 mm (40A, 70A)
- 尺寸Dimension:26.0 x 26.0 x 24.8 mm (80A, 100A)

*1组转换只针对40A,70A负载 1 Form C only for 40A, 70A rating current product



典型应用 Application

- 后窗除雾器/电池断开装置/空调系统/雾灯和前灯控制/燃油泵控制/ ABS控制系统/冷却风扇控制/电源管理等。Rear Windows Defogger / Battery Disconnection Device / Air-Conditioning System / Fog Lamp & Headlight Control / Fuel Pump Control / ABS Control system / Cooling Fan Control / Power Management, etc..

触点参数 Contact Data

	-40	-70	-80	-100
触点形式 Contact Arrangement	1A, 1C		1A	
触点额定 Contact Rating	NO:40A 14VDC NC:30A 14VDC	NO:70A 14VDC NC:50A 14VDC	80A 14VDC 40A 28VDC	100A 14VDC 40A 28VDC
最大切换电压 Max. Switching Voltage	50VDC			
最大切换电流 Max. Switching Current	40A	70A	80A	100A
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/≤10ms		≤10ms/≤7ms	
电耐久性 Electrical Endurance	1*10 ⁵ ops.			
机械耐久性 Mechanical Endurance	1*10 ⁷ ops.			
最大切换功率 Max. Switching Power	560W	980W	1120W	1200W

线圈参数 Coil Data

线圈电压范围 Coil Voltage Range	5~48 VDC
容许最大电压 Max. Continuous	额定电压的165% 165% of Rated Voltage
额定线圈功率 Coil Rating Power	1.6/2.0W

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.

性能参数 Characteristics

绝缘电阻 Insulation Resistance		500MΩ 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	40A, 70A	-40~+125℃
	80A, 100A	-40~+105℃
湿度 Ambient Operating Humidity		5% ~ 95%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	30G
	强度 Destructive	100G
重量 Weight	40A	Approx.35g
	70A	Approx.38g
	80A, 100A	Approx.30g

线圈规格 Coil Voltage Specifications

额定电压 Nominal Coil	动作电压 Must Operate	释放电压 Release Coil	线圈电阻 Coil Resistance		并联电阻 Parallel resistance
			1.6W	2.0W	
VDC	VDC	VDC	Ω(±10%)		Ω
5	3	0.5	16	13	/
6	3.6	0.6	23	18	/
9	5.4	0.9	51	41	/
12	7.2	1.2	90	72	/
12	7.20	1.2	79.4	65.2	680
18	10.8	1.8	203	162	/
24	14.4	2.4	360	288	/
24	14.4	2.4	317.6	260.2	2700
48	28.8	4.8	1440	1152	/

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

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型号命名标准 Model Number Legend

	ST98NP	-80	-1A	-12	L	S	1	R	C	,XXX
基本型号 Basic Type:										
ST98N: 标准形式 Standard Type										
ST98NP: PCB Type										
ST98NM: 金属支架 Metal Bracket										
ST98NB: 塑料支架 Plastic Bracket*										
触点负载 Contact Rating:										
40: 40A; 70: 70A; 80: 80A; 100: 100A										
触点结构 Contact Arrangement:										
1A: 1组常开 1 Form A; 1B: 1组常闭 1 Form B**; 1C: 1组转换 1 Form C**										
线圈电压 Coil Voltage:										
5, 6, 9, 12, 18, 24, 48VDC										
线圈功耗 Coil Power:										
Blank: 2.0W; L: 1.6W										
防护构造 Protective Construction:										
Blank: 耐助焊剂型 Flux Tight; S: 塑料密封型 Sealed										
触点材料 Contact Material:										
Blank: AgSnO ₂ ; 1: AgSnO ₂ In ₂ O ₃										
线圈并联元件 Coil Paralleled Component:										
Blank: Standard; R: with Resistance; D1: with diode (the diode anode on #85 terminal); D2: with diode (the diode anode on #86 terminal)										
外壳高度 Case Height:										
C: 24.8mm; G: 22.7mm										
特殊特性 Special Characteristic:										
Blank: 标准型 Standard; XXX: 客户特殊特性号 Customer Special Feature Number										

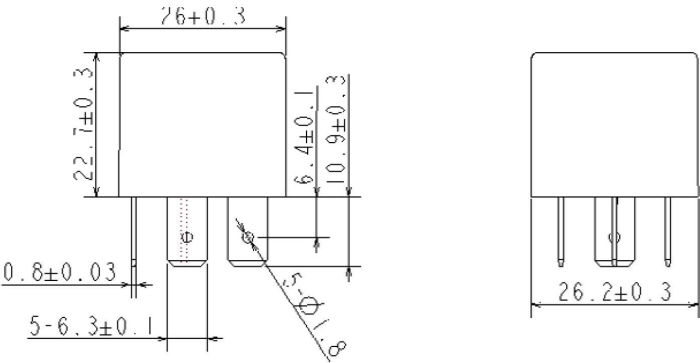
*80A及100A产品无塑料支架类型 80A 100A relay don't have plastic bracket type; **1组常闭1组转换只针对40A, 70A负载 1 Form B/1 Form C only for 40A 70A rating current product

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

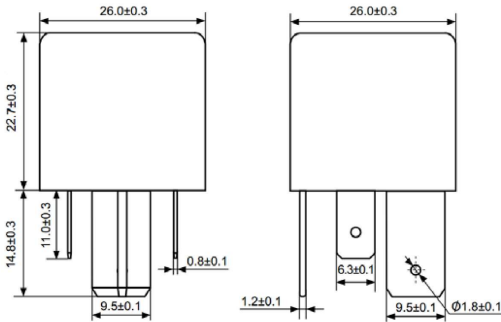
外形尺寸 Outline Dimensions

ST98N

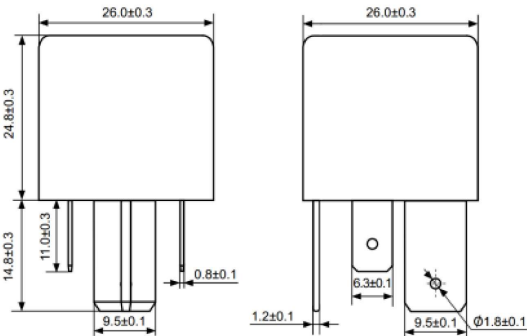
G型高度 G Type Height 40A



G型高度 G Type Height 70A



C型高度 C Type Height 80A/100A



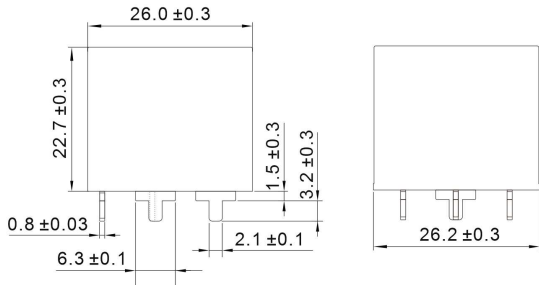
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外形尺寸、PCB 布局、接线图 Outline Dimensions, PCB Layout, Wiring Diagram (mm)

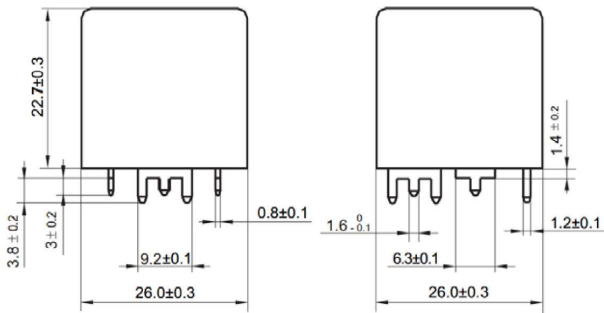
外形尺寸 Outline Dimensions

ST98NP

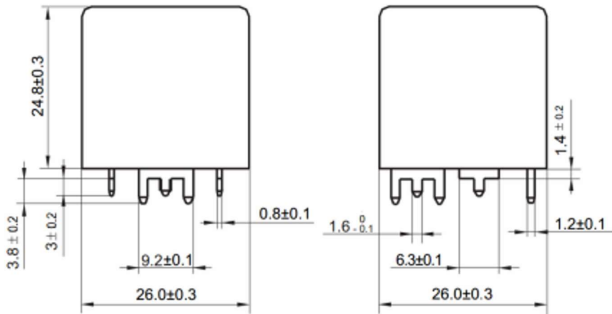
G型高度 G Type Height 40A



G型高度 G Type Height 70A

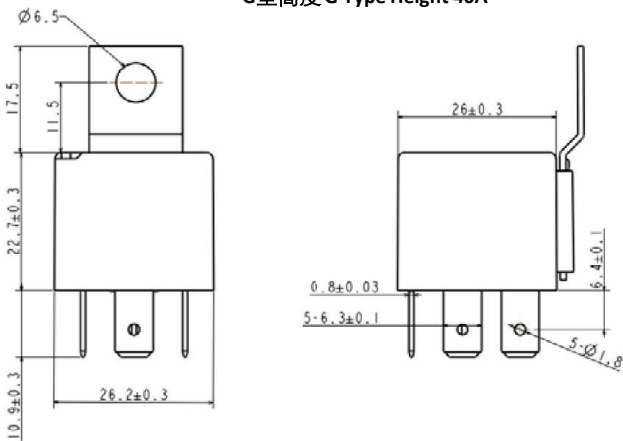


C型高度 C Type Height 80A/100A

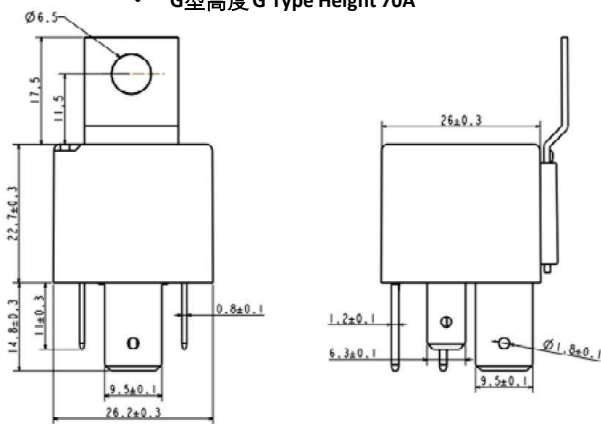


ST98NM

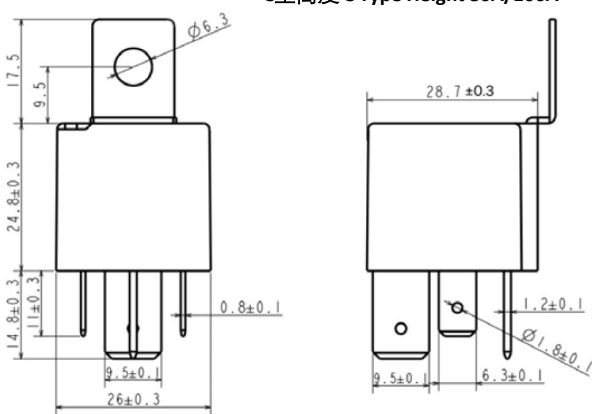
G型高度 G Type Height 40A



G型高度 G Type Height 70A



C型高度 C Type Height 80A/100A

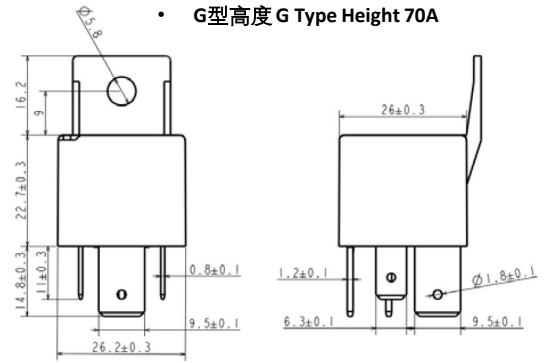
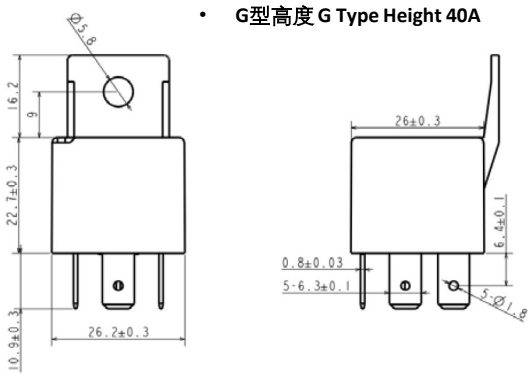


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外形尺寸、PCB 布局、接线图 Outline Dimensions, PCB Layout, Wiring Diagram (mm)

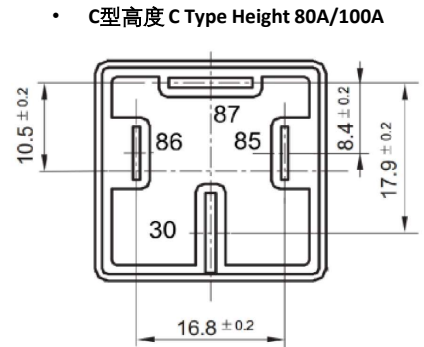
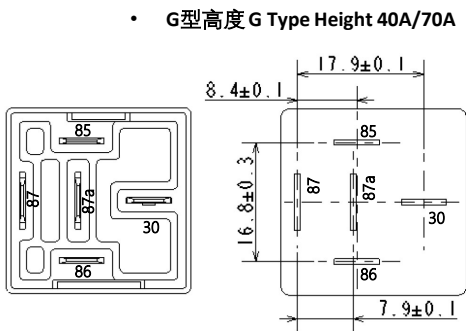
外形尺寸 Outline Dimensions

ST98NB

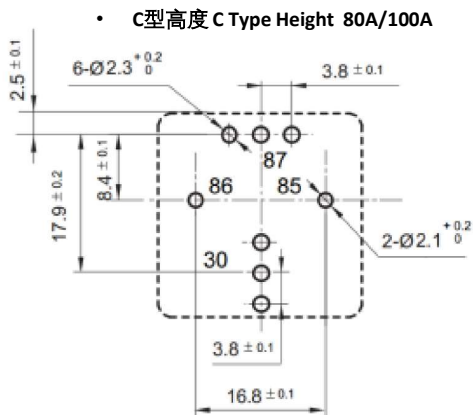
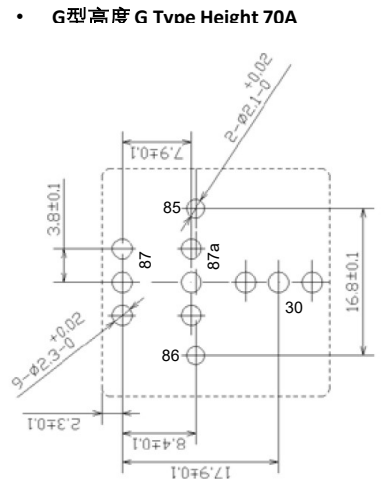
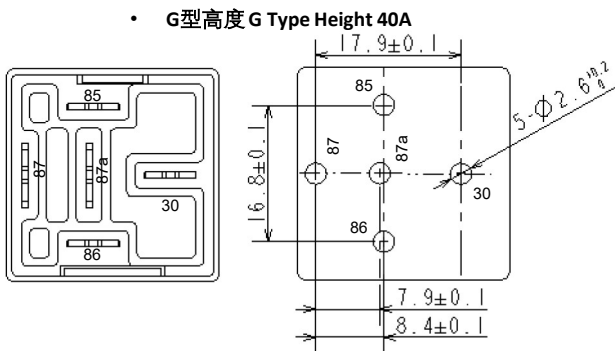


印刷线路板加工尺寸 PCB Outline Dimension Bottom View

ST98N/ST98NM/ST98NB

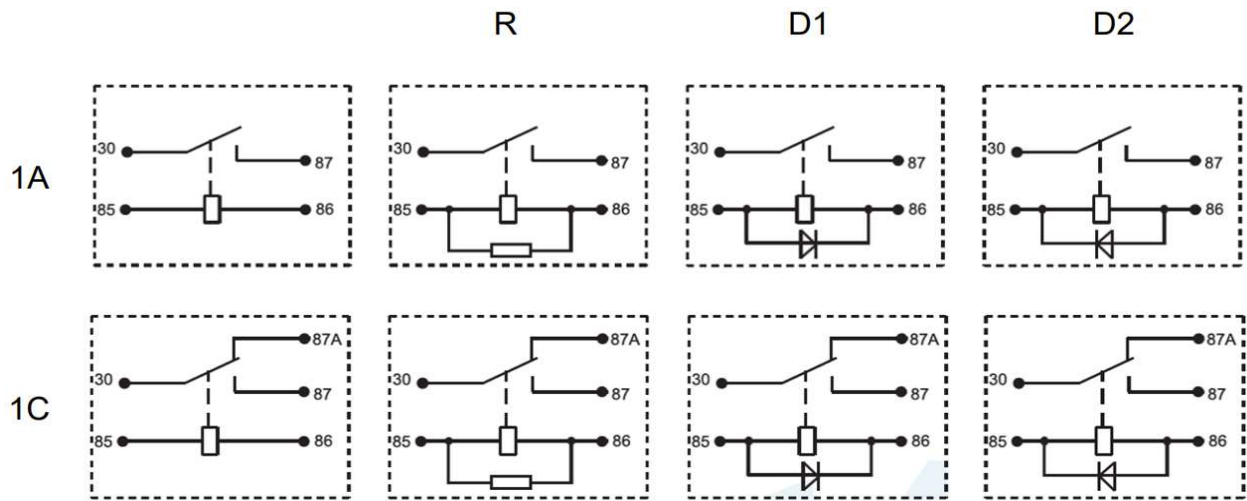


ST98NP



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

接线图 Wiring Diagram Bottom View



注 Note:
未注尺寸公差 Unspecified tolerance : <1mm: ±0.2 mm, 1~5 mm: ±0.3mm, >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.

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