



小型功率继电器 Miniature High Power Relay

SMUA-4P

特点 Features

- 具有大容量 High capacity
- 灵敏度强，内部防尘 Strong sensitivity, internal dust-proof
- 耐久性好，寿命长等优点 Good durability, long durability and other advantages

安规认证 Safety Approval

UL、C-UL 认证号 UL, C-UL File No. : 待
TUV 认证号 TUV File No. : 待
CQC 认证号 CQC File No. : 待
CE 认证号 CE File No. : 待

触点负载 Contact Capacity

型号 Type	SMUA-4P
额定负载 (阻性) Nominal switching capacity (res. load)	12A 240VAC
最大切换电流 Max.switching current	12A
最大切换电压 Max.switching voltage	240VAC/28VDC
最大切换功率 Max.switching power	2880VA

性能参数 Characteristic Data

触点材料 Contact material	银合金 Silver alloy	
接触电阻 Initial contact resistance	100mΩ Max. (at 1A 24VDC)	
吸合时间 Operate time	25msec. Max. (不加二极管 no diode)	
释放时间 Release time	25msec. Max. (不加二极管 no diode)	
绝缘电阻 Initial insulation resistance	1,00MΩ Min.(at DC500V)	
介质耐压 Dielectric strength	同极触点间 Between open contacts: AC1,000V , 50/60Hz 1min.	
	异极触点间 Between different pole contacts: AC1,000V , 50/60Hz 1min.	
浪涌电压 Initial dielectric strength	触点与线圈间 Between coil and contact: AC1,500V , 50/60Hz 1min.	
抗振动 Vibration resistance	10 ~ 55Hz, 双振幅 1.5 mm	
	10 ~ 55Hz, at double amplitude of 1.5mm	
抗冲击 Shock resistance	耐久 Destructive	100G Min.
	误动作 Functional	10G Min.
寿命 Endurance(Operations)	机械寿命 (7200 次/H) Mechanical endurance(7200ops/h)	10,000,000 次 10,000,000 times
	电气寿命(360 次/H, 通断比 1s : 9s) Electrical endurance(360ops/h,on:off 1S:9S)	100,000 次 100,000 times
	环境温度 Ambient temperature	
	-40℃ ~ +70℃ (不冷凝 no condensation)	
环境湿度 Humidity	35% ~ 80%RH	
重量 Weight	约 35g Approx.35g	

以上仅列出该产品认证部分典型负载，而每个负载详细测试条件不同，因此电寿命耐久性不一样。如需了解详细信息，请与我司技术部门联络。

Above lists only the typical load of the product certification part, and each load detailed test conditions are different, so the electrical life durability is different. For more details, please contact our technical department.

线圈参数(at 20°C) CoilData (at 20°C)

额定电压 Nominal voltage (VDC)	额定电流 Nominal operating current ±10% (mA)	线圈电阻 coil resistance ±10% (Ω)	最大外加电压 Max. allowable voltage (VDC)	吸合电压 Pick-up voltage (Max.)	释放电压 Drop-out voltage (Min.)	额定功率 Nominal operating power
6	250	24	额定电压的 110% 110% of nominal voltage	额定电压的 75% 75% of nominal voltage	额定电压的 10% 10% of nominal voltage	1.5W Approx. 1.5W
9	166.7	54				
12	125	96				
24	62.5	384				
36	41.7	864				
48	31.2	1536				
110	13.6	8066				
125	12	10416.7				
220	6.8	32266.7				
6	500	4.2		额定电压的 80% 80% of nominal voltage	额定电压的 30% 30% of nominal voltage	3.0VA Approx. 3.0VA
9	333	9.5				
12	250	16.8				
24	125	67.2				
36	83	151.2				
48	62.5	268.8				
110	27.3	1411.7				
125	24	4557.3				
220	13.6	5646.7				
230	13	6171.7				
240	12.5	6720				
380	7.9	16846.7				

请勿在产品上连续施加最大电压 > 10min，以免线圈过度发热。

The data shown above are initial values. Do not energize the maximum allowable voltage of the coil for more than 10 minutes to avoid overheating of the coil.

安规认证负载（注：更多详细的认证负载，参考安规证书）

Safety Approval Ratings (Note: More detail of approval ratings, please refer to the safety certification)

认证类型 Approval	UL/CUL	TUV	CQC	CE
认证号码 File No.	待	待	待	待
认证负载 Approved Ratings	待	待	待	待

(1) 上述未注明温度的负载，均指环境温度为室温。

The above-mentioned unspecified temperature ratings, means that the ambient temperature is room temperature.

(2) 以上仅列出了该产品认证的部分负载，每个负载的详细测试条件不同，因此电寿命次数不一样。如需了解详细情况，请联系三友。

Only some typical ratings are listed above. Each rating's test condition is different, so the electrical endurance will be different. If more details are required, please contact us.

(3) 对于塑封式、防水式产品试验时，应打开外壳的透气孔。

For sealed type testing, please open the ventilation hole of case before test.

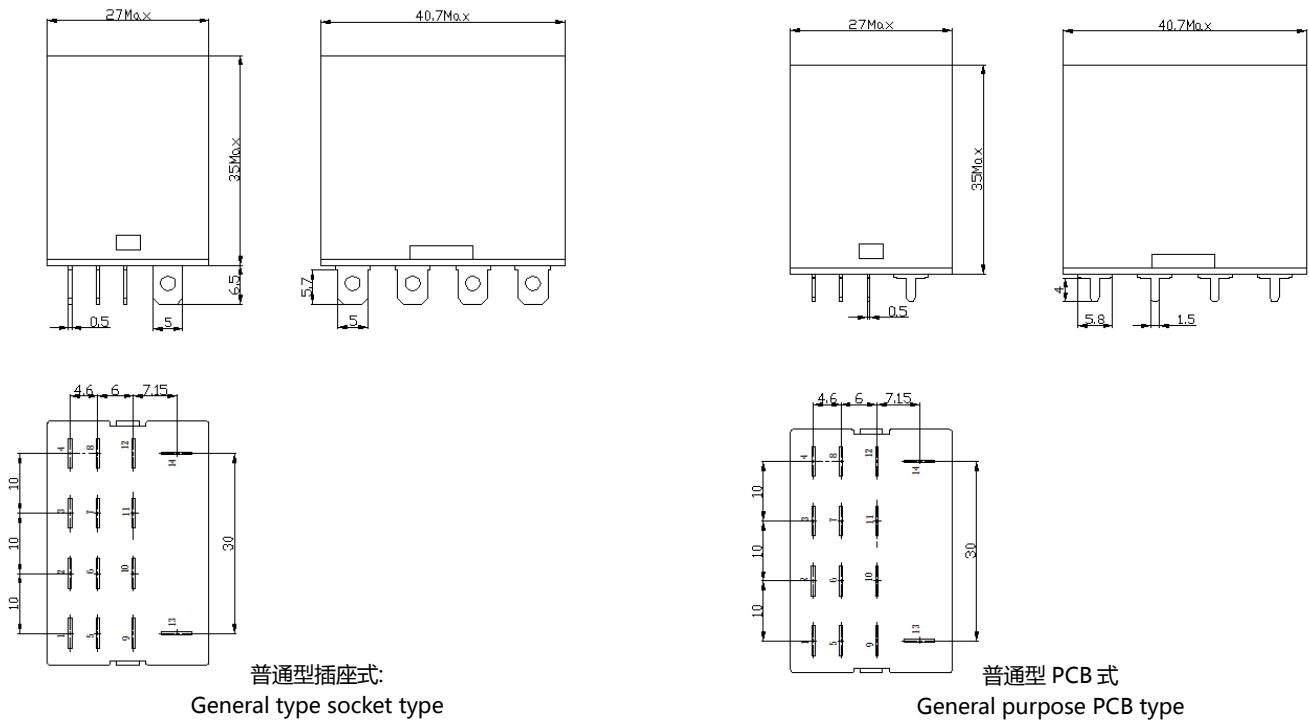
订货标记 Ordering Information

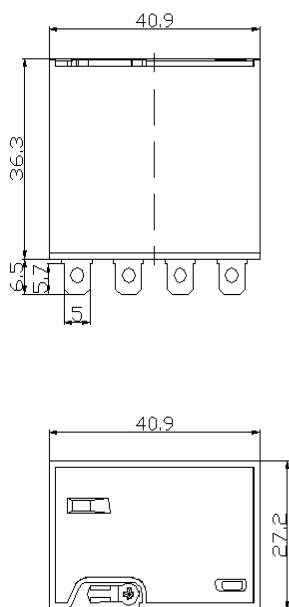
型号命名规则 Nomenclature

SMUA	-4	12	D	M	-F	P	L	-XX	
									客户代码： customer code:
									空-标准型，字母或数字-特殊要求 Nil-Standard type , Letter or number-Special requirement
									配件类型： Accessories type:
									L-带灯，D-带二极管，LD-带灯+二极管 空-无配件 L-With indicator,D-With diode LD-With indicator and diode , Nil-Without accessory
									端子类型： terminal type:
									P-PCB，空-标准型 Nil-Standard type
									外壳类型：
									Z-旋转式，空-标准型 Z-rotation type,Nil-Standard type
									触点形式： Contact Form：
									空-Form C，M-Form A，B-Form B
									线圈类型： Shell type:
									D-直流线圈(DC coil)，A-交流线圈(AC coil)
									线圈规格： Coil Voltage：
									6，9，12，24，36，48，110，125，220(VDC) 6，9，12，24，36，48，110，125，220，230，240，380(VAC)
									触点组数： Number of Poles：
									4-4 组 4-4 Pole
									基本型号： Type Designation：
									SMUA

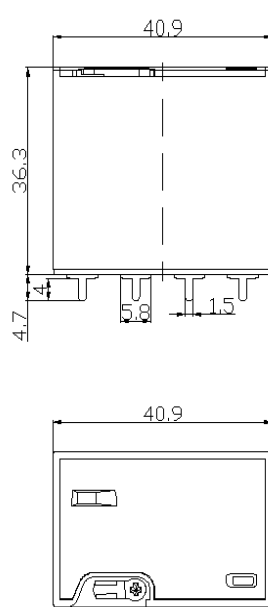
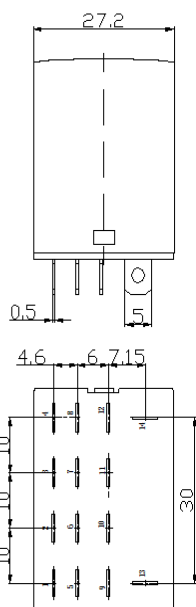
外形尺寸图、接线图、安装孔位图（单位：mm）
Outline dimension drawing, wiring diagram, installation vacancy drawing (unit: mm)

外形尺寸图 outline dimensional drawing

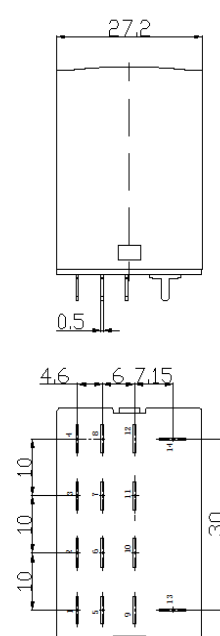




旋转型插座式
Rotary socket type

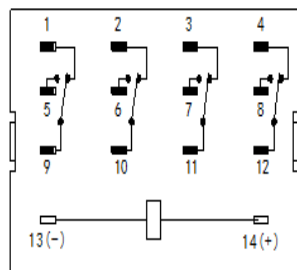


旋转型 PCB 式
Rotary PCB type

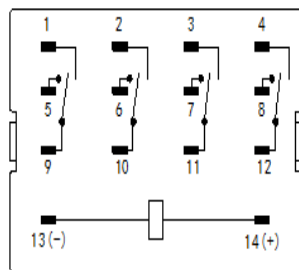


未标注尺寸公差 Unless otherwise specified :
 $< 1\text{mm} : \pm 0.2\text{mm}$ $1 \sim 5\text{mm} : \pm 0.3\text{mm}$ $> 5\text{mm} : \pm 0.4\text{mm}$
 注 : 1、引出脚尺寸为预焊前尺 Extended terminal dimension is dimension before soldering
 2、安装孔尺寸公差 Tolerance of PCB layout : $\pm 0.1\text{mm}$

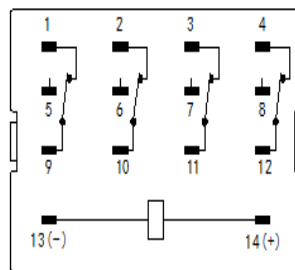
接线图(底视图) Wiring diagram (bottom view)



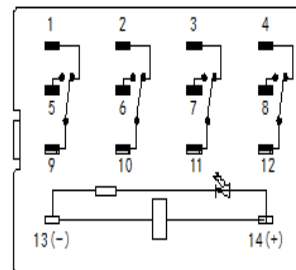
C 型
C type



A 型
A type

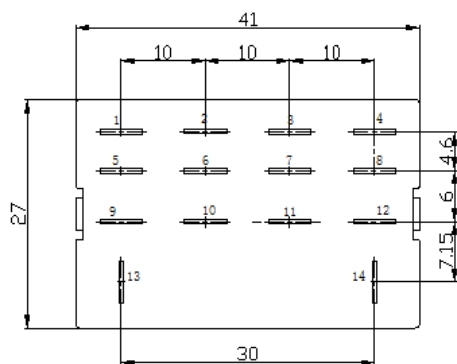


B 型
B type



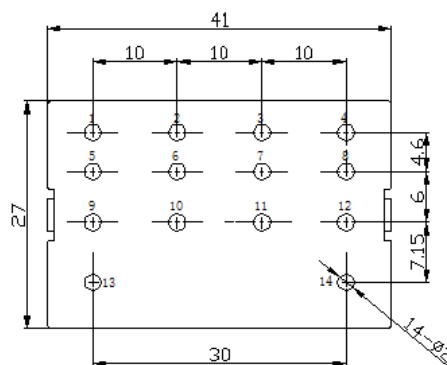
C 型带灯
C type With lamp

安装尺寸 installation size



安装尺寸 (底视) :插座型

Mounting size (bottom view) : Socket type



安装尺寸 (底视) :PCB 型

Mounting size (bottom view) : PCB type

注：安装孔尺寸公差为 $\pm 0.1\text{mm}$

Note : Tolerance of P.C.B. layout 0.1 mm

典型用途 Typical Applications

- 广泛用于家用电器，PCB 线路板，工业控制系统，自动化控制系统等领域

Home appliances such as air conditioner, microwave oven, PCB breadboard, industrial control system, Automation control systems and other fields

声明：本产品规格书仅供客户使用时参考，若有更改，恕不另行通知。

对三友而言，不可能评定继电器在每个具体应用领域的所有性能参数要求，因而客户应该根据具体的使用条件选择与之相匹配的产品。

对于密封继电器在安装清洗后，使用前请打开外壳上的透气孔。若有疑问，请与三友联系获取更多的技术支持。但产品选型责任仅由客户负责。

Disclaimer: This datasheet is the customers' reference. All the specification are subject to change without notice.

We could not evaluate all the performance and all the parameters for every possible application. Thus the user should in a right position to choose the suitable product for their own application. For sealed relays after installation and cleaning, please open the vent hole on the case before use. If there is any query, please contact Sanyou for the technical service.

However it is the user's responsibility to determine which product should be used only.