

小型功率继电器 Miniature power relay

SRD(I)-L



特点 Features

- 高触点容量：12 触点切换能力
High contact capability : 12A switching capability.
- 低线圈功耗，低价格。
Low coil power consumption, low price .
- 超小型，标准印刷板引出脚。
Microminiature relay, standard PCB terminal.
- 符合欧洲 RoHS 及白色家电要求。
Compliance EU RoHS and the requirement of white home appliances.
- 可提供满足雷击耐压 $\geq 6000V$ 的产品。
Impulse withstand voltage $\geq 6000V$ product is available.
- 可提供满足 IEC60335-1 GWIF 850°C/ GWIF 775°C 和 CTI $\geq 250V$ 的产品。
Compliance with IEC60335-1 GWIF 850°C/ GWIT 775°C and CTI $\geq 250V$ is available.
- 可提供满足 IEC60079-15 的产品
Satisfy IEC60079-15 product is available

安规认证 Safety Approval

UL、C-UL 认证号 (File No.): E190598
CQC 认证号 (File No.): CQC02001002126
VDE 认证号 (File No.): 40034479

触点负载 Contact Capacity

型号 type	SRDI -DM-L	SRDI -D-L
额定负载 (阻性负载) rated load (resistive load)	12A 277VAC	NO12A 277VAC NO/NC7A 277VAC
最大切换电流 Max. Switching Current	20A	20A
最大切换电压 Max. Switching voltage	277VAC	277VAC
最大切换功率 Max. Switching power	5,540VA	5,540VA
最小切换负载 Min. Switching load	6V 1A	6V 1A

性能参数 Characteristic Data

触点材料 contact material	银合金 Silver alloy
接触电阻 Contact resistance	100m Ω Max. (at 1A 6VDC)
吸合时间 (额定电压) Actuation time (at rated coil voltage)	8msec. Max. (不加二极管 No diode)

释放时间(额定电压) Release time (at rated coil voltage)	5msec. Max. (不加二极管 No diode)	
绝缘电阻 Insulation resistance	1,000MΩ Min. (DC500V)	
介质耐压 Dielectric strength	触点与触点间 (Between open contacts) : AC 750V , 50/60Hz 1min.	
	SRD	触点与线圈间 (Between coil and contact) : 标准品 standard product: AC 1,500V , 50/60 Hz 1min.
	SRDI	触点与线圈间 (Between coil and contact) : 标准品 standard product: AC 2,500V , 50/60 Hz 1min. 品名后缀有"-6"标示产品 product with suffix "-6" : AC3,000 V, 50/60 Hz 1min.
冲击耐压 Impulse withstand voltage	SRDI	触点与线圈间 (Between coil and contact) : 标准品 standard product: ≥4,800V 1.2/50 us 品名后缀有"-6"标示产品 product with suffix "-6": ≥6,000V 1.2/50 us
抗振动 Vibration resistance	耐久 Destructive	10 ~ 55Hz , 双振幅 1.5 mm 10 ~ 55Hz, at double amplitude of 1.5mm
	误动作 Functional	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(每小时 10,800 次, 室温) Mechanical (at 10,800ops./h)	10,000,000 次 10,000,000(at room temperature)
	电气寿命(每小时 360 次, 室温) Electrical (at 360ops./h)	100,000 次 100,000(at room temperature)
环境温度 Ambient temperature	-40°C ~ +105°C (不冷凝 No condensation)	
重量 Weight	约 8.5g Approx. 8.5g	

线圈参数(at 20°C) CoilData (at 20°C)

额定电压 (VDC) Nominal voltage (VDC)	额定电流 ±10%(mA) Nominal operating current ± 10%(mA)	线圈电阻 ±10% (Ω) coil resistance ±10%(Ω)	最大连续外加电压 Max. allowable voltage	吸合电压 (Max.) Pick-up voltage (Max.)	释放电压 (Min.) Drop-out voltage (Min.)	额定功率 Nominal operating power
3	120.00	25	额定电压的 130%	额定电压的 75%	额定电压的 10%	0.36W
5	71.42	70				
6	60.00	100	130% of nominal voltage	75% of nominal voltage	10% of nominal voltage	
9	40.00	225				

12	30.00	400				
15	24.00	625				
18	20.00	900				
24	15.00	1,600				
48	7.50	6,400				
60	6.00	10,000				

上述值为初始值；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	CQC	VDE	UL/CUL
认证号码 File No.	CQC02001002126	40034479	E190598
认证负载 Approved Ratings	12A 250/277VAC NO 17A 125/250/277VAC NO	12A 125/250/277VAC NO 17A 125/250/277VAC NO 20A 125VAC NO	12A 125/250/277VAC, General use&Resistive, NO 17A 125/250/277VAC, General use&Resistive, NO 20A 125VAC, General use&Resistive, NO Tv8

（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

SRDI -S -1 12 D M 1 -F -XX

特殊参数 Special Parameter :

无-标准型, 6-6000 冲击耐压, 字母或数字-特殊要求
Nil-Standard type, 6-6000V impulse withstand voltage,
Letter or number-Special requirement

绝缘等级 Insulation System :

无 Nil - 普通型 Standard , B - Class B , F - Class F

触点材质 Contact Material :

2 - AgSnO₂
4 - 三复合 (3 Compounds) AgSnO₂ (Form C)
6 - AgNi
7 - AgNi & AgSnO₂
8 - 三复合 (3 Compounds) AgNi (Form C)

触点形式 Contact Form : Nil - Form C, M - Form A

线圈功耗 Coil power : D-0.36W

线圈电压 Rated coil voltage(VDC) :

03 , 05 , 06 , 09 , 12 , 15 , 18 , 24 , 48 , 60

触点组数 Number of poles : 1-1Pole

封装形式 Protective construction :

S-塑封式 Flux proofed ,
SH-防水式 Sealed type washable

基本型号 Type Designation : SRD/SRDI

(1) 塑封式不能在污染环境 (含有 H₂S、SO₂、NO₂、粉尘等污染物) 中使用。

Flux-proofed relays can not be used in the environment with pollutants like H₂S, SO₂, NO₂, dust, etc.

(2) 塑封式装入 PCB 焊接后, 不能进行整体清洗或表面处理。

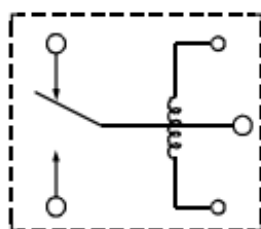
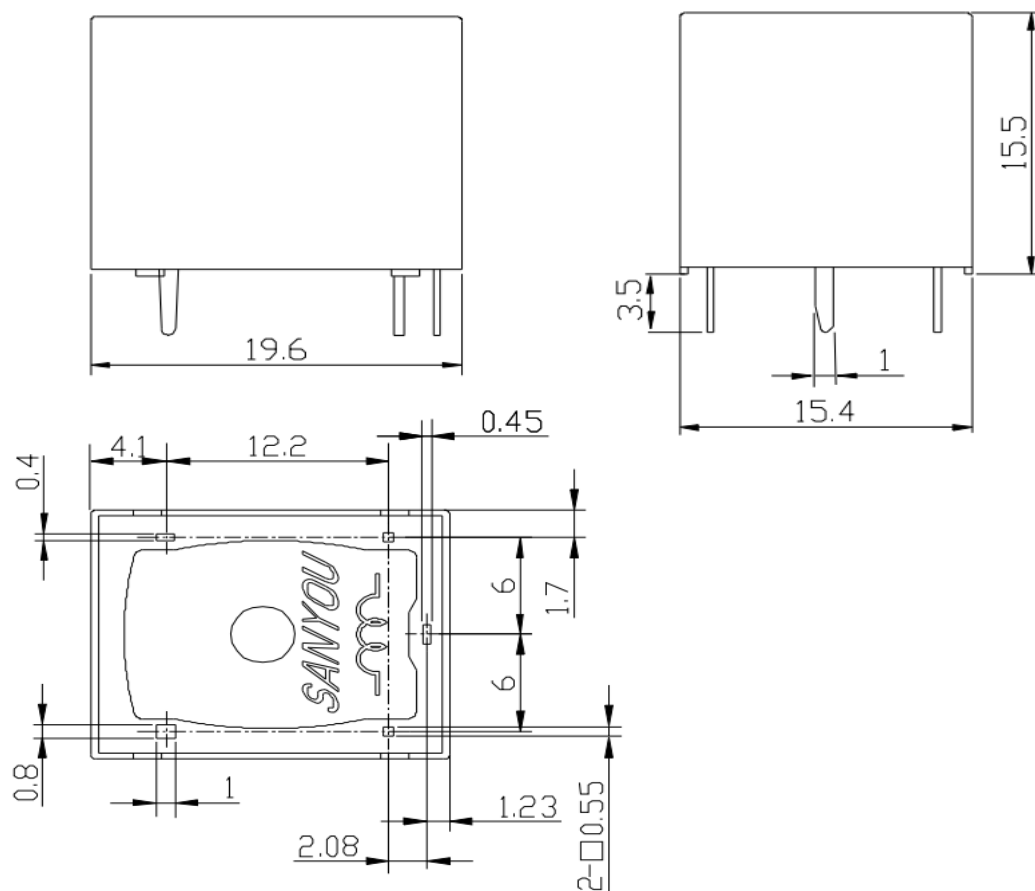
Water cleaning or surface process is not suggested after the flux-proofed relays are assembled on PCB.

(3) 客户特殊要求 (XX), 由我司评估后, 按特性符号标识。

The customer special requirement express as special code after evaluating by Sanyou

外形尺寸图、接线图、安装孔位图 (单位 : mm)

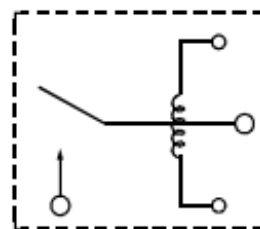
Outline dimension drawing, wiring diagram, installation vacancy drawing (unit: mm)



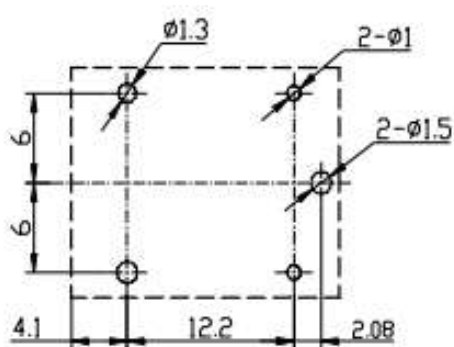
1c

接线图 (底视图)

Wiring Diagram (bottom view)



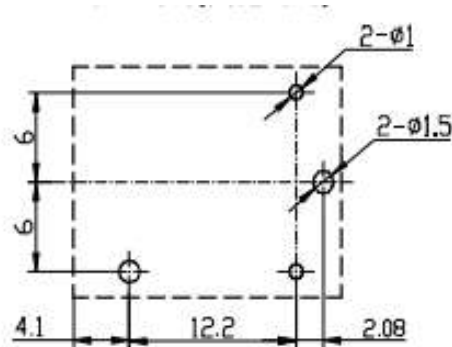
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安装孔位图 (底视图)

P.C.B Layout (bottom view)

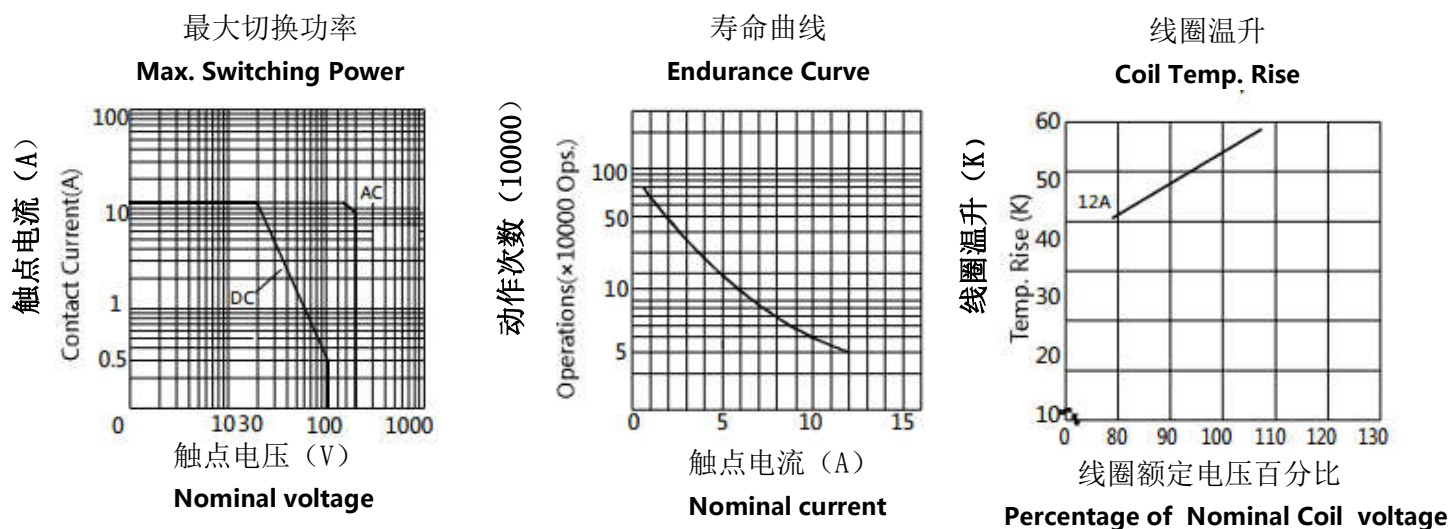


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典型用途 Typical Applications

- 家用电器：空调、电热器等 Home appliances such as air conditioner, heater, etc.
- 自动售货机 Automat
- 办公室设备：电脑、传真机等 Office equipment such as computer, fax machine, etc
- 自动电控窗、汽车天线、门锁等 Utomatic eletric controlled window, automotive antenna, door lock, etc.

性能曲线图 Characteristic Curves



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。

Disclaimer：The specification is for reference only. Specifications subject to change without notice.

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配的产品，若有疑问，请与三友联系获取更多的技术支持，但产品选型责权由客户负责。

We could not evaluate all the performance and all the parameters for every possible application. Thus the user should be in a right position to choose the suitable product for their own application. 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.