



Feature 特点

- Rated 150A contact switching capacity
额定150A触点切换能力。
- Not position sensitive- can be mounted in any position ,easy to be installed.
非位置敏感型-可安装在任意位置，易于安装
- It can be adjusted to abnormal operating conditions, and switched to 10-times over-current
满足异常工况应对要求，能够切换10倍过电流

Contacts Data

触点参数

Arrangement 触点形式	1 Form A 一组常开触点	
Rated load current 额定负载电流	150A	
Contact resistance 接触电阻	≤0.75mΩ (@12V 100A)	
Max. Switching voltage 最大切换电压	70VDC	
Electrical endurance ⁽¹⁾ 电寿命	Load current	Switching times
	80A	25K times
	100A	15k times
	150A	5k times
Breaking Current 分断	200A	200 times
	500A	45 times
	700A	35 times
	1000A	20 times
	1500A	12 times
	2000A	6 times
Current carrying capacity ⁽²⁾ 载流能力	2500A	4 times
	3300A	1 times
	Load current	time
	150A	48 hr
	175A	15 min
	350A	30 sec
	750A	7 sec
1500A	1.5 sec	
2000A	0.5 sec	
2500A	10 ms	

Parameters Data

性能参数

Mechanical life 机械耐久	5×10 ⁵ times	
Insulation resistance 绝缘电阻	100MΩ(500VDC)	
Dielectric strength 介质耐压	Between open contacts 触点间	1000VAC 1min. 10mA
	Between contact and coil 触点与线圈间	1000VAC 1min. 10mA
Operate time (at rated coil voltage) 吸合时间(额定电压)	≤20ms	
Release time (at rated coil voltage) 释放时间(额定电压)	≤10ms	
Shock resistance 抗冲击	Functional 误动作	50GMin
	Destructive 耐久	100GMin
Vibration resistance 抗振动	±X、±Y、±Z , LV124-M04,	
Ambient temperature 工作温度	-40°C~105°C	
Ambient humidity 工作湿度	5%~95% RH	
Weight 重量	110g±5g	
Noise 噪音	60dB (40cm)	
Protection level 防护等级	IP64	

Notes :

(1) The electrical endurance test temperature is 65°C, whilst break-make ratio 0.6s:5.4s unless marked otherwise ;

除特别标明外，电耐久性测试环境温度均为 65°C，通断比(on:off) 为0.6s : 5.4s

(2) The ambient temperature is 65 °C, and the cross-sectional area of wire is greater than or equal to 25mm.

环境温度为65°C,导线截面积≥25mm²

Coil Data (at 23°C)

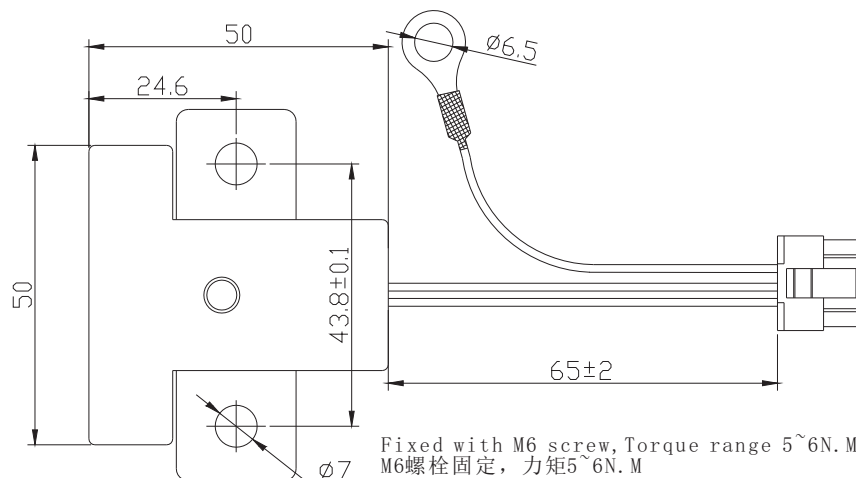
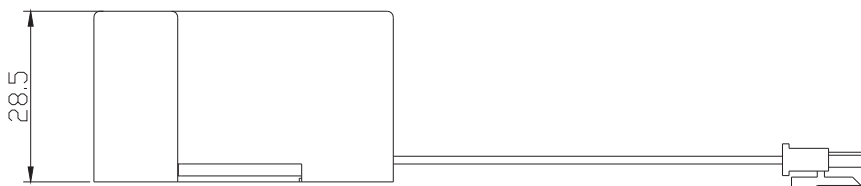
Rated voltage 额定电压 (VDC)	Rated current 额定电流 ±10%(A)	Coil resistance 线圈电阻 ±10% (Ω)	Pick-up voltage 吸合电压 (Max.VDC)	Drop-out voltage 释放电压 (Min.VDC)	Rated power 额定功率
12	0.25	48	8V	1.2V	3W

Ordering Information
订货标记

Model naming rules
订货标记

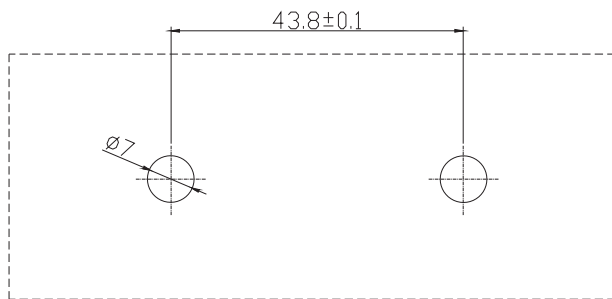
SAR18	-M	12	-H	□	
					Customer characteristics number 客户特性号 Nil : Customer without request 无 : 无客户特殊要求
					Coil Power : H : 3W 线圈功率
					Coil Voltage(VDC) 12 : 12VDC 线圈电压
					Number of contact groups M : 1 Form A 基本型号
					Type Designation SAR18 基本型号

Outline Dimensions
外形尺寸

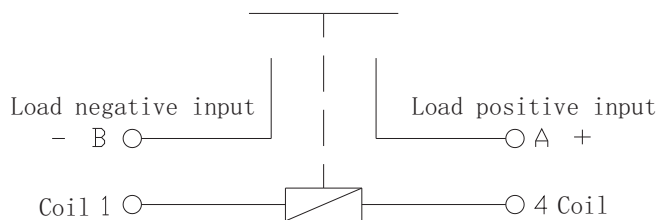


Size/尺寸范围	tolerance/公差
≤10mm:	±0.3
10~50mm:	±0.5
≥ 50mm:	±0.8

Installation Size Chart
安装尺寸

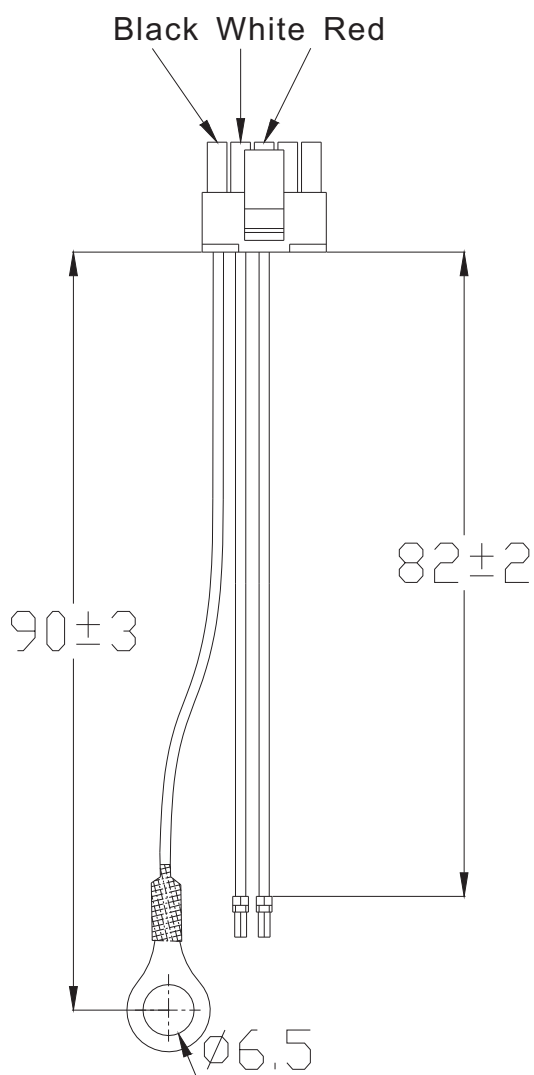


Schematic Diagram
原理图



Coil wire description

线圈线说明



Wiring instructions:

- Cable color black "Terminal signal detection"
- Cable color white "Coil lead -"
- Cable color red "Coil lead +"

接线说明:

- 黑色线-端子信号检测
- 白色线-线圈线接负极
- 红色线-线圈线接正极

NOTES**●Mounting Attention/继电器安装注意事项**

1. When installing the relay, always use washers to prevent the screws from loosening.
2. Tighten each screw within the rated range given in the outline dimensions. Exceeding the maximum torque may result in breakage.
3. Avoid mounting the relay in strong magnetic fields (near a transformer or magnet) or close to an object that radiates heat.
1. 在安装继电器时，一定要使用垫圈以防止螺丝松动；
2. 在安装继电器时，锁紧继电器负载端扭力矩与安装孔扭力矩请控制在建议范围内，在超过范围的情况下，可能会造成端子滑牙或外壳破损，使用螺钉时，确保垫圈强度足够，否则会变形撑坏外壳；
3. 在安装继电器时，请不要靠近强磁场和发热源；

●Electrical Life Attention/继电器负载端连接注意事项

1. This relay is a DC high-voltage switch. In its final breakdown mode, it may lose the ability to provide the proper cut-off. Therefore, do not exceed the indicated switching capacity and life.
2. Please treat the relay as a product with limited life and replace it when necessary.
3. The contacts of the relay are polarized. Please follow instructions in the connection schematic when connecting the contacts.
4. Be careful that foreign matter and oils and fats kind, don't stick to the main terminal parts because it is likely to cause terminal parts to give off unusual heat. Also, please use the following specifications of conductor.
1. 请避免过度负载应用到产品上，如果超出额定范围，产品的性能无法保证；
2. 请将继电器看做是有截止寿命的产品，不要超过开关的容量和使用寿命，为确保安全，应及时替换；
3. 继电器的负载端子是有极性的，请按产品外表标示极性要求连接负载，否则产品性能无法保证；
4. 小心异物或油粘着在负载端子部分，这样可能导致负载端子散热异常，同时请按下表公称面积的连接导线或铜排；

10A	Min. 2mm ² nominal cross-sectional area	公称截面积	≥2mm ²
20A	Min. 3mm ² nominal cross-sectional area	公称截面积	≥3mm ²
40A	Min. 10mm ² nominal cross-sectional area	公称截面积	≥10mm ²
60A	Min. 15mm ² nominal cross-sectional area	公称截面积	≥15mm ²
100A	Min. 35mm ² nominal cross-sectional area	公称截面积	≥35mm ²
150A	Min. 45mm ² nominal cross-sectional area	公称截面积	≥45mm ²
200A	Min. 60mm ² nominal cross-sectional area	公称截面积	≥60mm ²
250A	Min. 80mm ² nominal cross-sectional area	公称截面积	≥80mm ²
300A	Min. 100mm ² nominal cross-sectional area	公称截面积	≥100mm ²
350A	Min. 120mm ² nominal cross-sectional area	公称截面积	≥120mm ²

●Coil Attention/继电器线圈端连接注意事项

1. Please note that when using a diode, the switching speed may decrease and cause a reduction in cut-off performance, we recommend installing a surge protector varistor.
2. The pick-up voltage and drop-out voltage will change with ambient temperature, please use rated voltage to make sure the relay operate reliable. Don't exceed maximum coil voltage.
3. The 250A and 300A types have built-in dedicated drive circuit, please drive the coil with a quick startup (Built-in one-shot pulse generator circuit).
4. After the ON signal enters the 250A and 300A types, automatic coil current switching occurs after approximately 0.1 seconds. Do not repeatedly turn it OFF within that 0.1 seconds interval, as doing so may damage the relay

1. 请注意，使用二极管时，开关速度可能会降低，并导致故障如果切断性能降低，建议安装电涌保护器变阻器。
2. 拾取电压和跌落电压将随环境温度而变化，请使用额定电压，以确保继电器工作可靠。不要超过最大线圈电压。
3. 250A和300A型内置专用驱动电路，请驱动线圈具有快速启动功能（内置一次性脉冲发生器电路）。
4. ON信号进入250A和300A类型后，线圈电流自动切换大约0.1秒后发生。不要在0.1范围内反复关闭因为这样做可能会损坏继电器。

Disclaimer :

This datasheet is the customers' reference. All the specification are subject to change without notice. We could not evaluate all the performance and parameters for every possible application. Thus the users should be in a right position to choose the suitable product for their own application. If there is any query, please contact Sanyou for technical service. However it is the users' responsibility to determine which product should be used only.

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