



散热器及配件系列

产品选型手册 第三册

Heat sink & accessories series

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邮箱:sales@goldssr.com Copyright Symbol:2023.9 江苏固特电气控制技术有限公司

江苏固特电气控制技术有限公司
Jiangsu Gold Electrical Control Technology Co.,Ltd

公司简介

Company Profile

江苏固特电气控制技术有限公司位于江苏无锡，公司前身成立于1992年，是专业研制和生产交直流固态继电器、固态调压器、可控硅模块、交流调压控制器、智能温控仪表等产品的国家级高新技术企业。多年来我司始终坚持“以客户满意为追求 以品质卓越为核心”的企业宗旨。

公司在加拿大开设有跨国控股子公司，“加拿大SSR电子有限公司 CANADA SSR ELECTRICTECH.CO.,LTD”。在美国有合作伙伴公司：“美国高登电气集团公司 U.S.GOLDEN ELECTRICTECH GROUP INC”。公司系列产品涵盖广泛、质量过硬、认证齐全，多年来畅销欧洲、北美、南美、中东等40多个国家和地区。为国内固态继电器领先品牌和主要生产基地。

三十多年历史成果丰富

公司1992年成立江苏省第一家固态继电器研究所，1993年被评为无锡市十佳优秀民营科技企业，2015年被评为无锡市滨湖区十佳科技创新企业。“固特”牌电力电子模块获江苏省名牌产品称号。

- ★公司累计获得固态继电器各类专利近百项。连续多届获得“国家高新技术企业”称号。
- ★公司为固态继电器行业标准起草及制定的主要单位，为电力电子行业协会理事单位。
- ★2010年完成省级科研创新项目《高效节能大功率固态继电器》的研发。
- ★为国际第一家研制成功压接式固态继电器(600A-1600A)的企业 (已获PCT国际专利和俄罗斯发明专利)。
- ★公司大部分固态继电器型号具备美国UL、德国TUV、欧盟RoHS、CE、中国CCC等认证，企业具备ISO9001: 2008质量体系认证。
- ★目前正牵头制定大功率固态继电器团体标准。

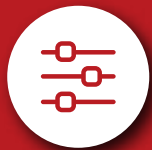
研发及生产实力强大

- ★公司坚持自主创新、自主研发、自主生产，拥有国内领先的固态继电器专业生产规模和优秀团队。
- ★产品生产和检测大量实现机械化/半机械化。
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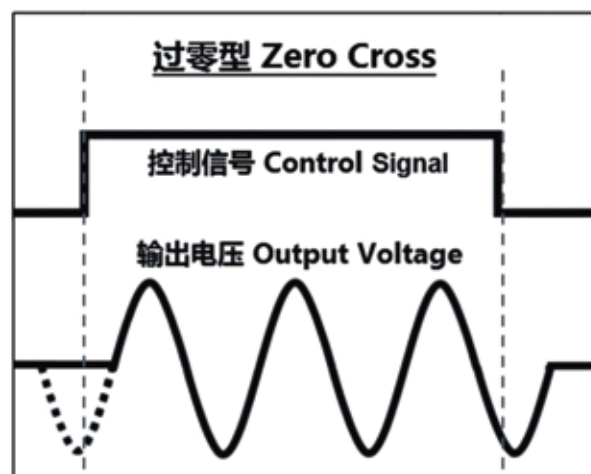
固态继电器应用说明

一、固态继电器的输出方式

固态继电器有着精妙的输出模式(过零型、随机型),并且无火花无噪音。

过零型固态继电器是一种过零通断的无触点交流开关。在当今市场中最常用。当 AC 电源电压达到过零波形的正弦波时继电器的开关从非导通状态到导通状态。这样减少了通过负载电路的第一个传导循环的峰值电流,也减少了对 AC 电网传导干扰,通常 10ms 实现通断。

过零图案与描述



要注意的是直到负载电流到达 AC 正弦波的另一个零点后固态继电器的输出才会停止导通。这一特点与过零形开关模式无关的。主要原因是可控硅在输出电路里不会关闭,除非负载电流小于保持电流(通常为 100mA)。这个特点所有 AC 输出固态继电器都有的,无论是过零型还是非过零型固态继电器。

过零型固态继电器适合于很多的工业与商业领域。比如电加热,电灯泡与整流器,还有很多其他的低启动阻抗或者具有电容特征的应用上。

Solid State Relay Introduction

Output Switching Functions of Solid-State Relays

Solid state relay has more subtle nature than tradition relays with advantage of no arcing and clanking. The output switching methods of Solid-State Relays includes zero-crossing and random output.

"Zero-crossing" is the most popular solid state relay switching mode in the market. This form of switching mode only allows conduction at the SSR's output when the AC main voltage wave crosses the next immediate 0 amplitude. Since the first conduction cycle will not occur immediately using this mode, the short delay would minimize inrush current and also reduce noise to the power grid, the AC mains.

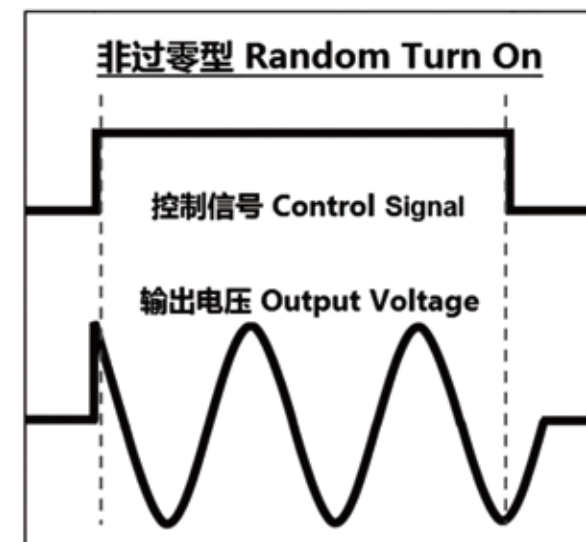
As for the shut-off of zero-crossing solid state relays, conduction shut-off will not occur until the load current crosses the next immediate 0 point. However, this aspect is not related to zero-crossing switching mode, but rather related to the nature of how internal holding current of an AC solid state relay functions.

Zero-crossing relays are suitable for most industrial applications with loads that are resistive in nature.

随机导通固态继电器

随机导通固态继电器也称为即时固态继电器。该类型固态继电器收到了控制信号以后会立即导通,通常 0.1 毫秒内完全导通。

非过零/随机导通图案与描述



非过零型或者随机导通固态继电器通常用于非常精确的相位控制应用上。他们经常用于感性负载,这种情况下使用过零型固态继电器,电压和电流间的相变可能会导致问题。

结论

了解如何在不同应用选择正确输出模式的固态继电器会增加控制的精确度与可靠性。这样的性能是传统继电器远远达不到的。窍门就是根据不同的负载情况选择相应的固态继电器。选择固态继电器是非常容易的我们只需要记住一些选点就行了。

Random Turn-On Solid-State Relays

Another common name for this type of switching mode is "instant-on". This mode allows a relay to begin its output conduction cycle immediately (less than 0.1ms) after the input signal is received.

Random turn-on (instant-on) solid state relays are commonly used in applications where the load is required to be in precise sync with the phase of the control signal. They are commonly used for industrial applications where the load is inductive in nature.

Conclusions

In most industrial application where the load is resistive in nature, zero-crossing or random turn-on relays can be used. For capacitive loads, it is important to consult and select the right relays for the given applications.

二、固态继电器的判断

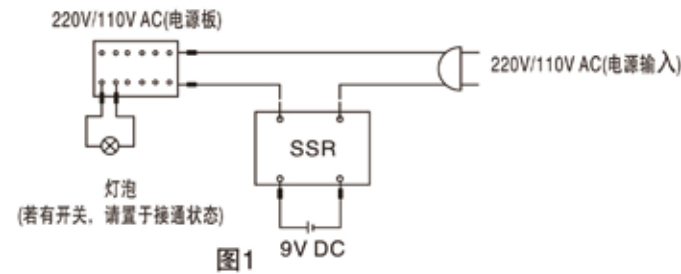
1、如何判断SSR是否损坏

如果是过电流原因击穿的，因可用万用表的电阻档(MΩ档)测量拆装后的两个输出端的电阻值，如果阻值低于50K，则说明输出端已经击穿，SSR报废。

2、如何判断AC SSR开关功能是否正常

阻值判断法：用一个9VDC电池，将电池的正、负电极分别连上SSR的输入端正、负极，如果连接后输出端的电阻阻值立即降低到1K左右，该SSR就应该是好的。

台灯判断法：用一个简单的旧的拖线板，将电源线的两根中剪断其中一根两端，然后将剪断的线头分别接入SSR的输出端(不分方向)，也就是用SSR是否导通来控制拖线板是否有电，将台灯或其他负载(如风扇)插入拖线板，然后用9V电池给SSR的输入正、负极接通，就能起到台灯的通断作用，(记得台灯处于打开状态)如图1所示：



三、对于不同负载情况下的固态继电器选择注意点

下表提供了不同负载导通时的浪涌电流情况，以供客户在选用时，作为参考依据。
The following provides examples of the inrush currents for different loads.

负载 Load	电阻 Resistor	电热丝 Heat resistive	接触器 Relay	电磁铁 Solenoid	灯泡 Lamp	电容 Capacitor
浪涌电流	1倍	1.6倍	3倍	10倍	15倍	20-50倍
正常电流	1 times	1.6 times	3 times	10 times	15 times	20-50 times

为了让我们的客户工程师更好的明白以上的不同负载的情况我们下面分别就常用的情况加以解释。

1、电加热

一般认为阻性负载没有浪涌电流。固态继电器一般用来作为温度控制器的电脉冲通断开关。当使用过零型继电器时，启动的噪声也得到了控制，但是对于全金属的陶瓷式电加热器来说，由于导通前后的冷热电阻不同，冷态的电阻要略低些也就所得冷组效应。所以就测出热态情况下的电流后要适当放大些(例1.6倍)来选择固态继电器的电流以保万无一失。有个特例必须提醒，使用硅碳棒的电加热用户这种负载导通浪涌电流是正常电流的20倍。

1.How to determine SSR are damaged or not

If the damage were caused by overload current, we can use the MΩ gear of the multimeter to test the resistance value of the two output terminals. If the resistance value is below 50k, that means the output terminals were breakdown and the SSR were breakdown too.

2.How to determine the AC SSR is normal

Resistance value judgment method: using a 9 VDC battery, connect the positive and negative electrodes of the battery respectively to the positive and negative of the input terminals on the SSR.If the output resistance value reduced to about 1 k immediately after connection, the SSR should be good.

Desk lamp judgment method: use an old power board, cut one of power line on both ends, and then connect the lines to the output terminals of the SSR respectively (regardless of the direction).That is to use SSR control the power board to see if there is electric conduction. Connect the lamp or other load (such as fan) on the power board, and then connect a 9 v battery to the SSR on the positive and negative input terminals which can play a role of switch for the desk lamp. The desk lamp is open (remember) as shown in figure 1:

2. 电机负载

众所周知，马达启动时需要产生约5-10倍的负载浪涌电流。三相异步电机是5-7倍，直流电机浪涌电流冲击达到10-12倍。而且马达启动时浪涌电流的维持时间比灯泡和变压器还要长。因此，选择带电机负载的固态继电器的电流就必须远大于电加热负载时的选择。电流选用不当将会直接导致固态继电器的损坏。另外考虑到电机反向电动势的影响，对于电机负载的固态继电器的耐压也要选高些。例如星形(Y)接法的固态继电器(开关耐压240V就必须选用480V标称的固态继电器。)对于三角(Δ)接法的固态继电器通断开关则必须选用输出实际耐压测试(非标称值)可达800VAC以上的固态继电器，本公司均有相对应的产品供应，订购时加以说明。

3. 变压器或者电磁铁负载

控制这类复杂的固态继电器在导通初期的10-500ms时间内，会有高达10-20倍的浪涌电流通过固态继电器。实际情况是，当变压器或者电磁铁空载接通时达到最高值20倍，而带载接通时则冲击电流要小一些约10倍与额定工作电流。

4. 灯泡

一般来说，各种照明灯具在开启瞬间会产生很大的冲击电流。具体来说，白炽灯为10-15倍，交流卤素灯10-15倍。LED灯开启时一般会产生更大的冲击电流。例如某0.4A/240V额定功率为LED探照灯，启动电流达到35A。这一点提醒从事LED照明的电器工程师一般留下个70倍左右的考量；对于直流12V-24V的低压卤素灯(ELV)启动电流，额定电流在50-75倍。

5. 半波整流电路

AC电磁计数器或螺线管有用于半波整流的内置二极管。对这种负载类型来说，一个半波AC电压达不到SSR的输出。对于过零型SSR来说，这会导致无法打开。下面介绍两种消除这个问题的方法。

1. 接一个大约为SSR负载电流20%的漏电阻。
2. 使用非过零(随机)型SSR。

6. 全波整流负载

AC电磁计数器或螺线管有用于全波整流的内置二极管。这种负载的负载电流有一个矩形波型。通常，AC SSR使用可控硅作为输出器件。如果负载电流的波形是直角形，这可能会导致可控硅误导通。当打开、关闭一个波形都被整流的电路时，应使用功率场效晶体管继电器(MOS FET)，来代替可控硅。
-V-model SSR: SDP11xxD,SDP40xxD,SDP60xxD
功率场效应管道继电器: IRFP460,TIP152,75T60
7. 小容量负载(几十毫安级负载)
即使固态继电器没有输入，它的输出(LOAD)仍然会有一个小漏电流(IL)。如果这个漏电流比负载释放的电流大的话，SSR将不会导通。可以并连一个漏电阻R来增加SSR的开关电流。

E:负载(例如，继电器)释放电压

I:负载(例如，继电器)释放电流

2. Motor Load

Typical AC motor at hard-start generates an initial inrush current 5-10 times the actual operating current; for three phase motor it is 5-7 times. For a DC motor, the inrush current can be as high as 10-12 times. The inrush current duration for motors is also expected to last longer than other loads, and this must be taken into account as well. The user must also ensure that the SSR has adequate protection against motor induced counter EMF to prevent damage.

3. Transformer Load

During the first 10-500ms of the relay's output conduction cycle, there may be an inrush current flow of 10 times the actual operating current if there is a live-load attached. Without a live-load the inrush current may be as high as 20 times.

4. Lamp Load

Lighting Load of all types generally have very large inrush currents. Incandescent and halogen lamps have inrush current 10-15 times the actual operating current. For LED lamps this value could be between 50-10 times. Typically the SSR current would be 70times the operating current for LED lighting applications and 50-75 times for LV halogen lighting applications.

5. Half-wave Rectifying Circuit

Half-wave AC voltage will not reach the SSR output therefore SSR with zero-cross switching mode will not be turned on. To solve this problem there are two recommended methods:

- 1)Use SSR with instant-on switching mode
- 2)Attach a bleeder resistance with value that is 20% of the SSR load current

6. Full-wave Rectified Loads

Most AC output SSR uses triac as the output component. If the load current is in square wave form, the triac could malfunction and causing problems. When the application requires the control of a full-wave rectified load, use relay containing MOSFET instead of triac component.

7. Small-capacity Loads

When a SSR is not receiving any control input signal, there is still a leakage current originating from the SSR output. If this leakage current is larger than the load release current, the SSR may fail to be controlled correctly. The solution is to connect a bleeder resistance(R) in parallel in order to increase the magnitude of the SSR switching current.

四、GOLD固态继电器使用与储存要求

1. 使用环境温度

固态继电器的使用环境系数是指在没有热量积累的情况下。因此，如果在过于密封和缺乏散热的环境下工作，固态继电器的温度可能会超出指定的系数，导致故障或引起烫伤。

使用固态继电器时，确保系统的设计能提供足够的透气与散热，使环境温度控制在70℃以内(固态继电器的使用环境温度是-40℃~75℃)。

2. 运输

运输时请确保符合以下几点。如果不能遵守则可能直接导致固态继电器的损毁，故障与性能退化。

3. 震动与冲击

切勿让固态继电器受到强烈的震动与冲击，不然内部零件会直接受损。

为了防止固态继电器不受到震动与冲击，不要将固态继电器装在容易受到震动与冲击的地方，比如马达周围。

4. 溶剂

不要让固态继电器接触溶剂液体，比如汽油和稀释剂。这些液体会消除固态继电器的关键信号。

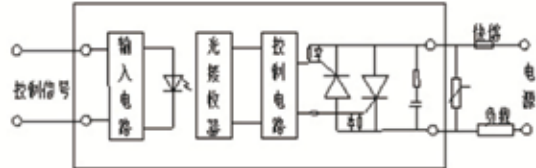
5. 油

不要让固态继电器的触点接触到油。如果一旦发生，固态继电器的外壳可能会碎裂或变得模糊。

五、固态继电器使用

1. 漏电流

在没有输入的情况下，吸收电路还会产生漏电流约1mA~5mA。所以应尽量切断电源后再更换固态继电器，确保安全，在某些特殊情况下，出厂的固态继电器可以去掉内部的RC吸收。



2. 防止过度用力

请勿企图修复或者使用变形的触点。过度用力可能会导致固态继电器失去原本的性能。

3. PCB 固态继电器

PCB固态一定要在260℃、5秒内焊接，或根据不同状况使用相应的方法。使用无松香的或无腐蚀的焊锡，与固态继电器材料搭配的。

4. 超声波清洗

不要使用超声波清洗设备。固态继电器被连接后使用超声波清洗会让震动波传达到固态继电器内部。从而损坏内部结构。

■ Operating and Storage Environments

1. Operating Ambient Temperature

The rated value for the ambient operating temperature of the SSR is for when there is no heat build-up. For this reason, under conditions where heat dissipation is not good due to poor ventilation, and where heat may build up easily, the actual temperature of the SSR may exceed the rated value resulting in malfunction or burning.

When using the SSR, design the system to allow heat dissipation sufficient to stay below the "●Load Current vs. Ambient Temperature" characteristic curve. Note also that the ambient temperature of the SSR may increase as a result of environmental conditions (e.g., climate or air-conditioning) and operating conditions (e.g., mounting in an airtight panel).

2. Transportation

When transporting the SSR, observe the following points. Not doing so may result in damage, multifunction, or deterioration of performance characteristics.

3. Vibration and Shock

Do not subject the SSR to excessive vibration or shock. Otherwise the SSR may malfunction and internal components may be damaged.

To prevent the SSR from abnormal vibration, do not install the SSR in locations or by means that will subject it to vibration from other devices, such as motors.

4. Solvents

Do not allow the SSR to come in contact with solvents, such as thinners or gasoline. Doing so will dissolve the markings on the SSR.

5. Oil

Do not allow the SSR terminal cover to come in contact with oil. Doing so will cause the cover to crack and become cloudy.

■ Actual Operation

1. Leakage Current

A leakage current flows through a snubber circuit in the SSR even when there is no input. Therefore, always turn OFF the input or load and check that it is safe before replacing or wiring the SSR.

2. Deformed Terminals

Do not attempt to repair or use a terminal that has been deformed. Otherwise excessive force will be applied to the SSR, and it will lose its original performance capabilities.

3. PCB SSR Soldering

- SSRs must be soldered at 260℃ within five seconds. For models, however, that conform to separate conditions, perform soldering according to the specified requirements.
- Use a rosin-based non-corrosive flux that is compatible with the material of the SSR.

4. Ultrasonic Cleaning

Do not perform ultrasonic cleaning. Performing ultrasonic cleaning after the SSR base has been installed will cause ultrasonic waves to resonate throughout the SSR internal structure, thereby damaging the internal components.

六、散热器命名方法

1、散热器产品命名方法：

固特的散热器命名规则：采用英文字母组合来命名，散热器的类型；在散热器型号后加数字表示（切割）长度；单位是：mm；

例如：X50 表示散热器类型为X（见图示），长度为50mm；

如果散热器类型前加字母C则表示：散热器是卡座式按装式样；

字母 C或无	字母 代码	数字	字母表示 适用类型	数字表示 安装数量	字母 B或无
C: 卡座式 无: 平板式 C: Clip Mount on Din Rail Blank: Panel Mount	散热器类型 (截面)式样: A、H、R... 见第39页-第42页 Heatsink type	散热器(切割) 长度(mm) Heatsink Length (mm)	P:P型SSR M:M型SSR T:三相SSR P:P type SSR M:M type SSR T:3 phase SSR	1:1只P型SSR 2:2只P型SSR 3:3只P型SSR 1:1 pcs SSR 2:2 pcs SSR 3:3 pcs SSR	B:发黑 无:不发黑 B:black color Blank:default color

例如：CR75-P1B 表示：卡座式安装的R型散热器长度为75mm，适用于安装1只P型固态继电器，B表示散热器已经过发黑处理。

2、散热器系列：

散热器产品原材料均选用高纯度优质电解铝，严格执行 GB/T6892-2006 国家标准；采用先进的生产和时效工艺，在保证产品各部位尺寸规范的同时又达到合适的硬度，保证产品在使用过程中不出现断齿，夹持不牢等现象。科学的生产工艺，高超的生产技术，严格的质量检测，保证了产品的尺寸与优良的性能。

散热器安装注意事项：

- 自然冷却时，应使散热器的断面平行于水平面的方向；
- 强制风冷时，应使气流的流向平行于散热器的肋片方向；
- 当安装一个部件时，其安装孔(或组孔)置于散热器基面的中心位置；
- 固态继电器配套散热器重量选择按下述比例进行：
 - 自然冷却时：实际工作电流 * 15g/A
 - 强制风冷时：实际工作电流 * 12g/A

注释：即自然风冷却时，每1安培工作电流(长期)对应选配15克的散热器。例：100A长期工作电流在散热器未加风机时配1.5Kg，加风机时最少选配1.2Kg的散热器。

1、Heatsink name definitions:

Name system of GOLD heatsink: letters means different types of heatsink. The number followed the letter means the length (mm) of the heatsink.

Example : X50 stands X type heatsink with the length of 50mm

C means heatsink with clip

—

七、固态继电器和散热器的配套选择

1、单相SSR的散热器选型：

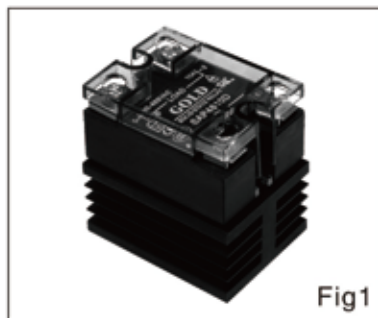
固态继电器经常被用于对设备中的电加热进行开关控制。

设计选择固态电流时都会留有一定的设计余量；例如：负载全导通工作相电流是40A的情况下，通常我们较可靠的选择是选择订购一个60A以上的固态继电器或者固态调压器。这是因为考虑到一般电炉丝或者电加热器冷却时阻抗较小，所以刚接通时有一定的冲击电流流过固态电器，这里有个固态厂家设计可靠性的问题，我们的产品为了提高用户使用的可靠性，都会尽量在设计时尽量加大内部芯片容量。客户只须不要满负载选择例如留下30%的设计余量就可以了。但是对于碳棒这类的特殊电加热负载，由于其冷阻与热阻差别有5倍之多，选用固态电流就应比实际导通时的实测电流要相应比例大，用以保证工作状态的高可靠。

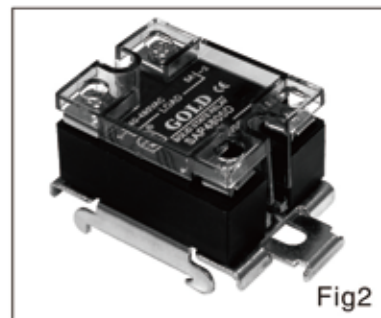
固态继电器型号选好后，就要选择相配套的散热器，对于相应的散热器的选择，我们只需要考虑长期导通状态下的散热，只要按实际工作电流选择相应散热器就行了。与固态继电器上的标称最大负载电流没有直接关连；当然如果客户按固态电流来选购散热器当然也没有问题，只是不够经济而已。备注：固态调压器来对设备中的温度进行更加精确的控制。

2、单相固态继电器(以下简称SSR)工作电流在5A以下的选择

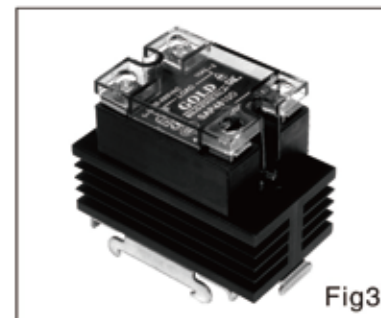
- 1、如果安装基板为金属底板可直接将SSR安装在底板上，见图片Fig1
- 2、如果控制柜有导轨，则选C型卡座式，直接将SSR (P型)安装在卡座相应孔上，见图片Fig2
- 3、如果底板是塑料料板、环氧板等，平面式安装则适用散热器型号为A80；见图片Fig3



A60-P1B



C-P1B



CA80-P1B

Heatsink for Single phase SSR for electric heating application:

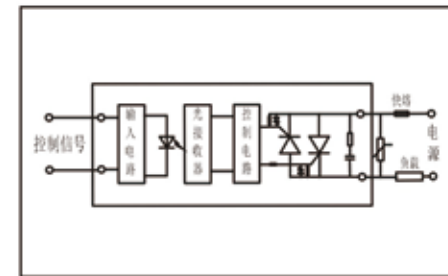
Solid state relay is often used to control electric heating device ,When selecting solid-state state,the current will have a certain design margin,"For example, to cases that the load whole conduction work current is 40 A , usually the reliable choice is to choose a 60 A solid state relay or solid state voltage regulator, because we will consider the cooling impedance is small for a electric stove wire or electric heater , so there is a certain impact current through solid state relay when it is connected. There is a design reliability problem of solid state. In order to improve the reliability of the products of our company, we increase the internal chip capacity when design. Customers just don't choose full load design just leave around 30% of the margin is ok. But for special electric heating load such as carbon rods, its cold resistance and heat resistance difference is more than 5 times. To ensure the work state of high reliable, customer should choose ssr with current bigger than the actual measured current in corresponding proportion."

"For the selection of the corresponding heatsink, as we need to consider long-term conduction of heat dissipation, we only need to choose according to actual working current corresponded heatsink. So in this manual, the current corresponded with the heatsink refers to the actual current. The nominal maximum load current on the solid state relay have no direct relation with that; it is ok for customers purchasing heat-sink according to current on ssr , only that it is not economic." "Note: solid state voltage regulator is for precise temperature control in the equipment."

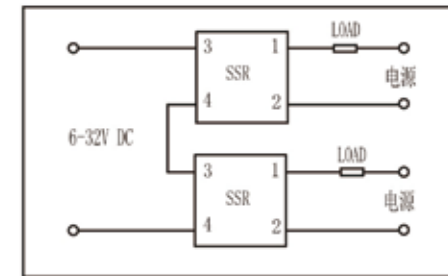
Single phase SSR with working current samller than 5A :

- 1、Mounted on metal panel, ssr can be directly installed on it without heatsink.
- 2、Mounted on guide rail, choose the heatsink with Clip. Install the ssr on the Clip.
- 3、If mounted on plasctic panel, choose A80 for surface installation.

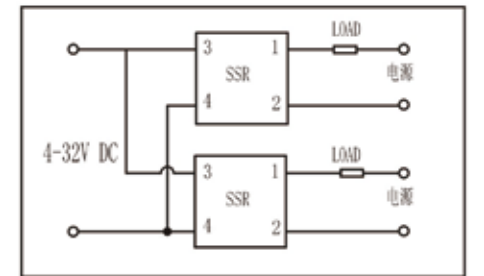
八、交流固态应用电路图



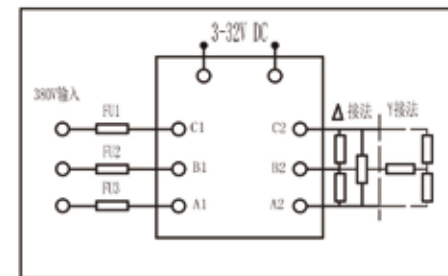
普通交流SSR内部结构框图与应用示意图
SSR Principals of Operation



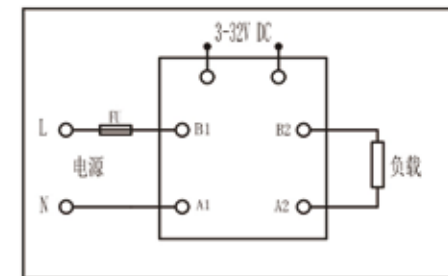
(1) SSR串联驱动
SSR in Series



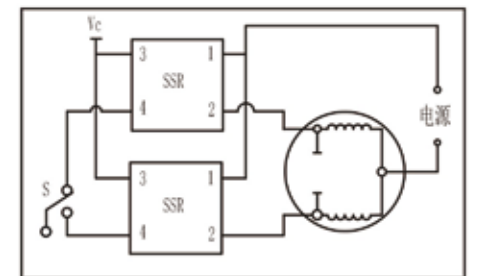
(2) SSR并联驱动
SSR in Parallel



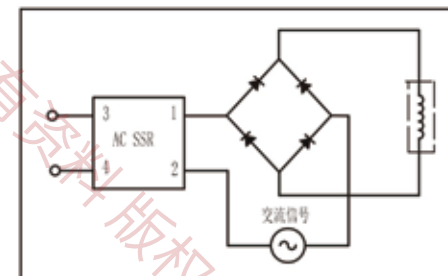
(3) 加热器控制
Three-phase Application



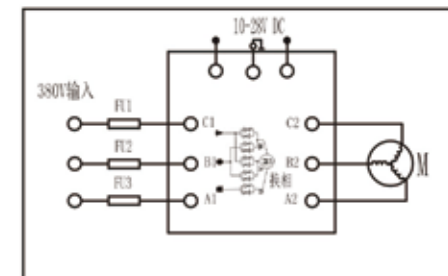
(4) 双路固态应用
Dual-path Application



(5) 单相电机正反转
Single-phase Motor & Reversal



(6) 交流SSR驱动直流负载
AC SSR with DC Load

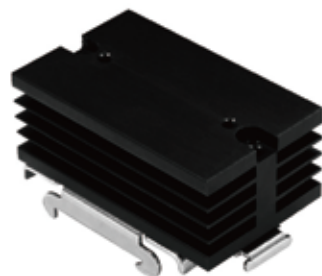


(7) 三相异步电机正反转示意图
Three-phase Motor & Reversal

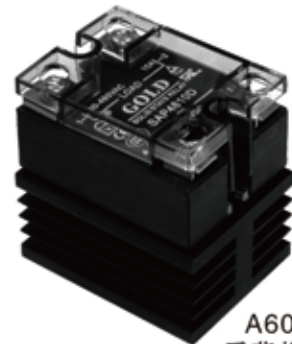
九、控制方法说明 Control Operations

	相位控制 Phase-Control	零点控制 Zero-Control
10%		
25%		
50%		
75%		
特性	1、适用于电感性或变阻性负载 (红外加热器, 变压器负载, 纯金属或碳矽发热体等) ; 2、功率因数小于1; 3、较高谐波干扰;	1、适用于定阻性或电容性负载 (合金类发热体, 电容性负载); 2、功率因数等于1; 3、较低谐波干扰;

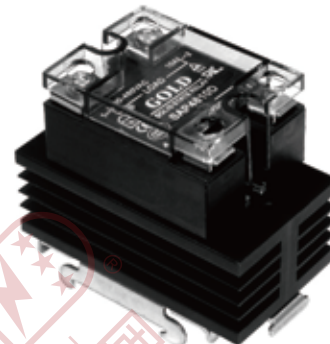
A/CA Series (适装P型固态)



CA80-PB



A60-P1B
后背螺丝安装
Screw mount in back



CA80-P1B

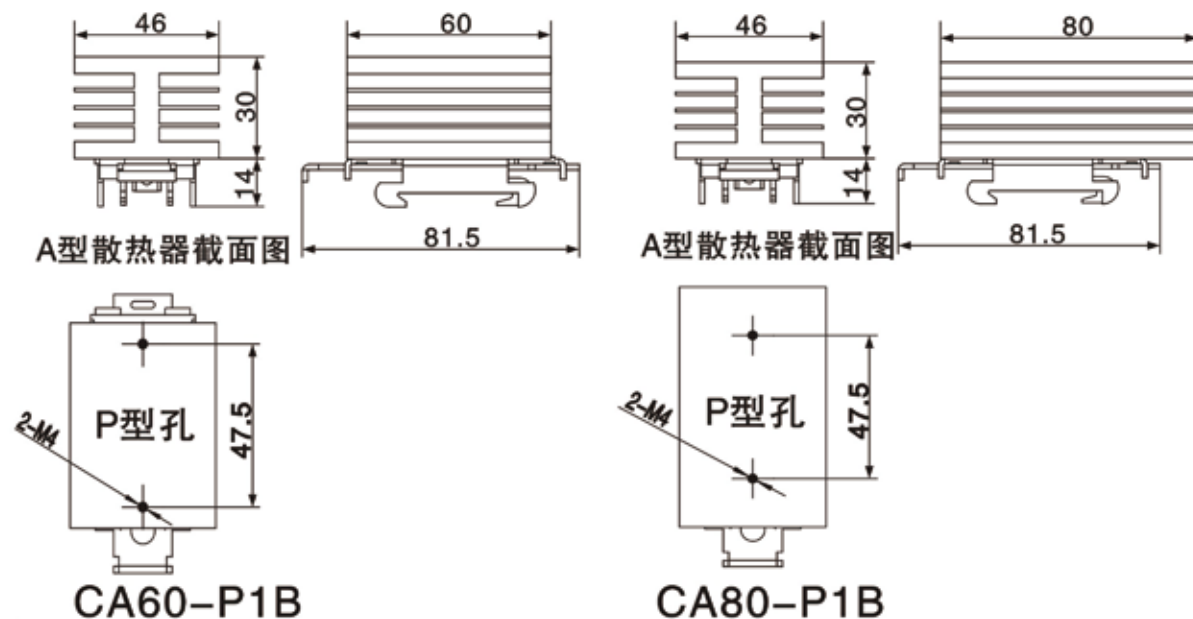
- 5-8A(A60), 5-10A(A80) AC output @ 40°C
- Suitable for single P SSR
- DIN rail mounting

GENERAL SPECIFICATIONS

Description	Din-Rail Mount	
型号 Model Number	CA60-P1B	CA80-P1B
单相SSR电流范围 Current range[A]	5-8	5-10
面积 Surface area[cm ²]	330	442
重量 Weight[g]	121.2	161.6
热阻 Thermal resistance[°C/W]	3.3	2.85
安装方式 Heat sink mounting	导轨式安装 Din-Rail Mount	
材质 Material	铝 Aluminum	
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized	
散热器安装孔 Heat Mounting Holes/threads[mm]	导轨 Din-Rail	
扭矩 Mounting screw torque[nm]	1.7-2.2	
SSR数量 Number and type of relay accepted	1只P型固态继电器 single P SSR	
风扇 Accepts Fan/size[mm]	无 None	

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

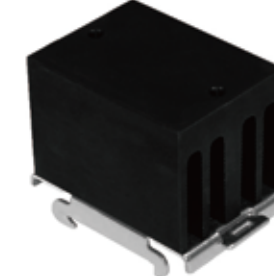
MECHANICAL SPECIFICATIONS



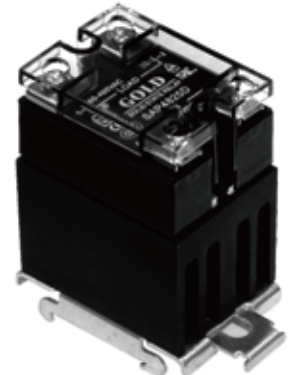
N/CN Series (适装P型固态)



N80-P



CN60-PB



CN60-P1B

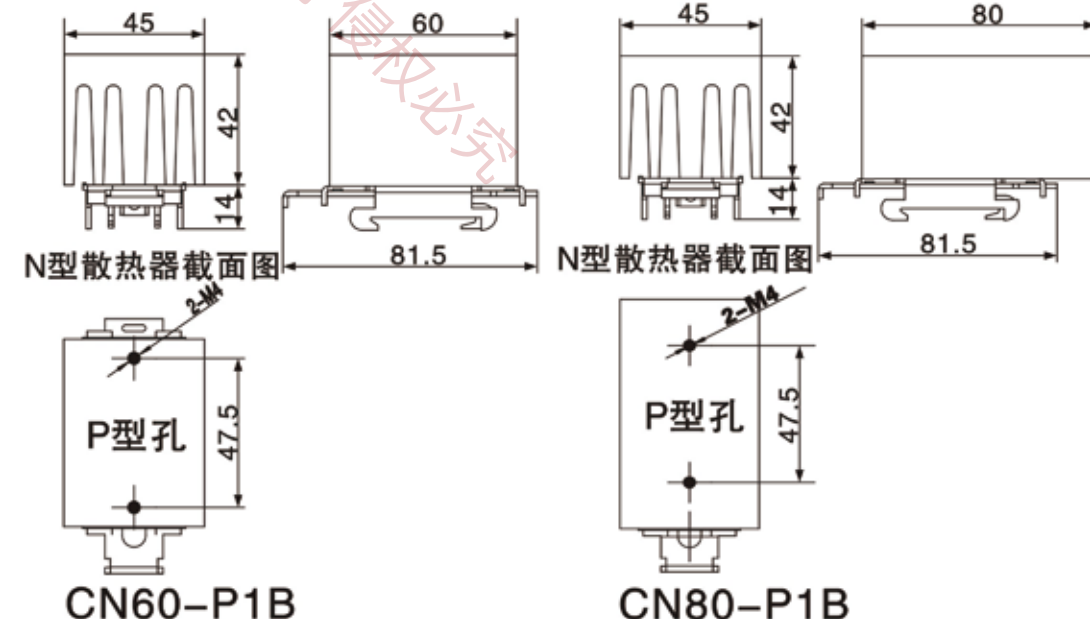
- 5-12A(CN60), 5-15A(CN80) AC output @ 40°C
- Suitable for single or P SSR
- DIN rail mounting

GENERAL SPECIFICATIONS

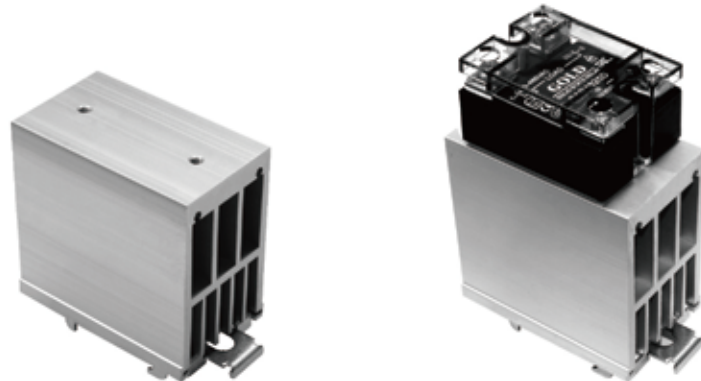
Description	Din-Rail Mount	
型号 Model Number	CN60-P1B	CN80-P1B
单相SSR电流范围 Current range[A]	5-12	5-15
面积 Surface area[cm ²]	283.8	354.2
重量 Weight[g]	194	258
热阻 Thermal resistance[°C/W]	2.81	2.5
安装方式 Heat sink mounting	导轨式安装 Din-Rail Mount	
材质 Material	铝 Aluminum	
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized	
散热器安装孔 Heat Mounting Holes/threads[mm]	导轨 Din-Rail	
扭矩 Mounting screw torque[nm]	1.7-2.2	
SSR数量 Number and type of relay accepted	1只P型固态继电器 single P SSR	
风扇 Accepts Fan/size[mm]	无 None	

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS



N/CR Series (适装P型固态) 导轨式安装



CR75

CR75-P1

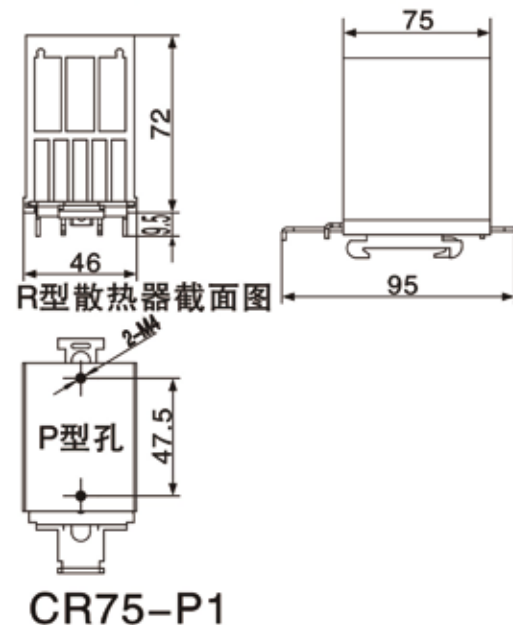
- 5-17A(CR75) AC output @ 40℃
- Suitable for single or P SSR
- DIN rail mounting

GENERAL SPECIFICATIONS

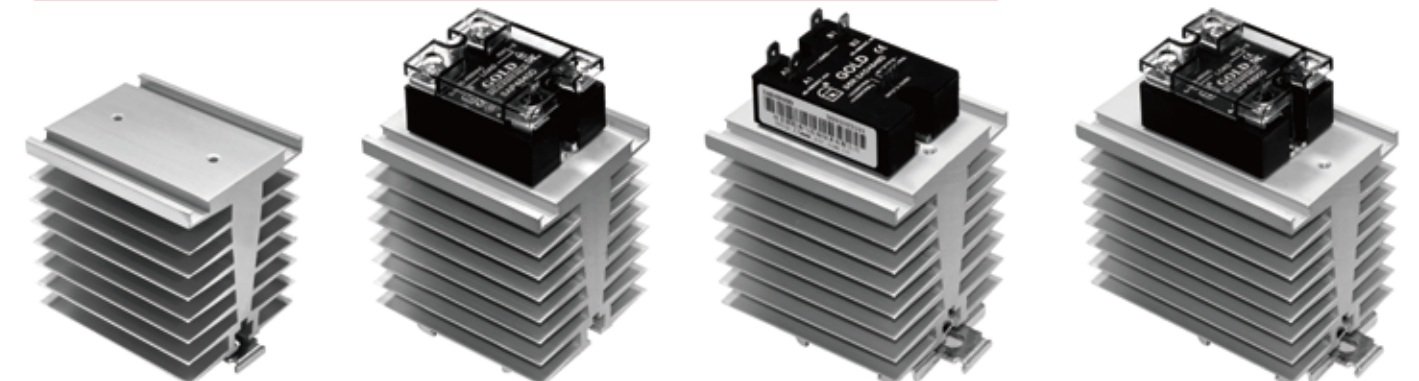
Description	Din-Rail Mount
型号 Model Number	CR75-P1
单相SSR电流范围 Current range[A]	5-17
面积 Surface area[cm²]	480.7
重量 Weight[g]	257
热阻 Thermal resistance[℃/W]	2.01
安装方式 Heat sink mounting	导轨式安装 Din-Rail Mount
材质 Material	铝 Aluminum
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized
散热器安装孔 Heat Mounting Holes/threads[mm]	导轨 Din-Rail
扭矩 Mounting screw torque[nm]	1.7-2.2
SSR数量 Number and type of relay accepted	1只P型固态继电器 single or P SSR
风扇 Accepts Fan/size[mm]	无 None

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS



N/CH Series (适装P型/M型固态) 导轨式安装



CH80

CH60-P1

CH80-P1

CH100-P1

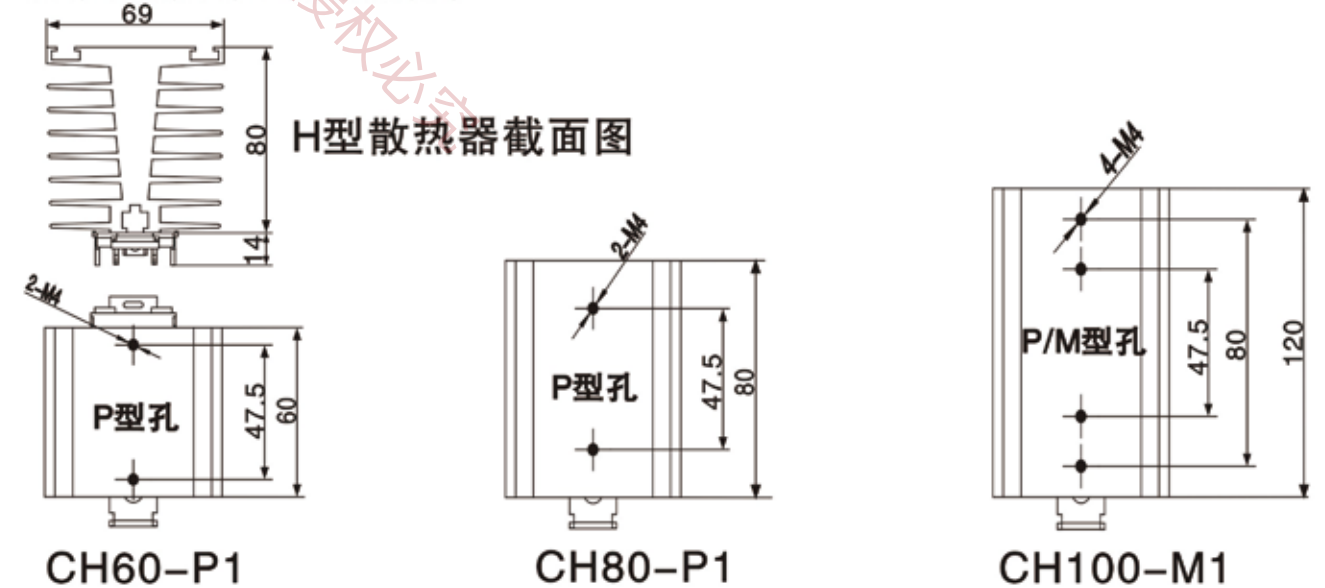
- 5-25A(CH60), 5-33A(CH80), 5-41A(CH100) AC output @ 40℃
- Suitable for single P or M SSR
- DIN rail mounting

GENERAL SPECIFICATIONS

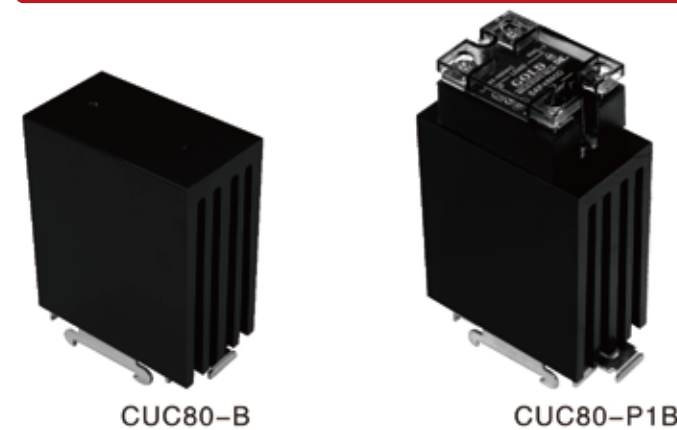
Description	Din-Rail Mount		
型号 Model Number	CH60-P1	CH80-P1	CH100-M1
单相SSR电流范围 Current range[A]	5-25	5-33	5-41
面积 Surface area[cm²]	702.9	937.2	1170.4
重量 Weight[g]	370.2	493.6	617
热阻 Thermal resistance[℃/W]	1.24	1.12	1.01
安装方式 Heat sink mounting	导轨式安装 Din-Rail Mount		
材质 Material	铝 Aluminum		
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized		
散热器安装孔 Heat Mounting Holes/threads[mm]	导轨 Din-Rail		
扭矩 Mounting screw torque[nm]	1.7-2.2		
SSR数量 Number and type of relay accepted	1只P型固态 single P SSR		1只M型固态 single M SSR
风扇 Accepts Fan/size[mm]	无 None		

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS



UB/CUB Series (适装P型/M型固态) 导轨式安装



- 10-24A(UB60), 10-32A(UB80), 10-40A(UB100), 10-48A(UB120) AC output @ 40℃
- Suitable for single P or M SSR
- DIN rail mounting

GENERAL SPECIFICATIONS

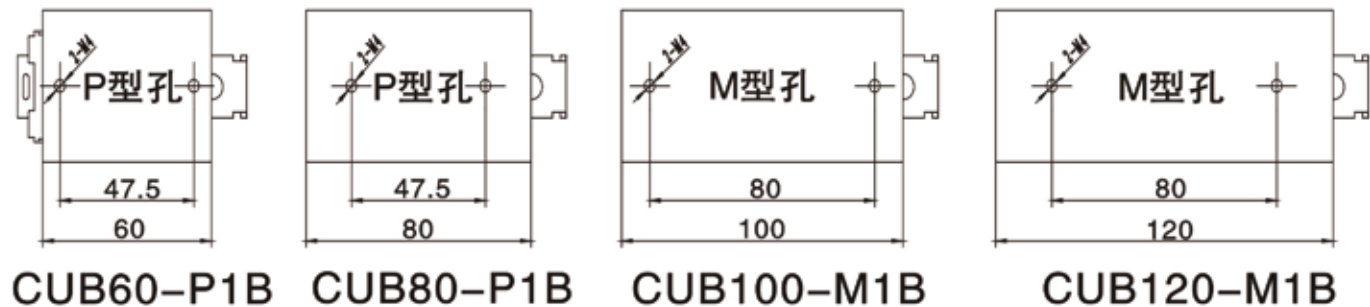
Description	Din-Rail Mount			
型号 Model Number	CUC60-P1B	CUC80-P1B	CUC100-M1B	CUC120-M1B
单相SSR电流范围 Current range[A]	10-24	10-32	10-40	10-48
面积 Surface area[cm ²]	585.6	780.8	976	1171.2
重量 Weight[g]	420	560	700	840
热阻 Thermal resistance[℃/W]	1.10	0.83	0.54	0.47
安装方式 Heat sink mounting	导轨式安装 Din-Rail Mount			
材质 Material	铝 Aluminum			
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized			
散热器安装孔 Heat Mounting Holes/threads[mm]	导轨 Din-Rail			
扭矩 Mounting screw torque[nm]	1.7-2.2			
SSR数量 Number and type of relay accepted	1只P型固态继电器 single P SSR		1只M型固态继电器 single M SSR	
风扇 Accepts Fan/size[mm]	无 None			

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS

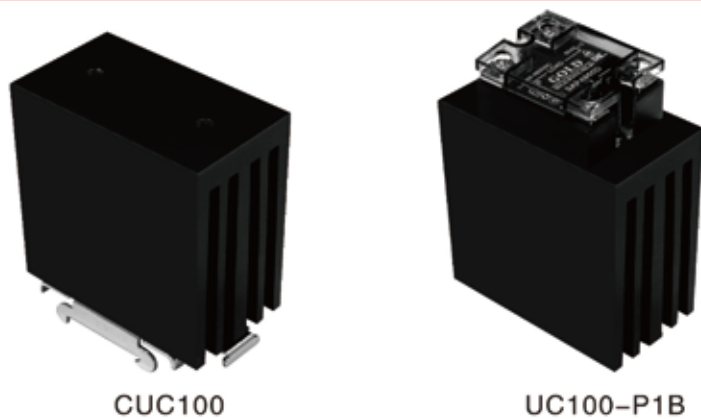


UB型散热器截面图



CUB60-P1B CUB80-P1B CUB100-M1B CUB120-M1B

UC/CUC Series (适装P型固态) 导轨式安装



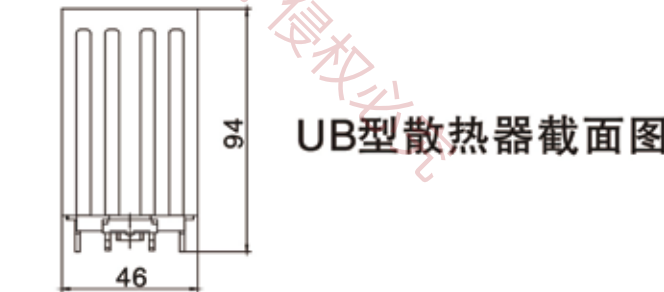
- 10-28A(UC60), 10-42A(UC100), 10-50A(UC120) AC output @ 40℃
- Suitable for single P or M SSR
- DIN rail mounting

GENERAL SPECIFICATIONS

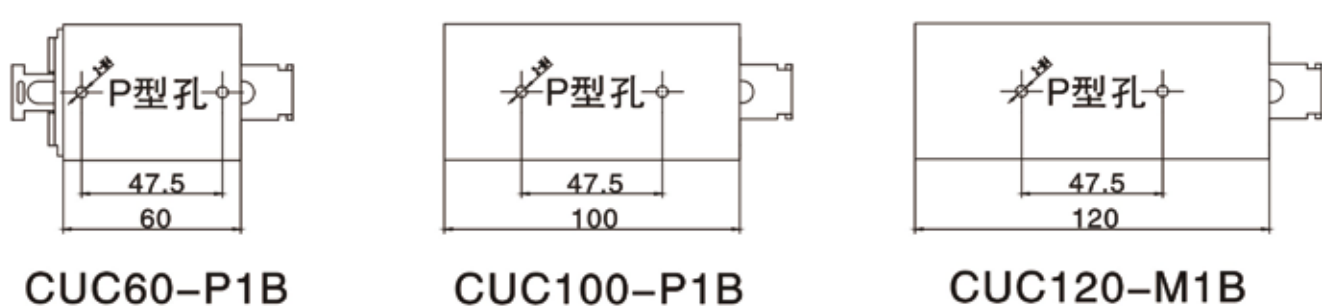
Description	Din-Rail Mount		
型号 Model Number	CUC60-P1B	CUC100-P1B	CUC120-M1B
单相SSR电流范围 Current range[A]	10-28	10-42	10-50
面积 Surface area[cm ²]	874.8	1458	1749.6
重量 Weight[g]	469.8	783	939.6
热阻 Thermal resistance[°C/W]	0.98	0.60	0.51
安装方式 Heat sink mounting	导轨式安装 Din-Rail Mount		
材质 Material	铝 Aluminum		
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized		
散热器安装孔 Heat Mounting Holes/threads[mm]	导轨 Din-Rail		
扭矩 Mounting screw torque[nm]	1.7-2.2		
SSR数量 Number and type of relay accepted	1只P型固态继电器 single P SSR		1只M型固态 single M SSR
风扇 Accepts Fan/size[mm]	无 None		

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS



UB型散热器截面图

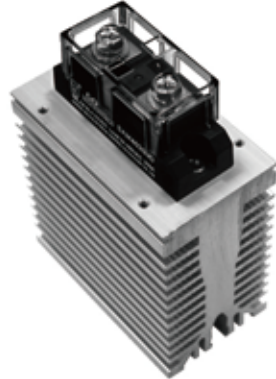


CUC60-P1B CUC100-P1B CUC120-M1B

V/CV Series (适装P型/M型固态) 导轨式安装



V100-P1



V100-M1

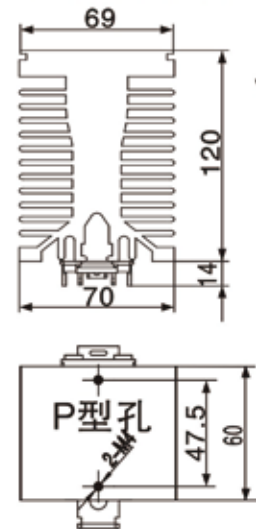
- 10-55A(V60), 10-85(V100), 10-110(V120) AC output @ 40°C
- Suitable for single P or M SSR
- DIN rail mounting

GENERAL SPECIFICATIONS

Description	Din-Rail Mount		
型号 Model Number	CV60-P1	CV100-M1	CV120-M1
单相SSR电流范围 Current range[A]	10-55	10-85	10-110
面积 Surface area[cm ²]	1232	1546	1681
重量 Weight[g]	834	1390	1668
热阻 Thermal resistance[°C/W]	0.61	0.36	0.27
安装方式 Heat sink mounting	导轨式安装 Din-Rail Mount		
材质 Material	铝 Aluminum		
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized		
散热器安装孔 Heat Mounting Holes/threads[mm]	导轨 Din-Rail		
扭矩 Mounting screw torque[nm]	1.7-2.2		
SSR数量 Number and type of relay accepted	1只P型固态 single P SSR	1只M型固态继电器 single M SSR	
风扇 Accepts Fan/size[mm]	无 None		

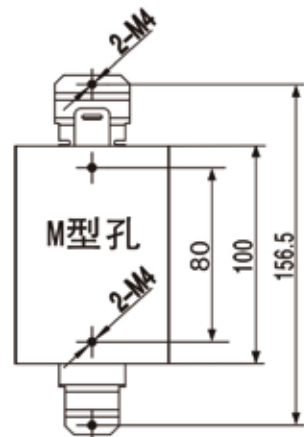
注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS

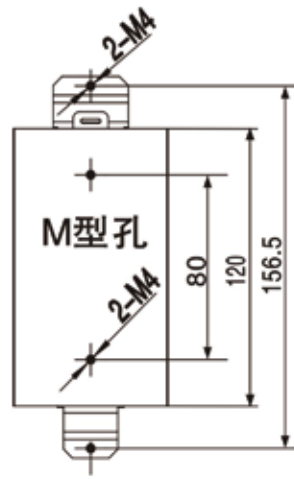


CV60-P1

V型散热器截面图

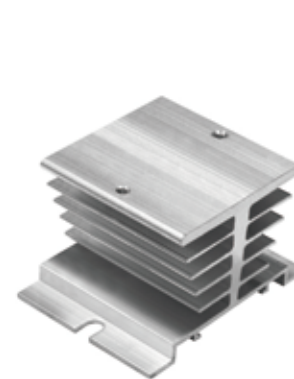


CV100-M1

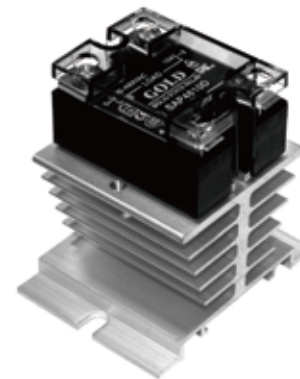


CV120-M1

X Series (适装P型固态) 平板式安装



X50-P



X50-P1

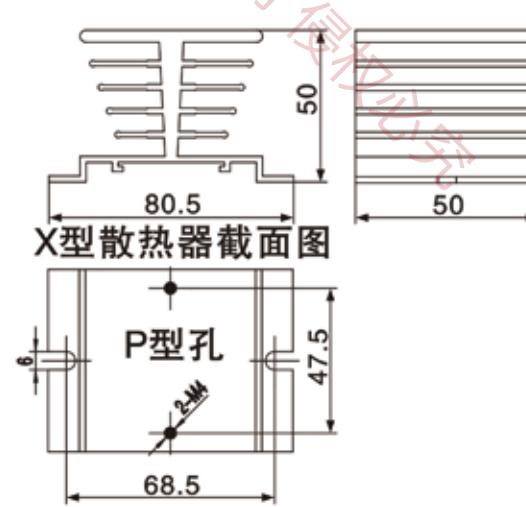
- 5-8A(X50), 5-13A(X75) AC output @ 40°C
- Suitable for single P SSR
- Panel mounting

GENERAL SPECIFICATIONS

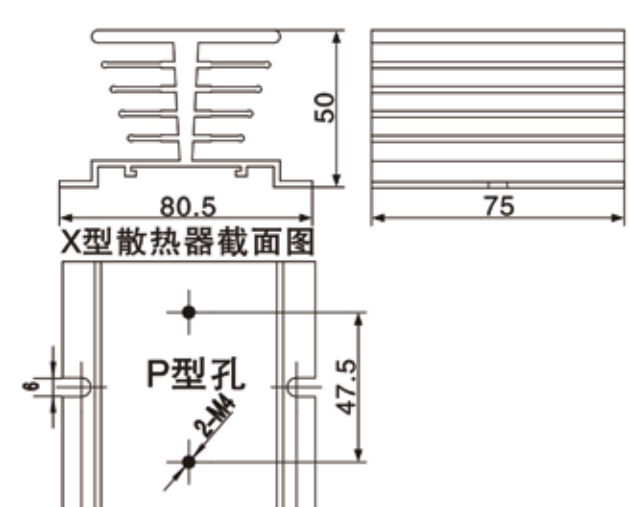
Description	Panel Mount	
型号 Model Number	X50-P1	X75-P1
单相SSR电流范围 Current range[A]	5-8	5-13
面积 Surface area[cm²]	360	450
重量 Weight[g]	150	188
热阻 Thermal resistance[°C/W]	3.84	2.56
安装方式 Heat sink mounting	平板式安装 Panel Mount	
材质 Material	铝 Aluminum	
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized	
散热器安装孔 Heat Mounting Holes/threads[mm]	∅6x2 间隔70mm	
扭矩 Mounting screw torque[nm]	1.7-2.2	
SSR数量 Number and type of relay accepted	1只P型固态继电器 single P SSR	
风扇 Accepts Fan/size[mm]	无 None	

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS

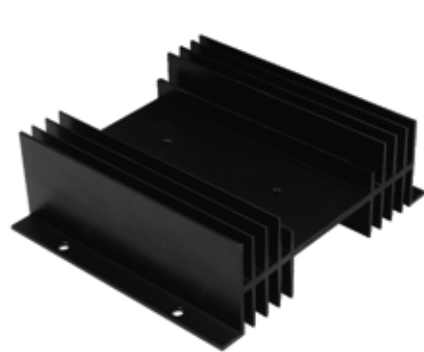


X50-P1

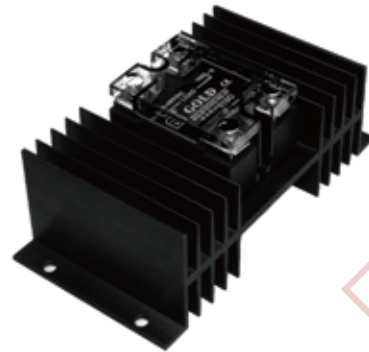


X75-P1

DQ Series (适装P型固态) 平板式安装



DQ100-B



DQ80-PB

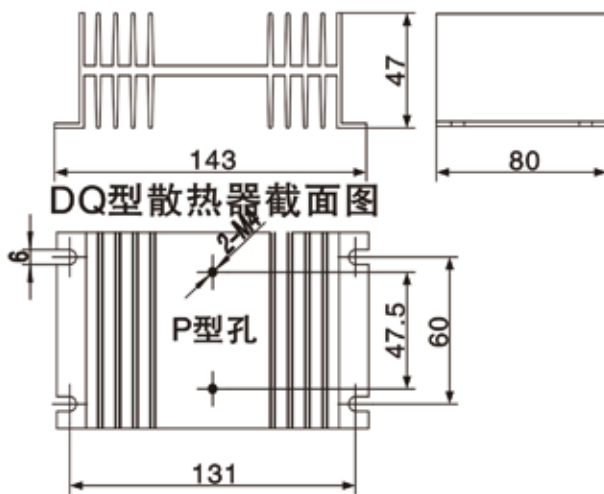
- 5-14A(DQ80),5-17A(DQ100) AC output @ 40℃
- Suitable for single P SSR
- Panel mounting

GENERAL SPECIFICATIONS

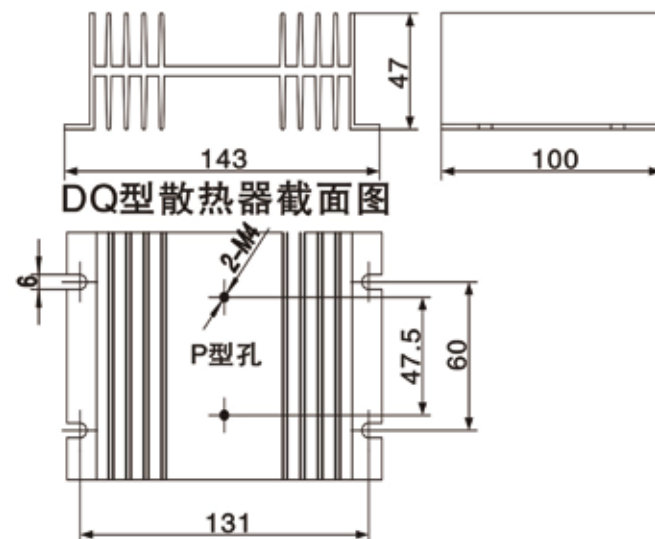
Description	Panel Mount	
型号 Model Number	DQ80-P1B	DQ100-P1B
单相SSR电流范围 Current range[A]	5-14	5-17
面积 Surface area[cm ²]	991.1	1239.7
重量 Weight[g]	203.2	254
热阻 Thermal resistance[℃/W]	2.36	1.81
安装方式 Heat sink mounting	平板式安装 Panel Mount	
材质 Material	铝 Aluminum	
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized	
散热器安装孔 Heat Mounting Holes/threads[mm]	∅6x4 间隔131x60mm	
扭矩 Mounting screw torque[nm]	1.7-2.2	
SSR数量 Number and type of relay accepted	1只P型固态继电器 single P SSR	
风扇 Accepts Fan/size[mm]	无 None	

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

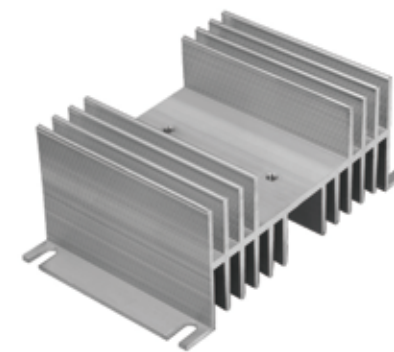
MECHANICAL SPECIFICATIONS



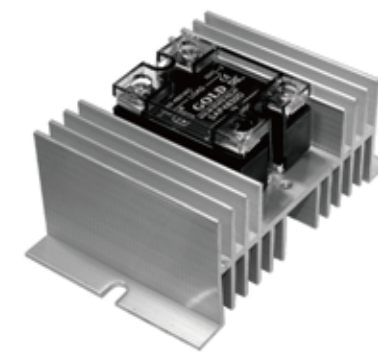
DQ80-P1B



DQ100-P1B



JN80



JN80-P1

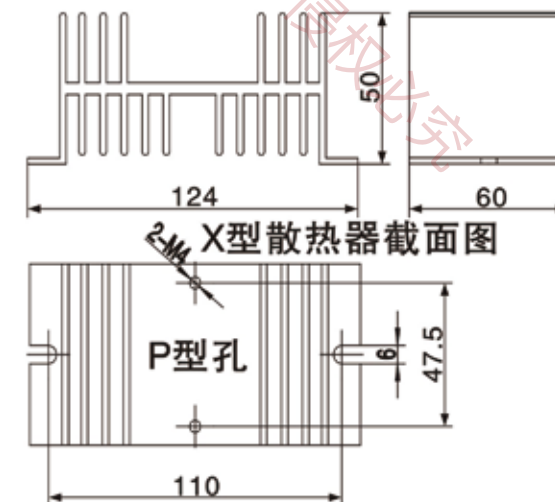
- 5-14A(JN60),5-19A(JN80) AC output @ 40℃
- Suitable for single P SSR
- Panel mounting

GENERAL SPECIFICATIONS

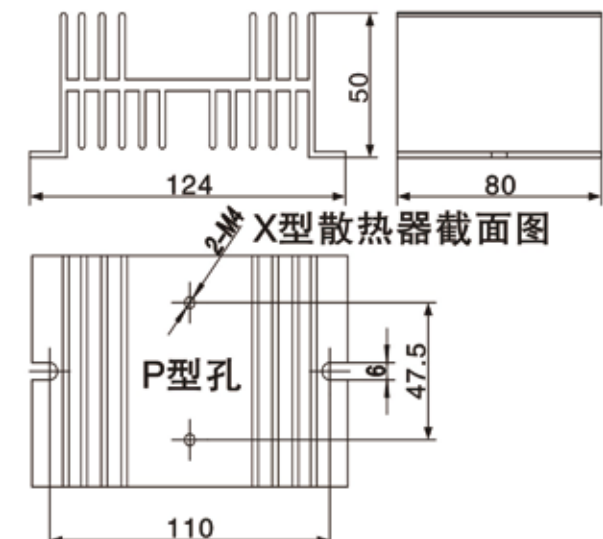
Description	Panel Mount	
型号 Model Number	JN60-P1	JN80-P1
单相SSR电流范围 Current range[A]	5-14	5-19
面积 Surface area[cm ²]	854.7	1097.8
重量 Weight[g]	210	280
热阻 Thermal resistance[℃/W]	1.8	1.39
安装方式 Heat sink mounting	平板式安装 Panel Mount	
材质 Material	铝 Aluminum	
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized	
散热器安装孔 Heat Mounting Holes/threads[mm]	∅6x2 间隔110mm	
扭矩 Mounting screw torque[nm]	1.7-2.2	
SSR数量 Number and type of relay accepted	1只P型固态继电器 single P SSR	
风扇 Accepts Fan/size[mm]	无 None	

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS

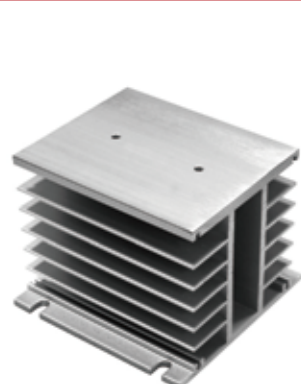


JN60-P1

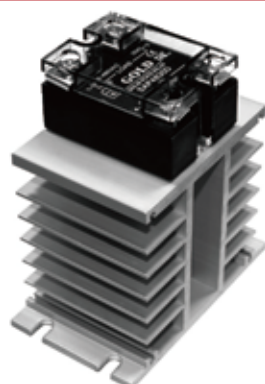


JN80-P1

G Series (适装P型固态) 平板式安装



G80



G60-P1



G80-P1

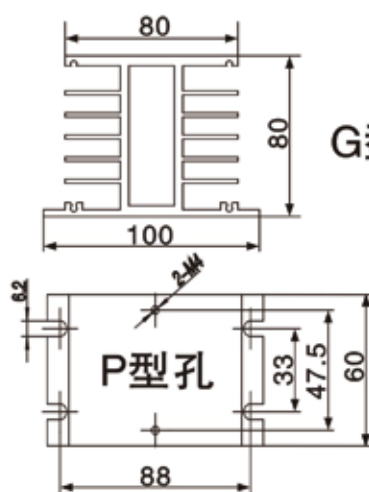
- 5–20A(G60), 15–27A(G80), 25–45A(G100) AC output @ 40°C
- Suitable for single P SSR
- Panel mounting

GENERAL SPECIFICATIONS

Description	Panel Mount		
型号 Model Number	G60-P1	G80-P1	G100-P1
单相SSR电流范围 Current range[A]	5-20	15-27	25-45
面积 Surface area[cm²]	714	952	1190
重量 Weight[g]	307	409	512
热阻 Thermal resistance[°C/W]	1.53	1.13	0.68
安装方式 Heat sink mounting	平板式安装 Panel Mount		
材质 Material	铝 Aluminum		
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized		
散热器安装孔 Heat Mounting Holes/threads[mm]	φ 6x4 间隔 88x33	φ 6x4 间隔 88x54	φ 6x4 间隔 88x70
扭矩 Mounting screw torque[nm]	1.7-2.2		
SSR数量 Number and type of relay accepted	1只P型固态继电器 single P SSR		
风扇 Accepts Fan/size[mm]	有风机 Yes/80x80		

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS



G型散热器截面



G60-P1



G80-P1



G100-P1

UF Series (适装P型/M型固态) 平板式安装



UF120



UF120-P2B

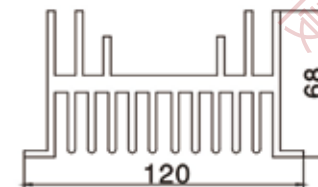
- 10-26A(UF60),10-34A(UF80),10-44A(UF100),10-53A(UF120) AC output @ 40°C
- Suitable for single P or M SSR
- Panel mounting

GENERAL SPECIFICATIONS

Description	Panel Mount			
型号 Model Number	UF60-P1B	UF80-P1B	UF100-M1B	UF120-M1B
单相SSR电流范围 Current range[A]	10-26	10-34	10-44	10-53
面积 Surface area[cm ²]	736.8	982.4	1228	1473.6
重量 Weight[g]	394.8	526.4	656	787.2
热阻 Thermal resistance[°C/W]	1.18	0.88	0.69	0.58
安装方式 Heat sink mounting	平板式安装 PanelMount			
材质 Material	铝 Aluminum			
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized			
散热器安装孔 Heat Mounting Holes/threads[mm]	φ6x2 间隔 108mm		φ6x4 间隔 60x108mm	
扭矩 Mounting screw torque[nm]	1.7-2.2			
SSR数量 Number and type of relay accepted	1只P型固态继电器 single P SSR		1只M型固态继电器 single M SSR	
风扇 Accepts Fan/size[mm]	无 None			

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS



UF型散热器截面



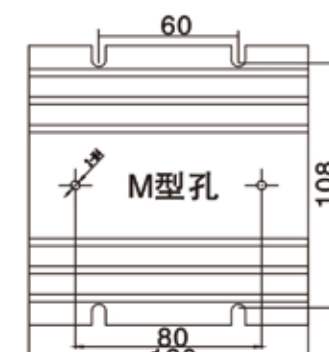
UF60-P1B



UF80-P1B

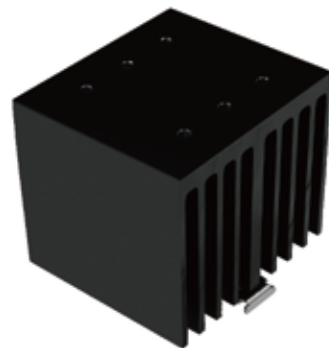


UF100-M1B



UF120-M1B

UD/CUD Series (适装M型固态) 导轨式安装



CUD100



CUD120-M1B

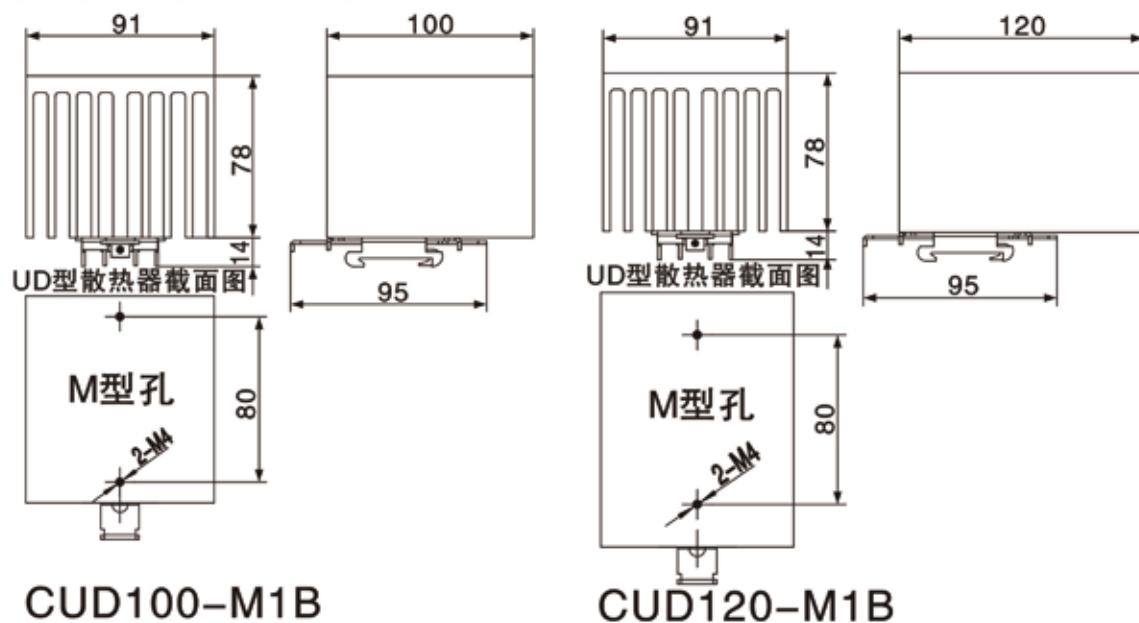
- 10-51A(UD100), 10-62A(UD120) AC output @ 40°C
- Suitable for single M SSR
- DIN rail mounting

GENERAL SPECIFICATIONS

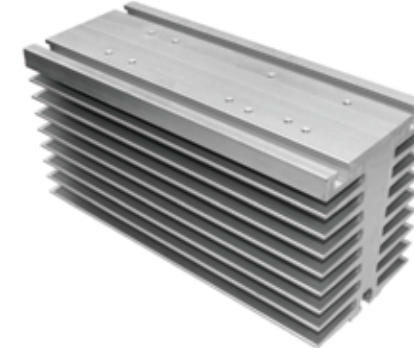
Description	Din-Rail Mount	
型号 Model Number	CUD100-M1B	CUD120-M1B
单相SSR电流范围 Current range[A]	10-51	10-62
面积 Surface area[cm ²]	828	993.6
重量 Weight[g]	783	939.6
热阻 Thermal resistance[°C/W]	0.76	0.64
安装方式 Heat sink mounting	导轨式安装 Din-Rail Mount	
材质 Material	铝 Aluminum	
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized	
散热器安装孔 Heat Mounting Holes/threads[mm]	导轨 Din-Rail	
扭矩 Mounting screw torque[nm]	1.7-2.2	
SSR数量 Number and type of relay accepted	1只M型固态继电器 single M SSR	
风扇 Accepts Fan/size[mm]	无 None	

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

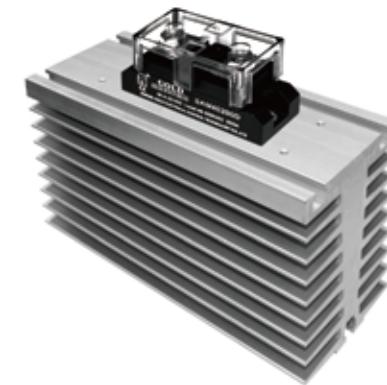
MECHANICAL SPECIFICATIONS



B/CB Series (适装M型固态) 导轨式安装



CB100



CB100-M1



CB120-M1

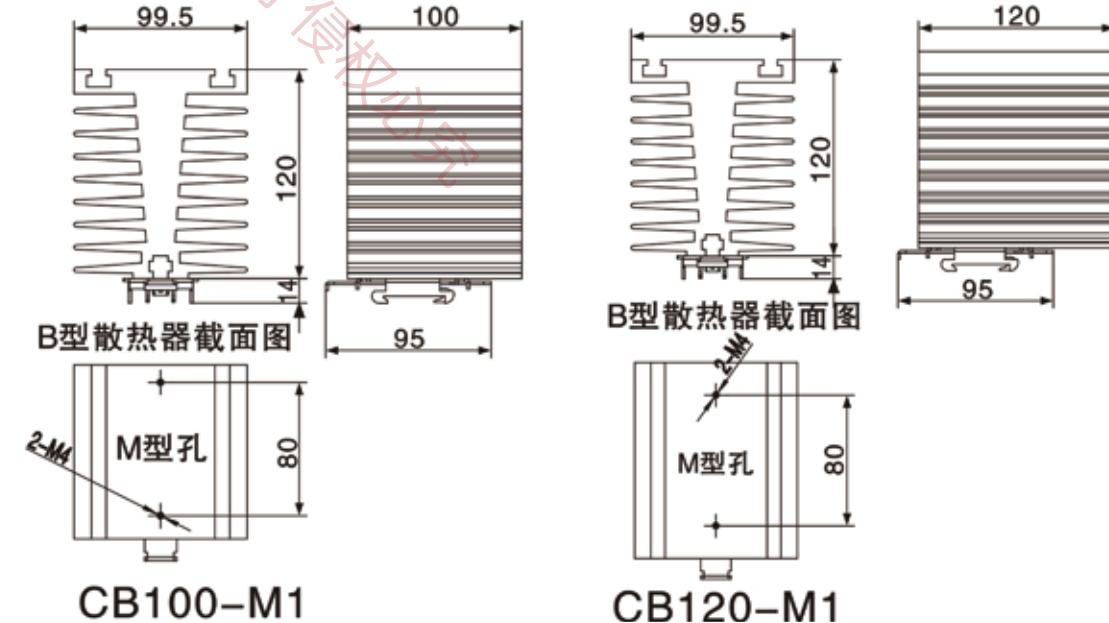
- 5-109A(CB100), 5-130A(CB120) AC output @ 40°C
- Suitable for single or M SSR
- DIN rail mounting

GENERAL SPECIFICATIONS

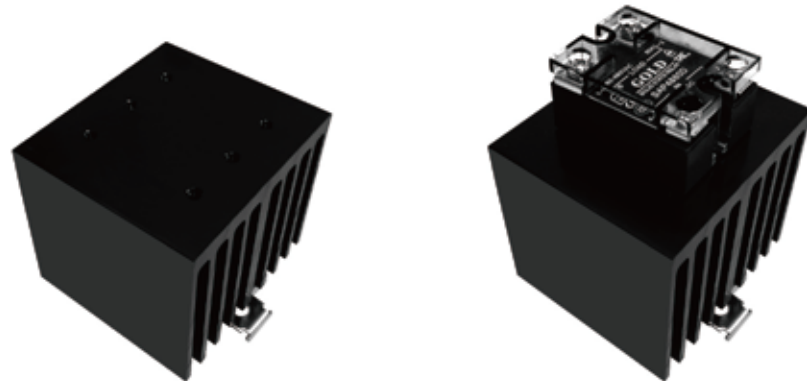
Description	Din-Rail Mount	
型号 Model Number	CB100-M1	CB120-M1
单相SSR电流范围 Current range[A]	50-109	50-130
面积 Surface area[cm ²]	1434	1720.8
重量 Weight[g]	1598	1917.6
热阻 Thermal resistance[°C/W]	0.24	0.19
安装方式 Heat sink mounting	导轨式安装 Din-Rail Mount	
材质 Material	铝 Aluminum	
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized	
散热器安装孔 Heat Mounting Holes/threads[mm]	导轨 Din-Rail	
扭矩 Mounting screw torque[nm]	1.7-2.2	
SSR数量 Number and type of relay accepted	1只M型固态继电器 single M SSR	
风扇 Accepts Fan/size[mm]	有风机 Yes/ 90x90	

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS



UA/CUA Series (适装小三相固态) 导轨式安装



CUA100

CUA100-P1B

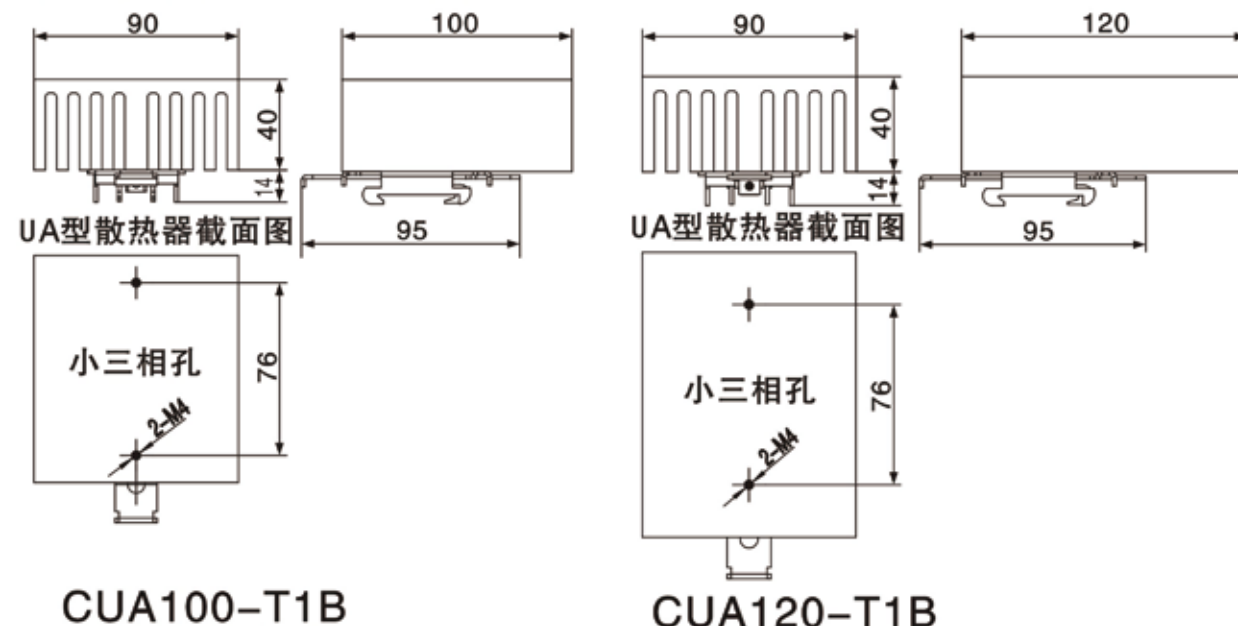
- 5-40A(UA100), 5-48A(UA120) AC output @ 40°C
- Suitable for single T SSR
- DIN rail mounting

GENERAL SPECIFICATIONS

Description	Din-Rail Mount	
型号 Model Number	CUA100-T1B	CUA120-T1B
单相SSR电流范围 Current range[A]	(5-14)x3	(5-17)x3
面积 Surface area[cm²]	804	964.8
重量 Weight[g]	600	720
热阻 Thermal resistance[°C/W]	0.76	0.64
安装方式 Heat sink mounting	导轨式安装 Din-Rail Mount	
材质 Material	铝 Aluminum	
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized	
散热器安装孔 Heat Mounting Holes/threads[mm]	导轨 Din-Rail	
扭矩 Mounting screw torque[nm]	1.7-2.2	
SSR数量 Number and type of relay accepted	1只小三相固态继电器 single T SSR	
风扇 Accepts Fan/size[mm]	无 None	

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

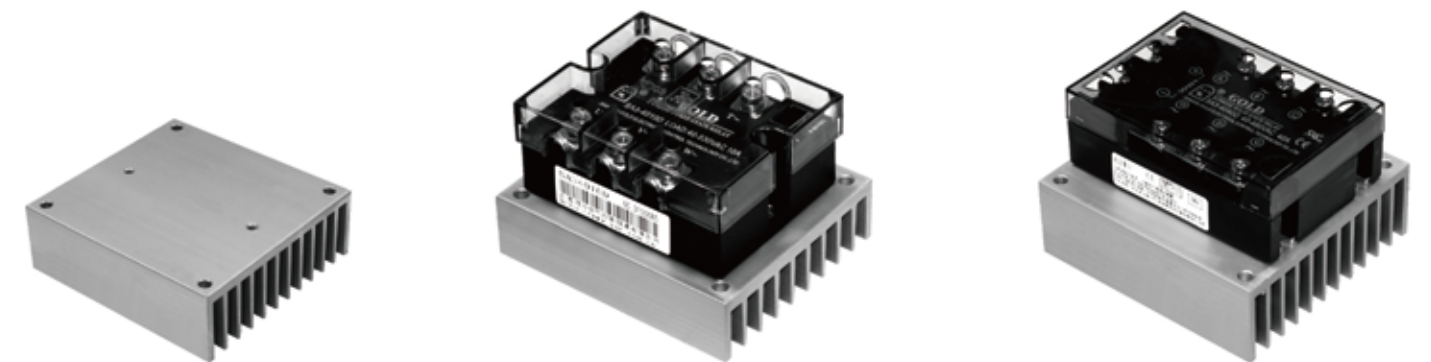
MECHANICAL SPECIFICATIONS



CUA100-T1B

CUA120-T1B

S Series (适装小三相固态) 导轨式/平板式安装



S100

S100-T1

S120-T1

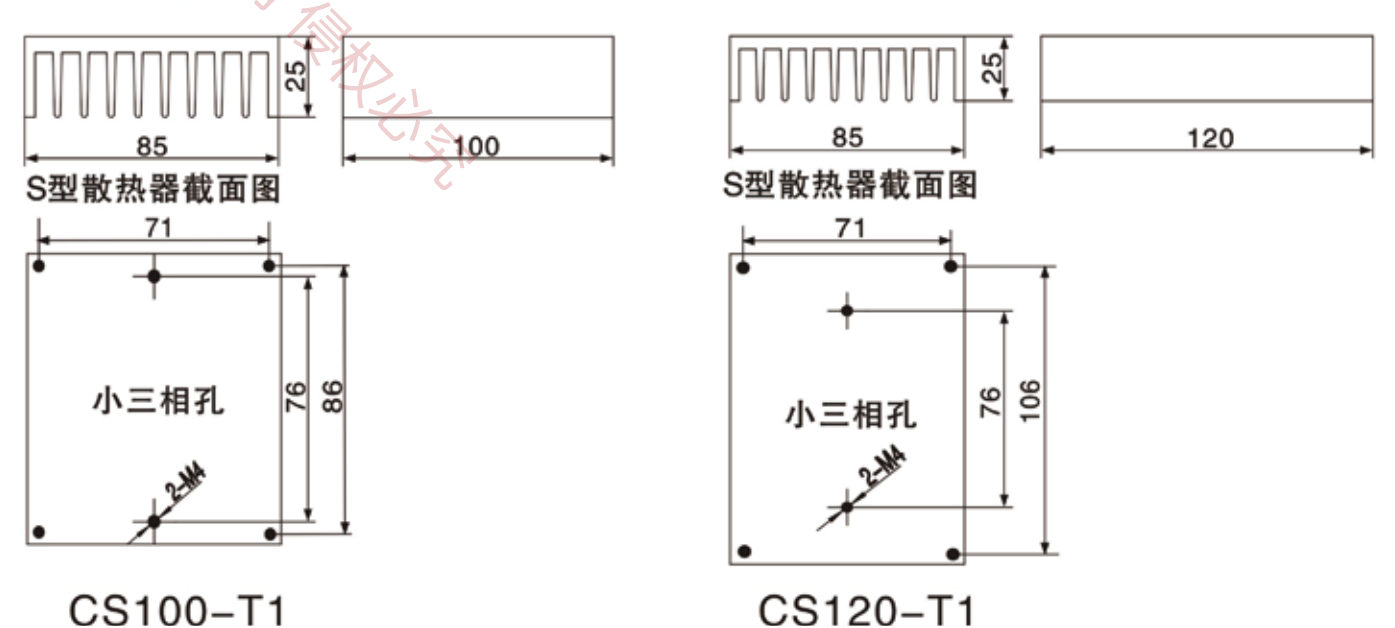
- 5-15A(S100), 5-21A(S120) AC output @ 40°C
- Suitable for single T SSR
- Panel mounting

GENERAL SPECIFICATIONS

Description	Panel or Din-Rail Mount	
型号 Model Number	CS100-T1	CS120-T1
单相SSR电流范围 Current range[A]	(5-6)x3	(5-7)x3
面积 Surface area[cm²]	580	696
重量 Weight[g]	260	312
热阻 Thermal resistance[°C/W]	1.7	1.43
安装方式 Heat sink mounting	平板式安装 Panel Mount	
材质 Material	铝 Aluminum	
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized	
散热器安装孔 Heat Mounting Holes/threads[mm]	∅6x4 间隔 71x86mm	∅6x4 间隔 71x106mm
扭矩 Mounting screw torque[nm]	1.7-2.2	
SSR数量 Number and type of relay accepted	1只小三相固态继电器 single T SSR	
风扇 Accepts Fan/size[mm]	无 None	

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

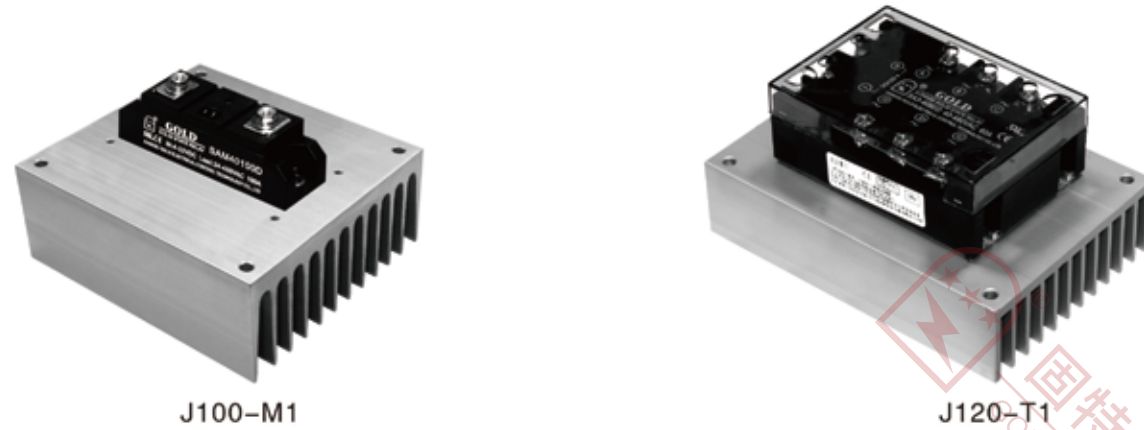
MECHANICAL SPECIFICATIONS



CS100-T1

CS120-T1

J Series (适装M型/小三相固态) 平板式安装



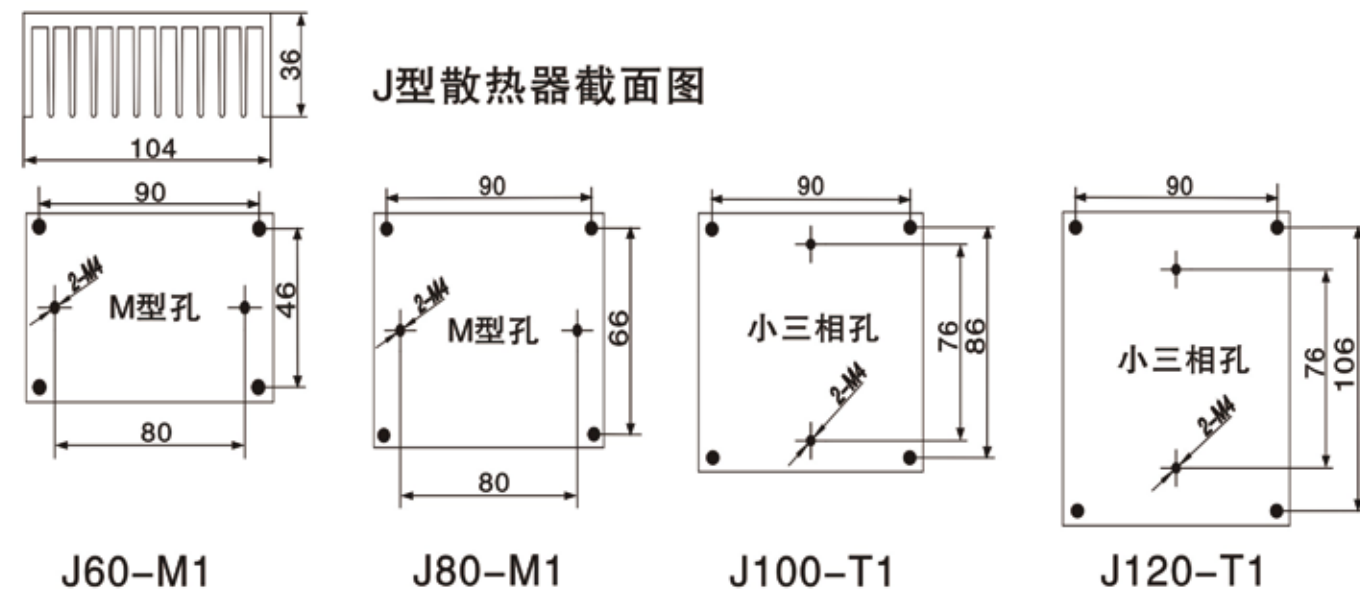
- 5-15A(J60),5-21A(J80),5-26A(J100),5-31A(J120) AC output @ 40℃
- Suitable for single M or T SSR
- Panel mounting

GENERAL SPECIFICATIONS

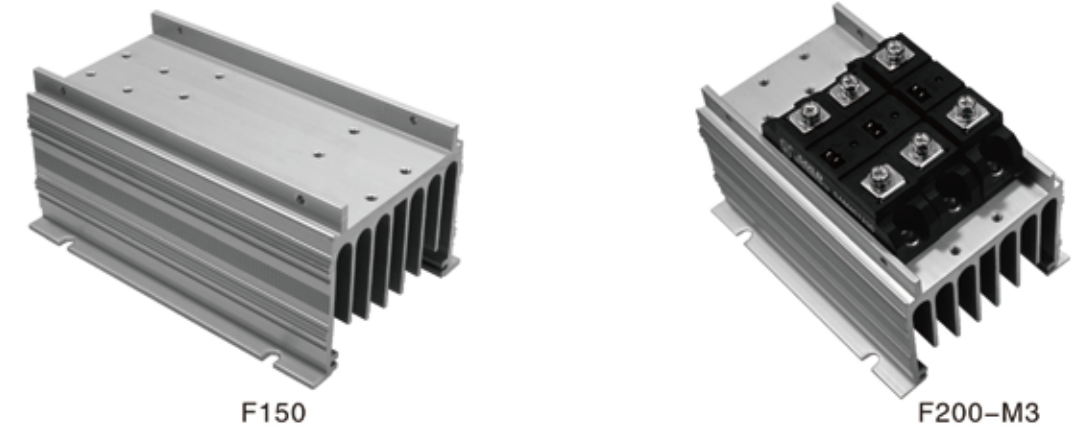
Description	Panel Mount			
型号 Model Number	J60-M1	J80-M1	J100-T1	J120-T1
单相SSR电流范围 Current range[A]	5-15	5-21	(5-9)*3	(5-11)*3
面积 Surface area[cm²]	372.6	496.8	621	745.2
重量 Weight[g]	231.6	308.8	386	463.2
热阻 Thermal resistance[℃/W]	2.1	1.46	1.18	1.0
安装方式 Heat sink mounting	平板式安装 Panel Mount			
材质 Material	铝 Aluminum			
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized			
散热器安装孔 SSR Mounting Holes/threads[mm]	∅6x4 间隔 90x46mm	∅6x4 间隔 90x66mm	∅6x4 间隔 90x86mm	∅6x4 间隔 90x106mm
扭矩 Mounting screw torque[nm]	1.7-2.2			
SSR数量 Number and type of relay accepted	1只M型固态继电器 single M SSR		1只小三相固态继电器 single T SSR	
风扇 Accepts Fan/size[mm]	无 None			

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS



F Series (适装M型/大功率模块) 平板式安装



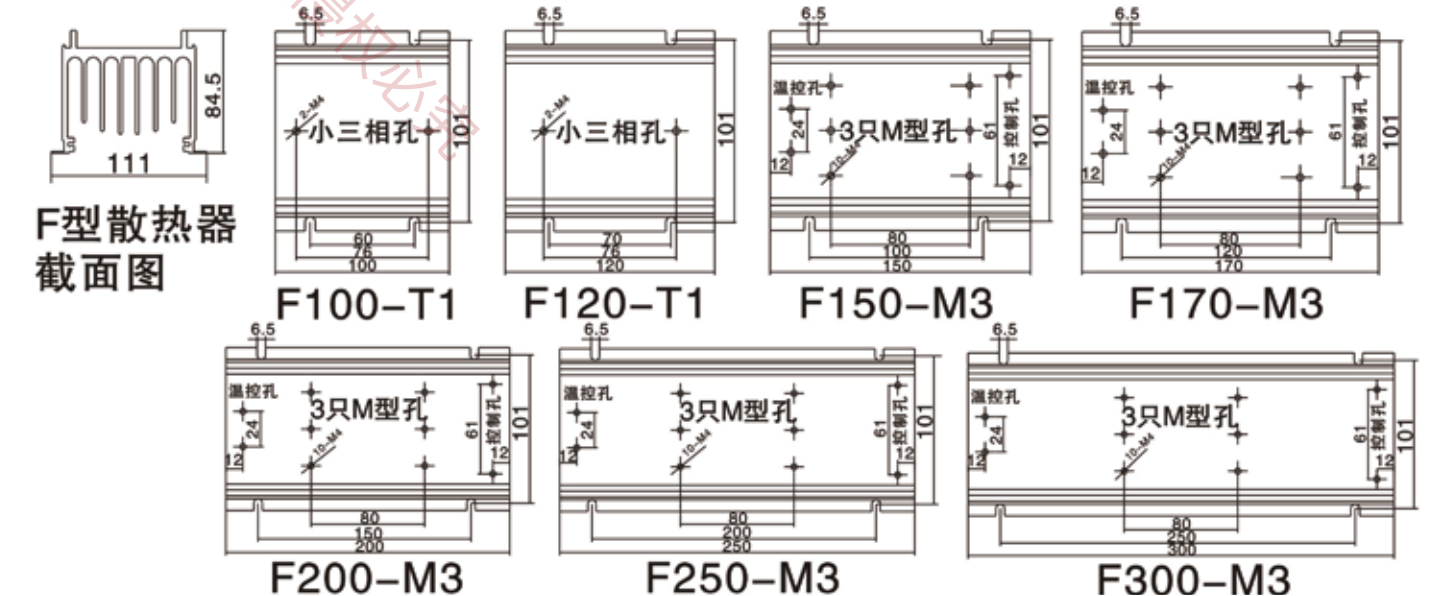
- 15-37A(F100),15-44A(F120),15-55A(F150),15-63A(F170),15-74A(F200),15-92A(F250),15-111A(F300) AC output @ 40℃
- Suitable for single T or three M SSR
- Panel mounting

GENERAL SPECIFICATIONS

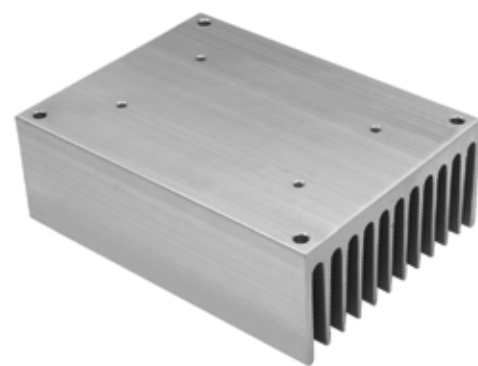
Description	Panel Mount						
型号 Model Number	F100-T1	F120-T1	F150-M3	F170-M3	F200-M3	F250-M3	F300-M3
单相SSR电流范围 Current range[A]	(5-12)*3	(5-15)*3	(5-19)*3	(5-21)*3	(5-28)*3	(5-31)*3	(5-37)*3
面积 Surface area[cm ²]	1183	1419.6	1774.5	2011.1	2366	2957.5	3549
重量 Weight[g]	557	668.4	835.5	946.9	1114	1392.5	1671
热阻 Thermal resistance[°C/W]	0.83	0.69	0.55	0.48	0.42	0.33	0.27
安装方式 Heat sink mounting	平板式安装 Panel Mount						
材质 Material	铝 Aluminum						
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized						
散热器安装孔SSR Mounting Holes/threads[mm]	101x70mm	101x70mm	101x100mm	101x120mm	101x150mm	101x200mm	101x250mm
扭矩 Mounting screw torque[nm]	1.7-2.2						
SSR数量 Number and type of relay accepted	1只大三相固态single T SSR		3只M型固态继电器 three M SSR				
风扇 Accepts Fan/size[mm]	有风机 Yes 90X90						

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明。散热器安装孔(∅6x4)。

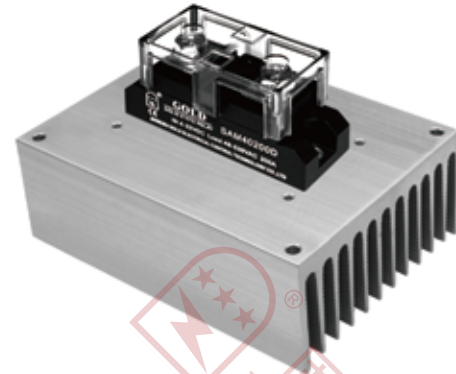
MECHANICAL SPECIFICATIONS



L Series (适装大三相/3M型固态) 平板式安装



L120



L120-M3

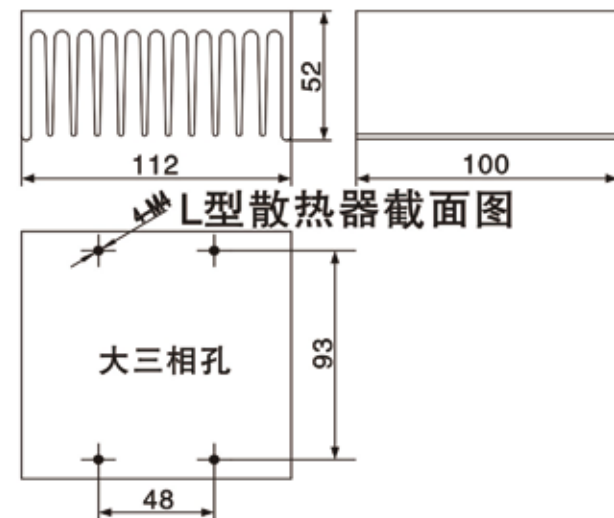
- 15-41A(L100), 15-50A(L120) AC output @ 40℃
- Suitable for single T or three M SSR
- Panel mounting

GENERAL SPECIFICATIONS

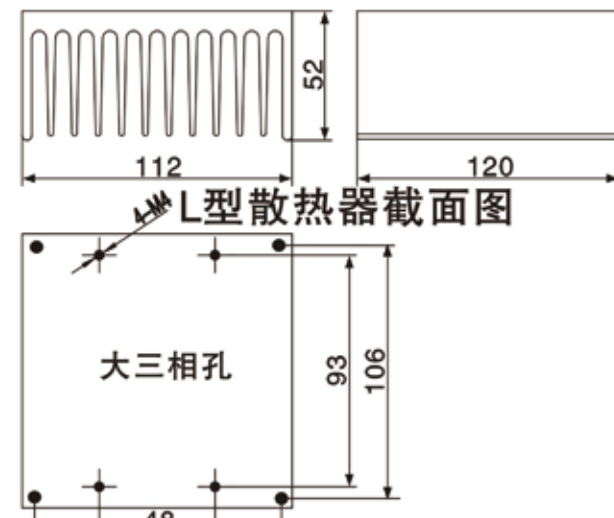
Description	Panel Mount	
型号 Model Number	L100-T1	L120-M3
单相SSR电流范围 Current range[A]	(5-14)*3	(5-17)*3
面积 Surface area[cm²]	1182	1418.4
重量 Weight[g]	618	741.6
热阻 Thermal resistance[℃/W]	0.75	0.61
安装方式 Heat sink mounting	平板式安装 PanelMount	
材质 Material	铝 Aluminum	
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized	
散热器安装孔 SSR Mounting Holes/threads[mm]	∅6x4 间隔 98x86mm	∅6x4 间隔 98x106mm
扭矩 Mounting screw torque[nm]	1.7-2.2	
SSR数量 Number and type of relay accepted	1只大三相固态继电器 single T SSR	3只大M型固态继电器 three M SSR
风扇 Accepts Fan/size[mm]	无 None	

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS



L100-T1



L120-M3

UG Series (适装三相/3M型固态) 平板式安装



UG80-M3B



UG80-T1B

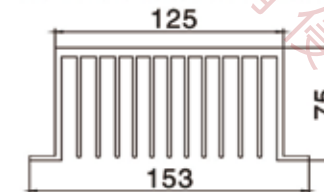
- 15-30A(UG60), 15-41A(UG80), 15-62A(UG120), 15-77(UG150) AC output @ 40℃
- Suitable for single T or three M SSR
- Panel mounting

GENERAL SPECIFICATIONS

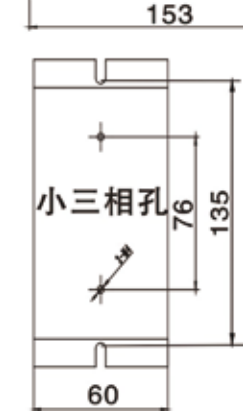
Description	Panel Mount			
型号 Model Number	UG60-T1B	UG80-M3B	UG120-M3B	UG150-M3B
单相SSR电流范围 Current range[A]	(5-10)*3	(5-14)*3	(5-21)*3	(5-26)*3
面积 Surface area[cm²]	1465	1947	2655.6	3319.5
重量 Weight[g]	463	617	926.4	1158
热阻 Thermal resistance[°C/W]	1.03	0.75	0.49	0.39
安装方式 Heat sink mounting	平板式安装 Panel Mount			
材质 Material	铝 Aluminum			
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized			
散热器安装孔 SSR Mounting Holes/threads[mm]	∅6x2间隔135mm		∅6x4间隔135x80mm	∅6x4间隔135x110mm
扭矩 Mounting screw torque[nm]	1.7-2.2			
SSR数量 Number and type of relay accepted	1只大三相固态single T SSR	3只M型固态继电器 three M SSR		
风扇 Accepts Fan/size[mm]	无 None			

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS



UG型散热器截面图



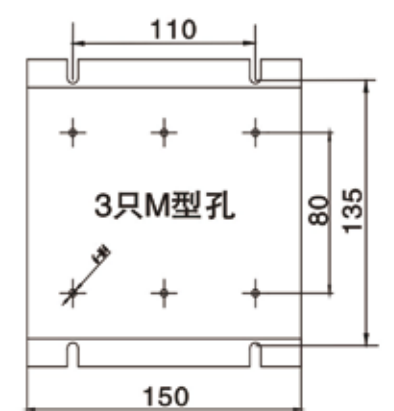
UG60-T1B



UG80-M3B



UG120-M3B



UG150-M3B

E Series (适装三相/3M型固态) 平板式安装



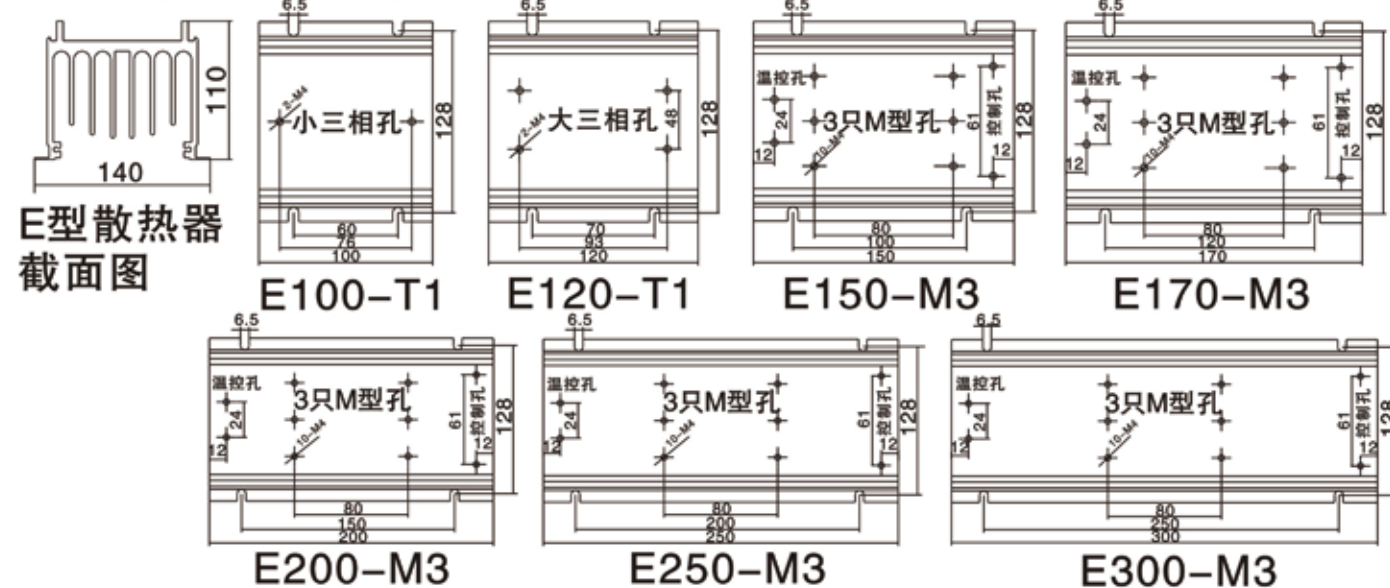
- 15-55A(E100), 15-66A(E120), 15-82A(E150), 15-94A(E170), 15-110A(E200), 15-138A(E250), 15-165A(E300) AC output @ 40°C
- Suitable for single T or three M SSR
- Panel mounting

GENERAL SPECIFICATIONS

Description	Panel Mount						
型号 Model Number	E100-T1	E120-T1	E150-M3	E170-M3	E200-M3	E250-M3	E300-M3
单相SSR电流范围 Current range[A]	(5-18)*3	(5-22)*3	(5-27)*3	(5-31)*3	(5-37)*3	(5-46)*3	(5-55)*3
面积 Surface area[cm²]	1834	2200.8	2751	3117.8	3668	4585	5502
重量 Weight[g]	824	988.8	1236	1400.8	1648	2060	2472
热阻 Thermal resistance[°C/W]	0.55	0.46	0.37	0.32	0.27	0.22	0.18
安装方式 Heat sink mounting	平板式安装 Panel Mount						
材质 Material	铝 Aluminum						
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized						
散热器安装孔SSR Mounting Holes/threads[mm]	128x70mm	128x70mm	128x100mm	128x120mm	128x150mm	128x200mm	128x250mm
扭矩 Mounting screw torque[nm]	1.7-2.2						
SSR数量 Number and type of relay accepted	1只三相固态 single T SSR		3只M型固态继电器 three M SSR				
风扇 Accepts Fan/size[mm]	有风机 Yes 120X120						

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明。散热器安装孔（ $\varnothing 6 \times 4$ ）。

MECHANICAL SPECIFICATIONS



T Series (适装中功率三相/3M型固态)



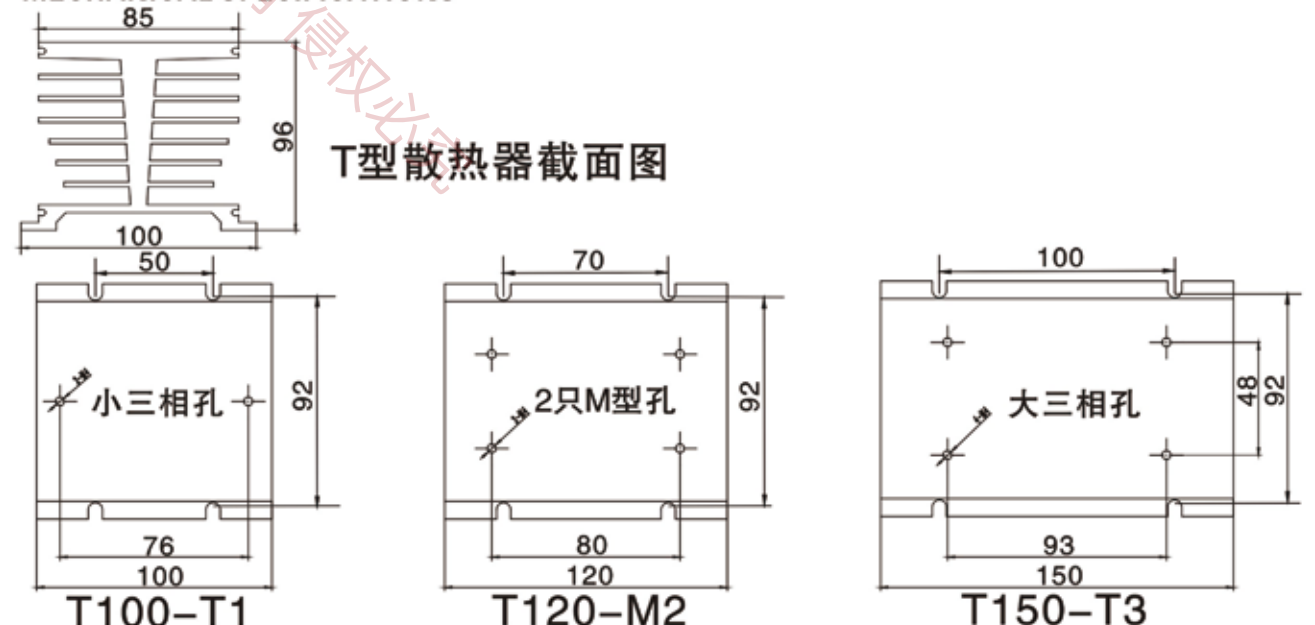
- 15-55A(T100), 15-60A(T120), 15-71A(T150) AC output @ 40°C
- Suitable for single T or three M SSR
- Panel mounting

GENERAL SPECIFICATIONS

Description	Panel Mount		
型号 Model Number	T100-T1	T120-M2	T150-T3
单相SSR电流范围 Current range[A]	(5-18)*3	(5-30)*2	(5-24)*3
面积 Surface area[cm ²]	765	885.5	1046.5
重量 Weight[g]	871	903.1	1067.3
热阻 Thermal resistance[°C/W]	0.55	0.51	0.43
安装方式 Heat sink mounting	平板式安装 Panel Mount		
材质 Material	铝 Aluminum		
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized		
散热器安装孔 SSR Mounting Holes/threads[mm]	φ6x4间隔92x50mm	φ6x4间隔92x70mm	φ6x4间隔92x100mm
扭矩 Mounting screw torque[nm]	1.7-2.2		
SSR数量 Number and type of relay accepted	1只三相固态 single TSSR	3只M型固态继电器 three M SSR	
风扇 Accepts Fan/size[mm]	有风机 Yes 90x90		

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS



C Series (适装复合三相/3M型固态) 平板式安装



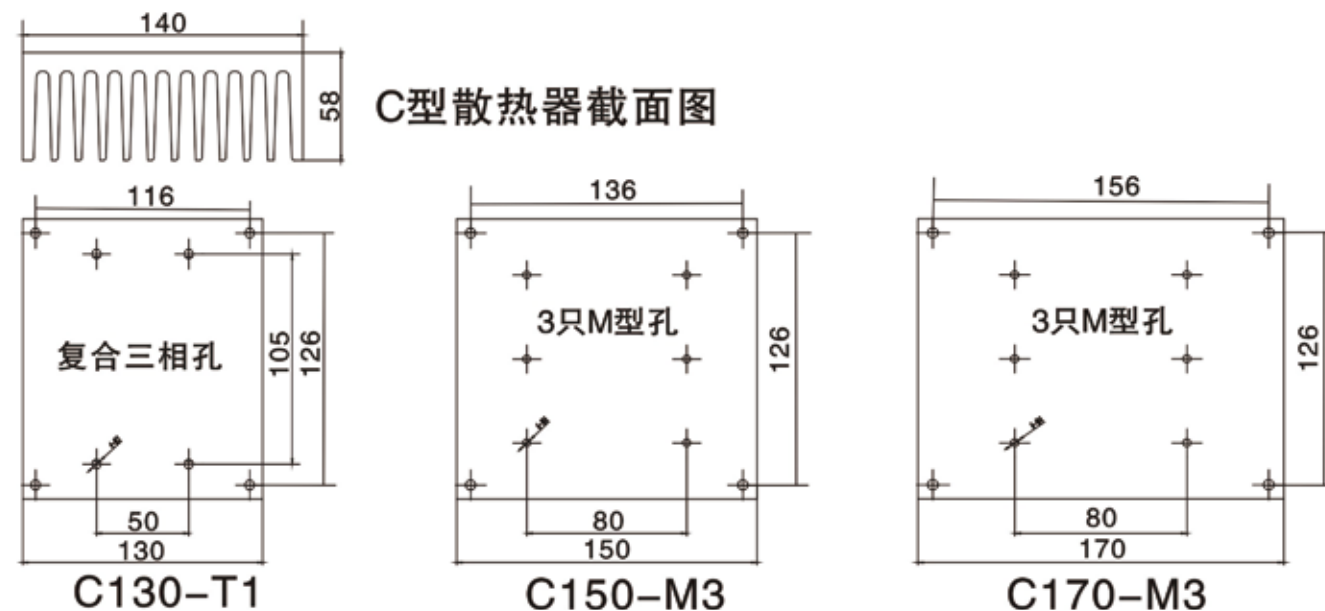
- 15-71A(C130), 15-82A(C150), 15-93A(C170) AC output @ 40℃
- Suitable for single T or three M SSR
- Panel mounting

GENERAL SPECIFICATIONS

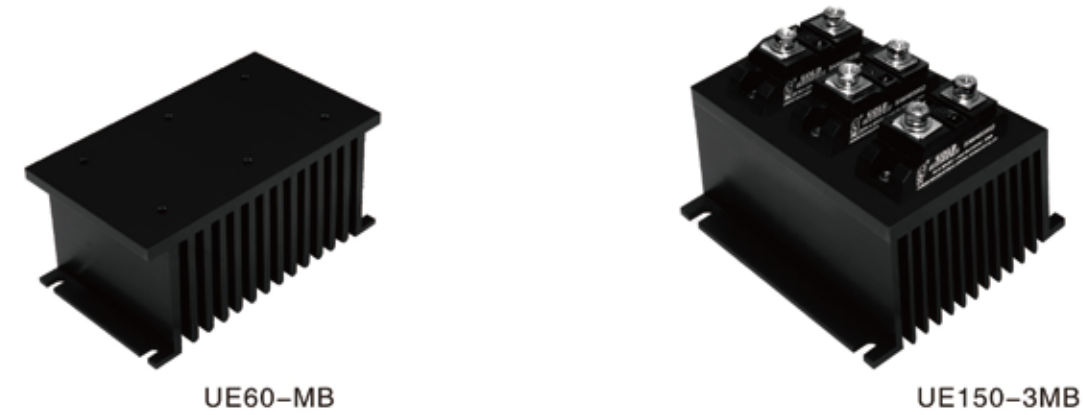
Description	Panel Mount		
型号 Model Number	C130-T1	C150-M3	C170-M3
单相SSR电流范围 Current range[A]	(5-24)*3	(5-28)*3	(5-31)*3
面积 Surface area[cm²]	1887.6	2178	2468.4
重量 Weight[g]	1076.4	1242	1407.6
热阻 Thermal resistance[°C/W]	0.43	0.37	0.33
安装方式 Heat sink mounting	平板式安装 PanelMount		
材质 Material	铝 Aluminum		
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized		
散热器安装孔 SSR Mounting Holes/threads[mm]	∅6x4间隔126x116mm	∅6x4间隔126x136mm	∅6x4间隔126x156mm
扭矩 Mounting screw torque[nm]	1.7-2.2		
SSR数量 Number and type of relay accepted	1只三相固态 single T SSR	3只M型固态继电器 three M SSR	
风扇 Accepts Fan/size[mm]	无 None		

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS



UE Series (适装三相/3M型固态) 平板式安装



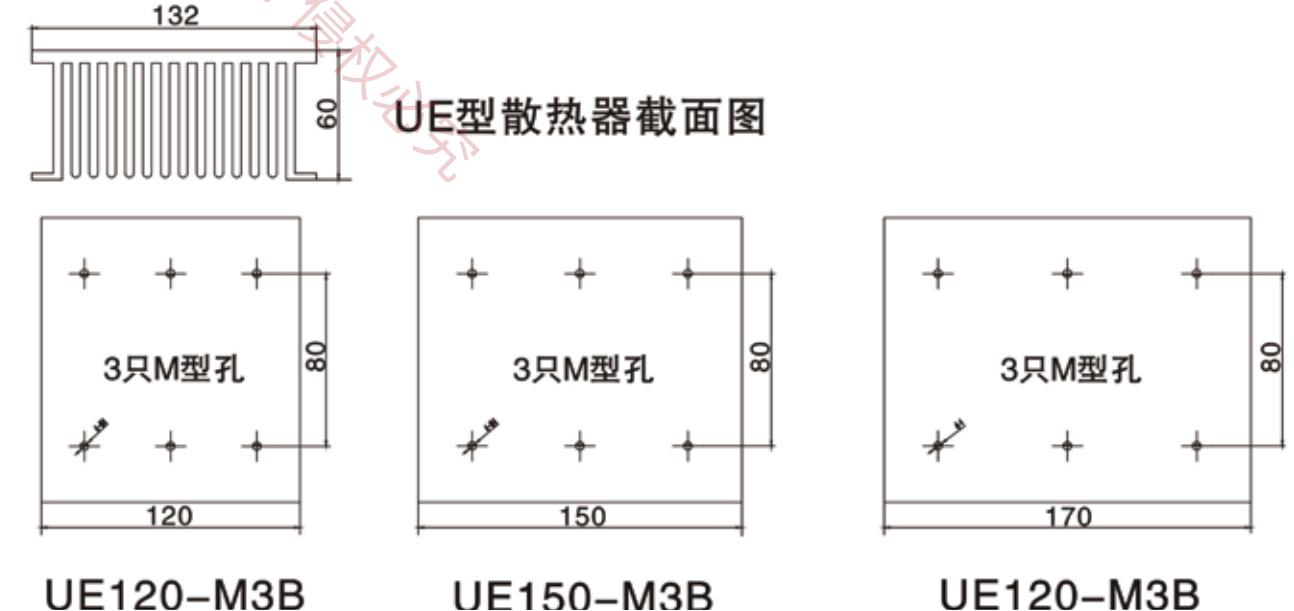
- 15-81A(UE120), 15-101A(UE150), 15-115A(UE170) AC output @ 40℃
- Suitable for three M SSR
- Panel mounting

GENERAL SPECIFICATIONS

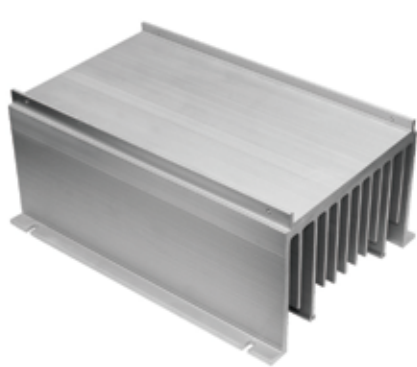
Description	Panel Mount		
型号 Model Number	UE120-M3B	UE150-M3B	UE170-M3B
单相SSR电流范围 Current range[A]	(5-27)*3	(5-33)*3	(5-38)*3
面积 Surface area[cm ²]	283.8	354.2	354.2
重量 Weight[g]	2590	3238	3670
热阻 Thermal resistance[℃/W]	0.37	0.31	0.26
安装方式 Heat sink mounting	平板式安装 PanelMount		
材质 Material	铝 Aluminum		
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized		
散热器安装孔 SSR Mounting Holes/threads[mm]	∅6x4间隔122x70mm	∅6x4间隔122x100mm	∅6x4间隔122x120mm
扭矩 Mounting screw torque[nm]	1.7-2.2		
SSR数量 Number and type of relay accepted	3只M型固态继电器 three M SSR		
风扇 Accepts Fan/size[mm]	无 None		

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS



K Series (适装复合三相/3M型固态) 平板式安装



K200



K200-M3

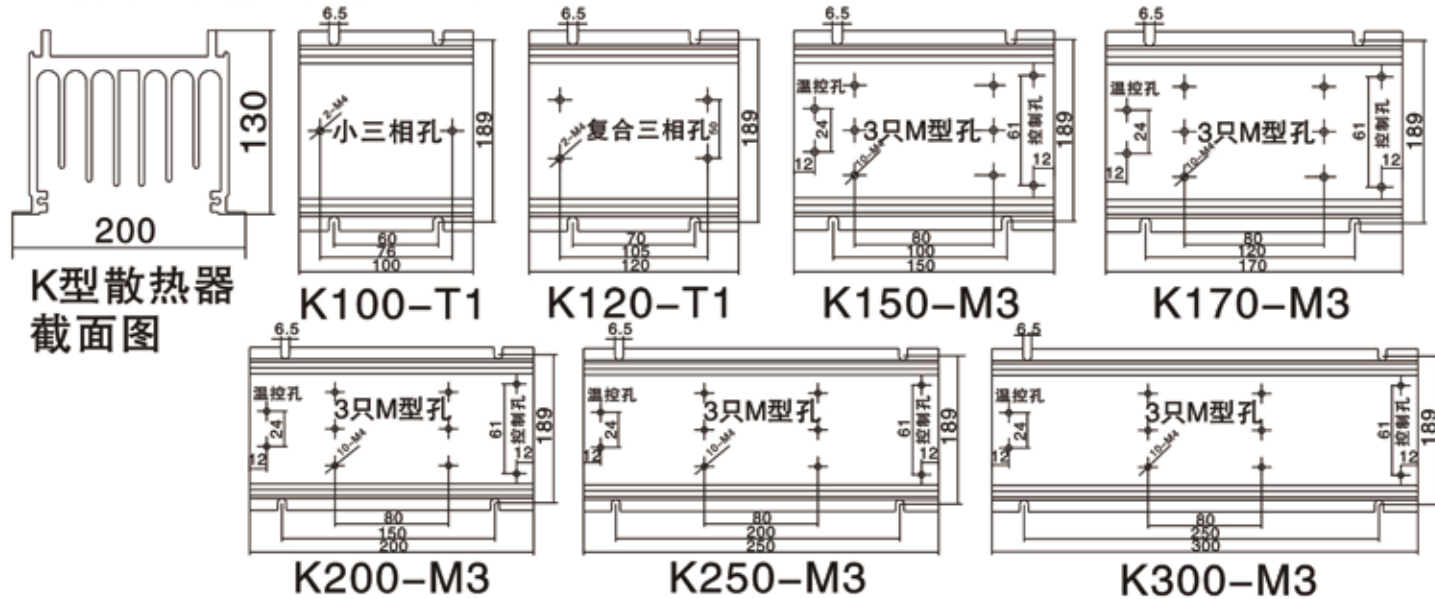
- 60–114A(K100), 60–136A(K120), 60–171A(K150), 60–194A(K170), 60–228A(K200), 60–285A(K250), 60–342A(K300) AC output @ 40°C
- Suitable for single T or three M SSR
- Panel mounting

GENERAL SPECIFICATIONS

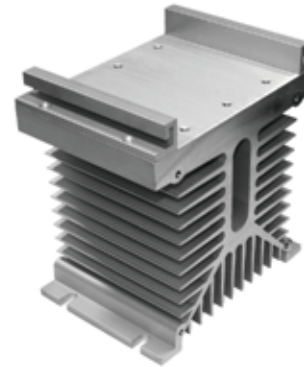
Description	Panel Mount						
型号 Model Number	K100-T1	K120-T1	K150-M3	K170-M3	K200-M3	K250-M3	K300-M3
单相SSR电流范围 Current range[A]	(20–38)*3	(20–46)*3	(20–57)*3	(20–65)*3	(20–76)*3	(20–95)*3	(20–114)*3
面积 Surface area[cm ²]	3078	3693.6	4617	5232.6	6156	7695	9234
重量 Weight[g]	1688	2025.6	2532	2869.6	3376	4220	5064
热阻 Thermal resistance[°C/W]	0.26	0.22	0.17	0.15	0.13	0.11	0.09
安装方式 Heat sink mounting	平板式安装 Panel Mount						
材质 Material	铝 Aluminum						
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized						
散热器安装孔 SSR Mounting Holes/threads[mm]	189x60mm	189x60mm	189x100mm	189x120mm	189x150mm	189x200mm	189x250mm
扭矩 Mounting screw torque[nm]	1.7–2.2						
SSR数量 Number and type of relay accepted	1 single or dual or three SSR						
风扇 Accepts Fan/size[mm]	Yes 120X120						

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明。散热器安装孔(⌀6x4)。

MECHANICAL SPECIFICATIONS



K Series (适装复合三相/3M型固态) 平板式安装



Y100



Y120-M3



Y200-M3

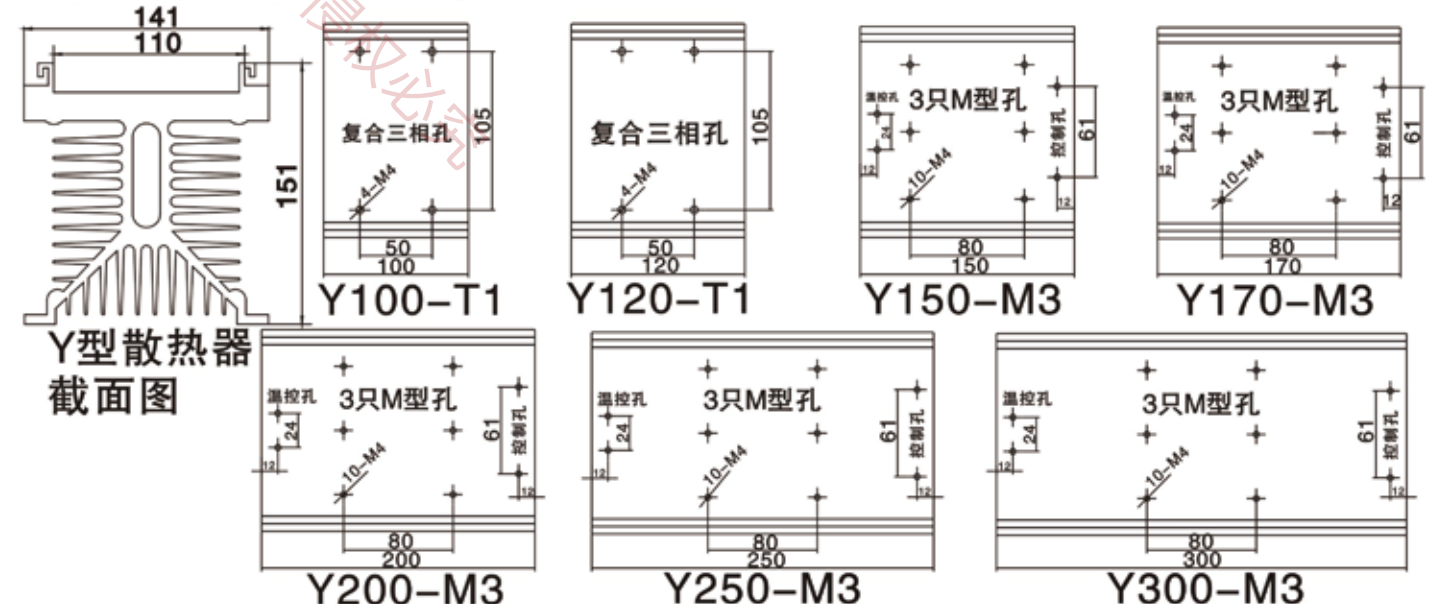
- 60–122A(Y100), 60–146A(Y120), 60–183A(Y150), 60–207A(Y170), 60–244A(Y200), 60–305A(Y250), 60–366A(Y300) AC output @ 40°C
- Suitable for single T or three M SSR
- Panel mounting

GENERAL SPECIFICATIONS

Description	Panel Mount						
型号 Model Number	Y100-T1	Y120-T1	Y150-M3	Y170-M3	Y200-M3	Y250-M3	Y300-M3
单相SSR电流范围 Current range[A]	(20-41)*3	(20-49)*3	(20-61)*3	(20-69)*3	(20-82)*3	(20-102)*3	(20-122)*3
面积 Surface area[cm²]	2488	2985.6	3732	4229.6	4976	6220	7464
重量 Weight[g]	1843	2211.6	2764.5	3133.1	3686	46507.5	5529
热阻 Thermal resistance[°C/W]	0.25	0.21	0.16	0.14	0.13	0.11	0.09
安装方式 Heat sink mounting	平板式安装 Panel Mount						
材质 Material	铝 Aluminum						
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized						
散热器安装孔 SSR Mounting Holes/threads[mm]	125x60mm	125x60mm	125x100mm	125x120mm	125x150mm	125x200mm	125x250mm
扭矩 Mounting screw torque[nm]	1.7-2.2						
SSR数量 Number and type of relay accepted	1只三相固态 single T SSR		3只M型固态继电器 three M SSR				
风扇 Accepts Fan/size[mm]	有风机 Yes 120X120						

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明。散热器安装孔(⌀6x4)。

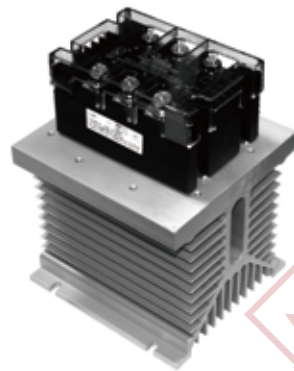
MECHANICAL SPECIFICATIONS



W Series (适装复合三相/3M型固态) 平板式安装



W150-M3



W120-T1

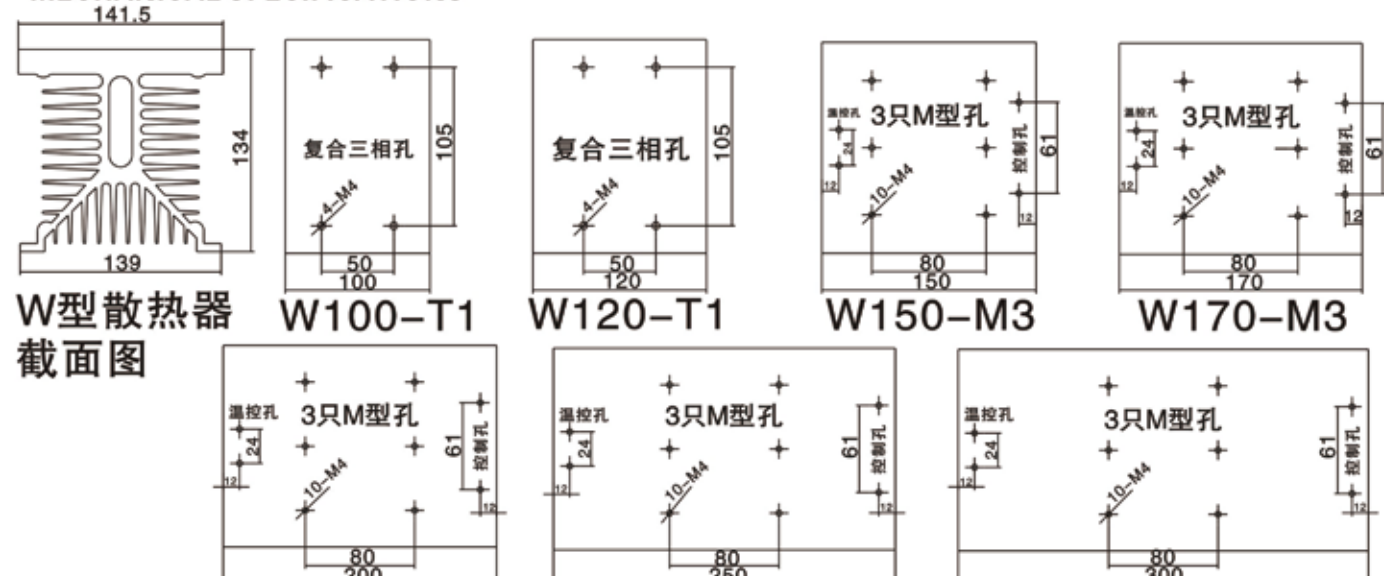
- 60-122A(W100), 60-146A(W120), 60-183A(W150), 60-207A(W170), 60-244A(W200), 60-305A(W250), 60-366A(W300) AC output @ 40°C
- Suitable for single T or three M SSR
- Panel mounting

GENERAL SPECIFICATIONS

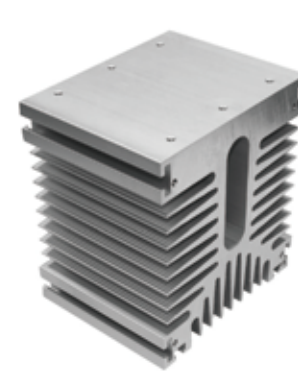
Description	Panel Mount						
型号 Model Number	W100-T1	W120-T1	W150-M3	W170-M3	W200-M3	W250-M3	W300-M3
单相SSR电流范围 Current range[A]	(20-41)*3	(20-49)*3	(20-61)*3	(20-69)*3	(20-81)*3	(20-101)*3	(20-122)*3
面积 Surface area[cm ²]	2476	2971.2	3714	4209.2	4944	6180	7416
重量 Weight[g]	1833	2199.6	2749.5	3116.1	3666	4582.5	5499
热阻 Thermal resistance[°C/W]	0.72	0.70	0.69	0.65	0.62	0.59	0.56
安装方式 Heat sink mounting	平板式安装 PanelMount						
材质 Material	铝 Aluminum						
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized						
散热器安装孔 SSR Mounting Holes/threads[mm]	125x60mm	125x60mm	125x100mm	125x120mm	125x150mm	125x200mm	125x250mm
扭矩 Mounting screw torque[nm]	1.7-2.2						
SSR数量 Number and type of relay accepted	1只三相固态 single T SSR		3只M型固态继电器 three M SSR				
风扇 Accepts Fan/size[mm]	有风机 Yes 120X120						

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明。散热器安装孔(φ6x4)。

MECHANICAL SPECIFICATIONS



Z Series (适装复合三相/3M型固态) 平板式安装



Z100



Z150-M3



Z200-M3

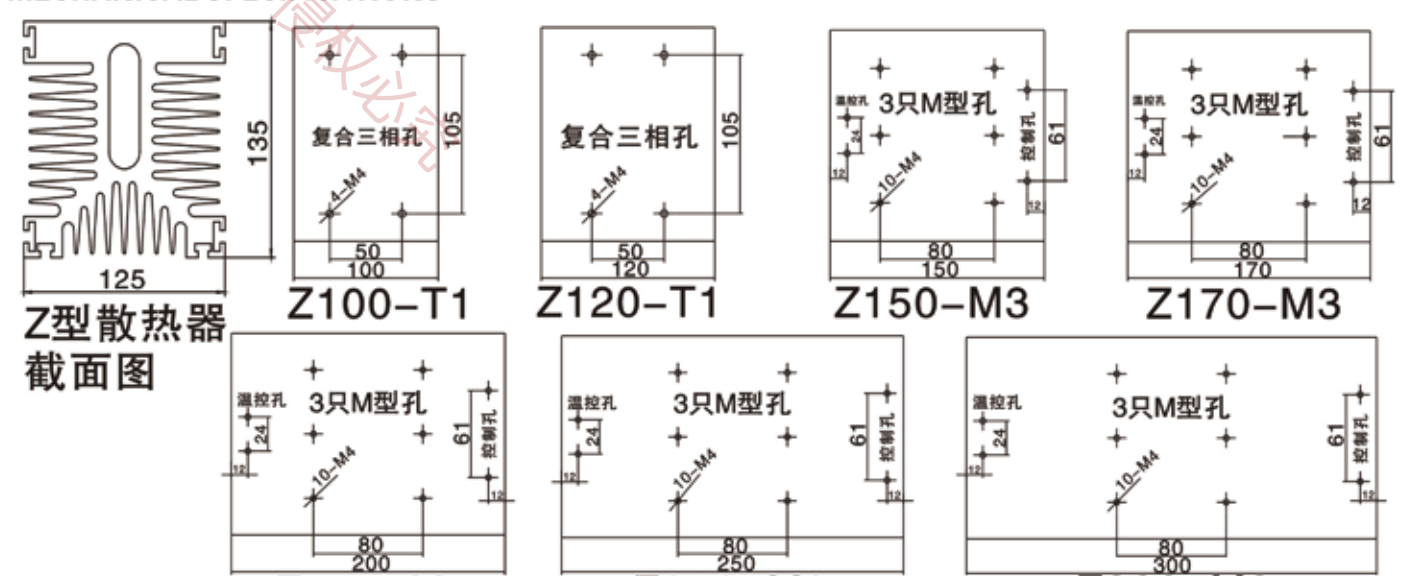
- 60-156A(Z100), 60-187A(Z120), 60-234A(Z150), 60-265A(Z170), 60-312A(Z200), 60-390A(Z250), 60-468A(Z300) AC output @ 40°C
- Suitable for 1 single or dual or three SSR
- Panel mounting

GENERAL SPECIFICATIONS

Description	Panel Mount						
型号 Model Number	Z100-T1	Z120-T1	Z150-M3	Z170-M3	Z200-M3	Z250-M3	Z300-M3
单相SSR电流范围 Current range[A]	(20-52)*3	(20-63)*3	(20-75)*3	(20-89)*3	(20-104)*3	(20-130)*3	(20-163)*3
面积 Surface area[cm²]	2545	3054	3817.5	4326.5	5090	6362.5	7635
重量 Weight[g]	2315	2778	3472.5	3935.5	4630	5787.5	6945
热阻 Thermal resistance[°C/W]	0.51	0.50	0.47	0.45	0.41	0.38	0.34
安装方式 Heat sink mounting	平板式安装 PanelMount						
材质 Material	铝 Aluminum						
散热器颜色 Heat sink color	铝本色/发黑可选 None/Black Anodized						
散热器安装孔 SSR Mounting Holes/threads[mm]	105x120mm	105x140mm	105x170mm	105x190mm	105x220mm	105x270mm	105x320mm
扭矩 Mounting screw torque[nm]	1.7-2.2						
SSR数量 Number and type of relay accepted	1只三相固态 single T SSR		3只M型固态继电器 three M SSR				
风扇 Accepts Fan/size[mm]	有风机 Yes 120X120						

注：发黑的散热器的散热效果能提高10%，表中所列为铝本色的参数说明

MECHANICAL SPECIFICATIONS



电加热(电阻性)负载对应固态继电器和相应散热器的选型推荐表 (220 ± 20%VAC、380 ± 10%VAC)

4.Selection guide of ssr and heat sink for resistive load(electrical heating)

本公司研发、生产和供应固态继电器已有25年历史。我们的宗旨是不仅要为用户提供高质量的产品，而是要为顾客提供我们最好的服务。为此我们特整理了这些年为客户配套固态和散热器的经验，针对客户不同的负载类型和电流做的一份推荐表，供大家选择时作为参考依据。

We have 25 years experience ofr ssr R&D and productin. We can provide best products and best service. The following table is a Selection guide of ssr and heat sink for different load according to our experience.

备注：以下推荐表格是针对交流固态继电器的选型，如果是选用直流固态继电器的情况，则同样电流长期导通时，由于直流SSR通态压降比同样电流的交流SSR大一倍，所以散热器也应该大一倍。

长期工作电流 (额定电流) Load Current	固态型号 (推荐) SSR Model	适用散热器型号 Suitable Heatsink		
		平板安装(Panel)	卡座安装(Din Rail)	
单相 Single Phase				
1-3A	SAP4805 D/A	直接安装在底板上 Heatsink not Required	直接安装在卡座上 Heatsink not Required	P 型 Panel Style
3-6A	SAP4810 D/A	X60-P1	CA60	
6-11A	SAP4820 D/A	X60/DQ60-P1	CA80	
10-13A	SAP4825 D/A	DQ80-P1	CR75/CN60	
13-17A	SAP4830 D/A	G60/JN80-P1	CR75/CN70	
1-22A	SAP4840 D/A	G60/JN80-P1	CR75/CN90/CUC60-P1	
1-27A	SAP4850 D/A	G80/NF60-P1	CH80/CNC60/CUC80-P1	
1-31A	SAP4860 D/A	G90/NF80-P1	CH80/CNC80/CUC80-P1/CUC60-P1	
1-36A	SAP4870 D/A	T70/NF80-P1	CNC80/CV60-P1	
1-41A	SAP4880 D/A	T80-P1	CH100/CNC90/CV60-P1/CUC100-P1	
1-45A	SAP4890 D/A	T90-P1	CB60/CUC100/CV60-P1/CUC100-P1	
1-52A	SAP48100 D/A	T100-P1	CB60/CUC110/CV100-P1/CUC120-P1/CUD100-P1	
单相 Single Phase				
10-50A	SAM40100 D/A	T100-M1/UG80-M1/UF120-M1	CH130/CUC110-M1/CUC120-M1	M 型 Module Style
10-60A	SAM40120 D/A	T120-M1/UG80-M1	CH150/CUC130-M1/CV100-M1	
10-80A	SAM40150 D/A	T150-M1/UG150-M1	CB95-M1/CV100-M1	
10-100A	SAM40200 D/A	W4-100-M1	CB100-M1/CV120-M1	
10-125A	SAM40250 D/A	W4-100-M1	CB120-M1	
10-150A	SAM40300 D/A	W4-130-M1	CB150-M1	
10-200A	SAM40400 D/A	W4-170-M1	CB200-M1	
三相 SSR 整机, Three Phase Unit with 3-SSRs				
(1-5A) x3	SAP4010 D/A	S170-P3/UE80-P3	-	三路 One Piece with 3 Relays
(5-13A) x3	SAP4025 D/A	UE80-P3	-	
(5-20A) x3	SAP4040 D/A	UE80-P3	-	
(10-30A) x3	SAP/M 4060 D/A	UE80-P3	-	
(10-40A) x3	SAP/M 4080 D/A	UE110-P3	-	
(20-50A) x3	SAP/M 40100 D/A	UE120-M3/W100-M3	-	
(20-60A) x3	SAM 40120 D/A	UE170-M3/W100-M3	-	
(20-80A) x3	SAM 40150 D/A	UE120-M3/W100-M3	-	
(20-100A) x3	SAM 40200 D/A	W120-M3	-	
(40-120A) x3	SAM 40250 D/A	W150-M3	-	
(40-140A) x3	SAM 40300 D/A	W170-M3	-	
(40-160A) x3	SAM 40400 D/A	W200-M3	-	
(40-180A) x3	SAM 40400 D/A	W250-M3	-	
三相 SSR, Three Phase SSR				
(1-5A) x3	SA3(TP)-4010D/A	S90-T1	-	小型三相 small size relay
(1-10A) x3	SA3(TP)-4020D/A	S120-T1	-	
(1-13A) x3	SA3(TP)-4025D/A	S150-T1	-	
(1-15A) x3	SA3(TP)-4030D/A	S180-T1	-	中型三相 medium size relay
(1-20A) x3	SA3(TP)-4040D/A	T110-T1	-	
(1-30A) x3	SA3(TP)-4060D/A	W100-T1/UE80-T1	-	
(1-40A) x3	SA3(TP)-4080D/A	W100-T1/UE120-T1	-	复合三相 large size relay
(1-50A) x3	SA3(TP)-66100D/A	W125-T1/UE120-T1	-	
(1-60A) x3	SA3(TP)-66120D/A	W150-T1/UE150-T1	-	
(1-70A) x3	SA3(TP)-66150D/A	W170-T1/UE170-T1	-	
(1-90A) x3	SA3(TP)-66200D/A	W250-T1	-	
(1-120A) x3	SA3(TP)-66300D/A	W300-T1	-	

电动机(电感性)负载对应固态继电器和相应散热器的选型推荐表 (220 ± 20%VAC、380 ± 10%VAC)

5.Selection guide of ssr and heat sink for inductive load(electrical motor)

功率和电流的换算方法

单相电流=功率/电压(I=P/220V)

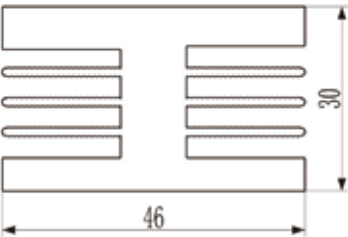
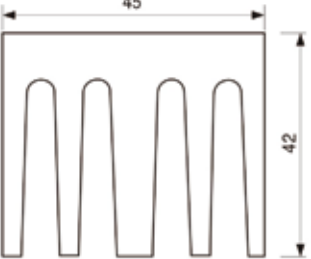
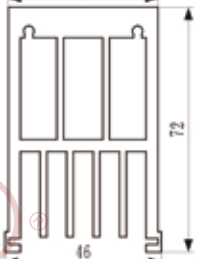
三相线电流(Y型接法) = 总功率/(3x220)

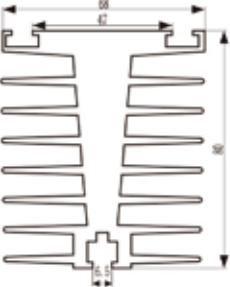
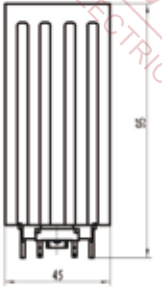
三相线电流(Δ型接法) = 总功率/(√3x380)

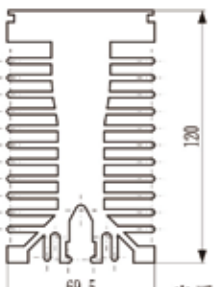
电机功率 Power Rating	长期工作电流 (额定电流) Load Current	固态型号 (推荐) SSR Model	适用散热器型号 Suitable Heatsink		
			平板安装(Panel)	卡座安装(Din Rail)	
单相 Single Phase					
200W	0.5-1A	SAP4810 D/A	直接安装在底板上 Heatsink not Required	直接安装在卡座上 Heatsink not Required	P 型 Panel Style
550W	1-2.5A	SAP4825 D/A			
800W	1-4A	SAP4840 D/A			
1000W	1-5A	SAP4850 D/A			
1.2KW	1-6A	SAP4860 D/A	X60/DQ60-P1	CR60-P1	
1.4KW	1-7A	SAP4870 D/A	X60/DQ60-P1	CR60-P1	
1.6KW	1-8A	SAP4880 D/A	X60/DQ60-P1	CR60-P1	
1.8KW	1-9A	SAP4890 D/A	X60/DQ60-P1	CR60-P1	
2KW	1-10A	SAP48100 D/A	X60/DQ60-P1	CR60-P1	
单相 Single Phase					
2KW	5-10A	SAM40100 D/A	X100-M1	CA100-M1	M 型 Module Style
2.4KW	5-12A	SAM40120 D/A	X100-M1	CA100-M1	
3.0KW	5-15A	SAM40150 D/A	X100-M1	CA100-M1	
4.0KW	5-20A	SAM40200 D/A	G100-M1	CR100-M1	
5.0KW	5-25A	SAM40250 D/A	G100-M1	CH100-M1	
6.0KW	5-30A	SAM40300 D/A	G100-M1	CH100-M1	
8.0KW	5-40A	SAM40400 D/A	T100-M1	CH100-M1	
三相 Three Phase					
0.5W	(0.5-1A) x3	SA3(TP)-4010 D/A	S80-T1 (S)	-	小型三相 Small Size
1.2KW	(1-2.5A) x3	SA3(TP)-4025 D/A	S80-T1 (S)	-	
2KW	(1-4A) x3	SA3(TP)-4040 D/A	S100-T1 (S)	-	中型三相 Medium Size
3KW	(1-6A) x3	SA3(TP)-4060 D/A	S110-T1 (S)	-	
4KW	(1-8A) x3	SA3(TP)-4080 D/A	S100-T1 (L)	-	
5KW	(1-10A) x3	SA3(TP)-66100 D/A	S120-T1 (L)	-	复合三相 Large Size
6KW	(1-12A) x3	SA3(TP)-66120 D/A	S150-T1 (L)	-	
7.5KW	(1-15A) x3	SA3(TP)-66150 D/A	T110-T1	-	
10KW	(1-20A) x3	SA3(TP)-66200 D/A	T110-T1	-	
15KW	(1-30A) x3	SA3(TP)-66300 D/A	W4-100-T1	-	

常用散热器截面代码示意图(长度单位:mm)

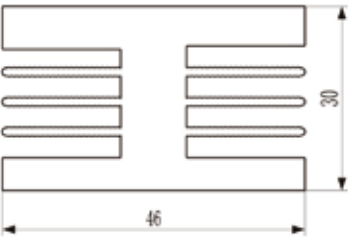
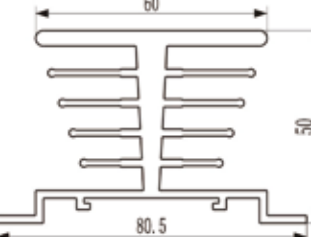
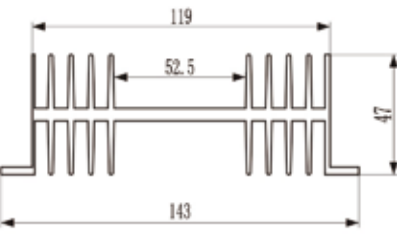
适装P型SSR卡座式散热器式样如下(模块工作电流不同切割长度不同):

 A60/80(8A/10A) 米重: 20.2G/cm A型 卡座式	 N60/80(12A/15A) 米重: 32.3G/cm N型 卡座式	 R75(17A) 米重: 34.3G/cm R型 卡座式
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 H60/80/100(25A/33A/41A) 米重: 61.7G/cm H型 卡座式	 UB60/80(24A/32A) 米重: 60.4G/cm UB型 卡座式	 UC60/80(28A/37A) 米重: 70.1G/cm UC型 卡座式
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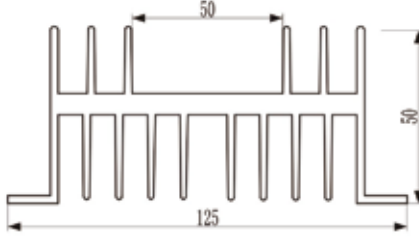
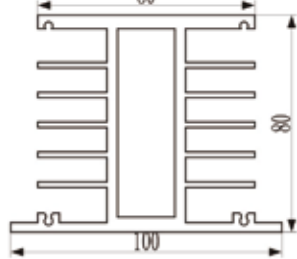
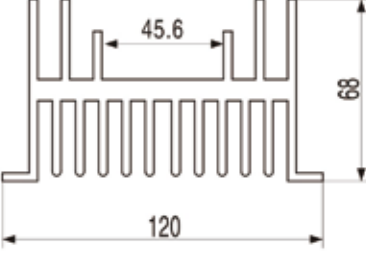
 V60(55A) 米重: 139G/cm V型 卡座式
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适装P型SSR平板式散热器式样如下(模块工作电流不同切割长度不同):

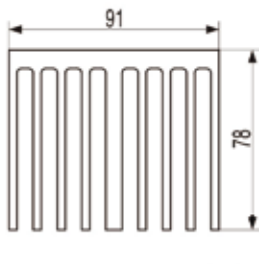
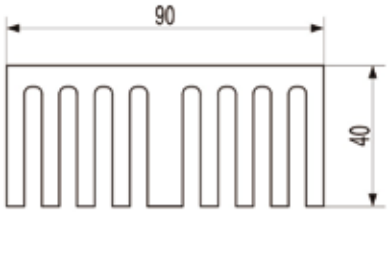
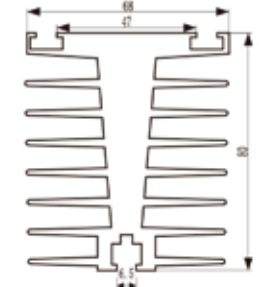
 A60/80(8A/11A) 米重: 20.2G/cm A型 平板式	 X50/75(8A/13A) 米重: 25G/cm X型 平板式	 DQ80/100(14A/17A) 米重: 25.4G/cm DQ型 卡座式
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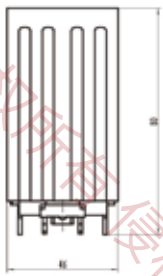
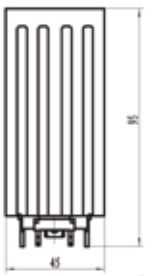
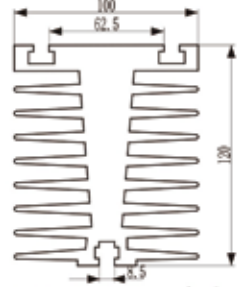
常用散热器截面代码示意图(长度单位:mm)

适装P型SSR平板式散热器式样如下(模块工作电流不同则切割长度不同):

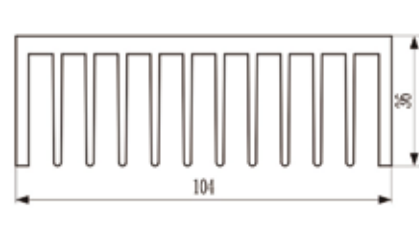
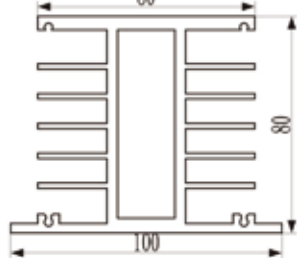
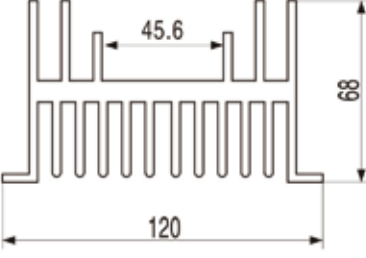
 JN60/80(14A/19A) 米重: 35G/cm JN型 平板式	 G60/80(20A/27A) 米重: 51.2G/cm G型 平板式	 UF60/80(26A/34A) 米重: 65.6G/cm UF型 平板式
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适装M型SSR卡座式散热器式样如下(模块工作电流不同则切割长度不同):

 UD100/120(51A/62A) 米重: 78.3G/cm UD型 卡座式	 UA100/120(40A/48A) 米重: 60.6G/cm UA型 卡座式	 H100/120(41A/49A) 米重: 61.7G/cm H型 卡座式
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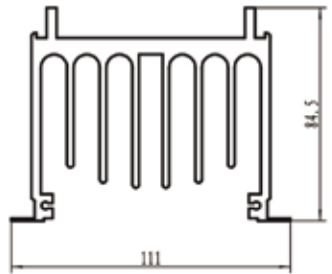
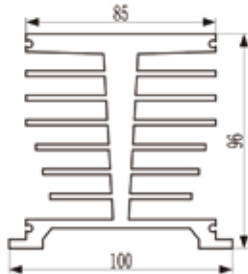
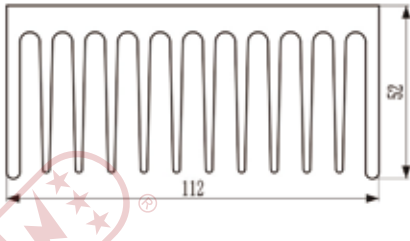
 UB100/120(40A/48A) 米重: 60.4G/cm UB型 卡座式	 UC100/120(42A/50A) 米重: 70.1G/cm UC型 卡座式	 B100/120(109A/130A) 米重: 159.8G/cm B型 卡座式
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适装M型SSR平板式散热器式样如下(模块工作电流不同切割长度不同):

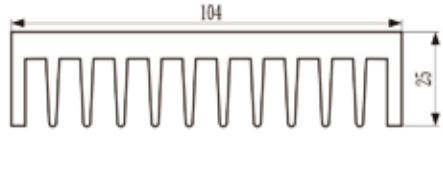
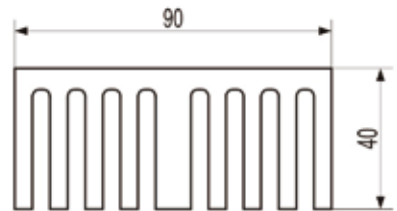
 J100/120(26A/31A) 米重: 38.6G/cm J型 平板式	 G100/120(34A/41A) 米重: 51.2G/cm G型 平板式	 UF100/120(44A/48A) 米重: 65.6G/cm UF型 平板式
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常用散热器截面代码示意图(长度单位:mm)

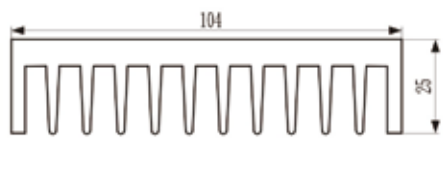
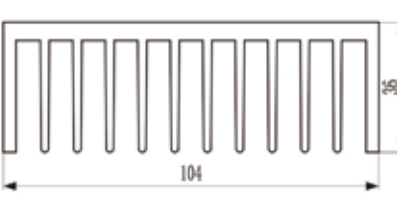
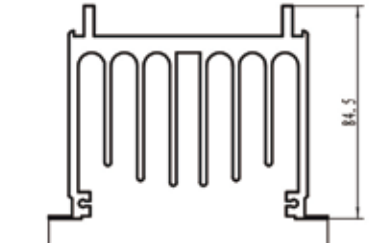
适装M型SSR平板式散热器式样如下(模块工作电流不同切割长度不同):

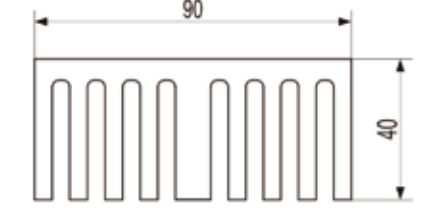
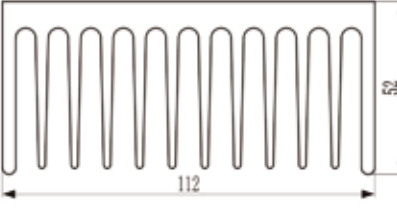
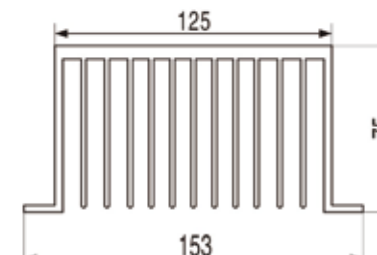
 F100/120/150(37A/41A/55A) 米重: 55.7G/cm	 T100/120/150(55A/61A/66A) 米重: 82.7G/cm	 L100/120/150(42A/50A/62A) 米重: 61.8G/cm
F型 平板式	T型 平板式	L型 平板式

适装M型SSR卡座式散热器式样如下(模块电流不同切割长度不同):

 CS100/120(17A/21A) 米重: 26G/cm	 CUA100/120(40A/49A) 米重: 60.6G/cm
S型 卡座式	UA型 卡座式

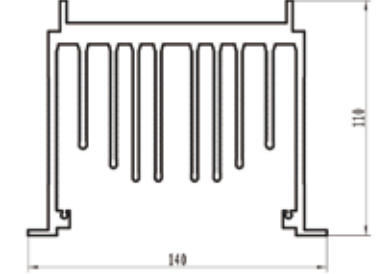
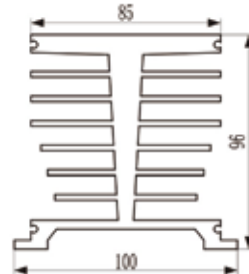
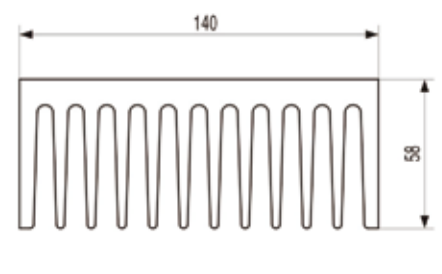
适装三相SSR平板式散热器式样如下(模块工作电流不同切割长度不同):

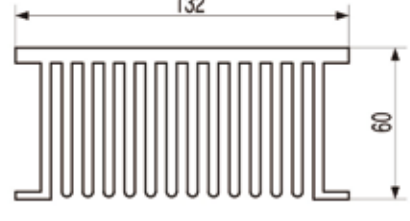
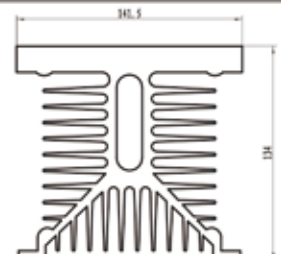
 S100/120((5/7)*3A) 米重: 26G/cm	 J100/120((5/10)*3A) 米重: 38.6G/cm	 F120/150((14/19)*3A) 米重: 55.7G/cm
S型 平板式	J型 平板式	F型 平板式

 CUA100/120((13-17)*3A) 米重: 60G/cm	 L100/120((14/17)*3A) 米重: 61.8G/cm	 UG120/150((21/27)*3A) 米重: 77.2G/cm
UA型 卡座式	L型 平板式	UG型 平板式

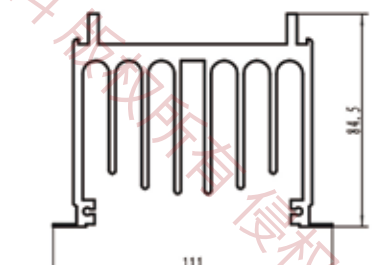
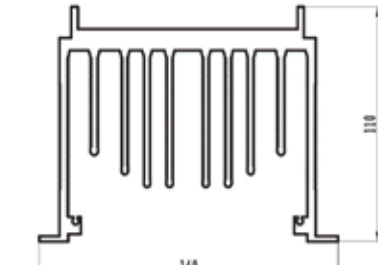
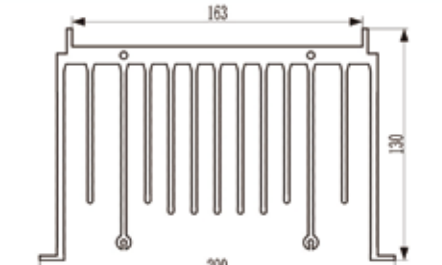
常用散热器截面代码示意图(长度单位:mm)

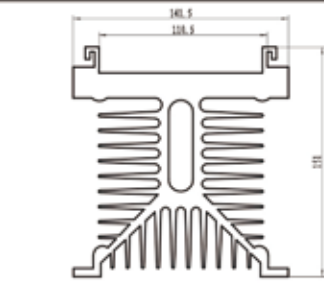
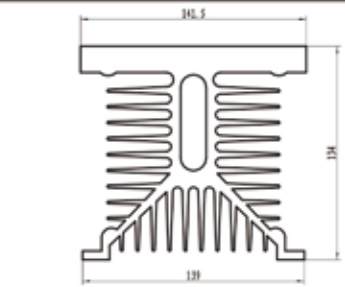
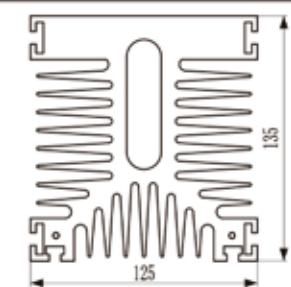
适装三相SSR平板式散热器式样如下(模块工作电流不同切割长度不同):

 E130/150((24/28)*3A) 米重: 82.4G/cm	 T110/130((20/24)*3A) 米重: 82.1G/cm	 C150/170((28/32)*3A) 米重: 82.8G/cm
E型 平板式	T型 平板式	C型 平板式

 UE150/170((33/40)*3A) 米重: 102G/cm	 W120/150((50A/61A)*3A) 米重: 183.3G/cm
UE型 平板式	W型 平板式

适装大功率模块的组合类整机散热器式样如下(模块工作电流不同切割长度不同):

 F100/120/150/170/200/250/300 米重: 55.7G/cm	 E100/120/150/170/200/250/300 米重: 82.4G/cm	 K100/120/150/170/200/250/300 米重: 168.8G/cm
F型 平板式	E型 平板式	K型 平板式

 Y100/120/150/170/200/250/300 米重: 184.3G/cm	 W100/120/150/170/200/250/300 米重: 183.3G/cm	 Z100/120/150/170/200/250/300 米重: 231.5G/cm
Y型 平板式	W型 平板式	Z型 平板式

RC浪涌吸收器



RC-1
RC-6



RC-2
RC-3



RC-4
RC-5



RC-7

浪涌吸收器产品命名方法:

固特浪涌吸收器命名规则: RC+电容量+耐压值;
例如: RC104/1000V 表示: 浪涌吸收器容量 104
(0.1uF)耐压1000V

Name system of GOLD surge absorber:

★Name system of GOLD surge absorber: RC+capacitance+voltage
★Example: RC104/1000V means: surge capacitance 104(0.1uF)
withstand voltage 1000V;

GENERAL SPECIFICATIONS

型号	RC参数	说明	尺寸(长×宽×高)
RC-1	563/630V	:0.056uF/630V	57×20×13
RC-2	683/1000V	:0.068uF/1000V	43×22×11
RC-3	104/1000V	:0.1uF/1000V	37×20×11
RC-4	104*2/2000V	:0.05uF/2000V	37×20×11
RC-5	224/1000V	:0.22uF/1000V	37×20×11
RC-6	224/630V	:0.22uF/630V	43×20×11
RC-7	2242/2000V	:0.1uF/2000V	37×20×11

RC浪涌吸收器的作用 The function of the RC surge absorber

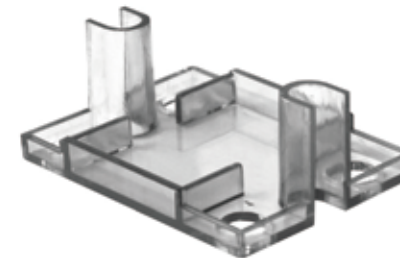
浪涌吸收器也叫过电压抑制器,电子灭弧器,阻容吸收器。本产品可以广泛用于国防, 航天, 化工, 冶金工业中所使用的接触器, 继电器, 电磁阀等易产生电弧或断开而产生的过电压的主电路及控制电路,达到消除电弧, 抑制过电压, 减少干扰, 延长电器元件寿命的作用, 对于机电一体化产品是不可缺少的过电压保护器件。

浪涌吸收器具有体积小,重量轻,功耗低,操作频率高及安装使用方便等优点。为了限制电路电压上升率过大, 确保晶闸管安全运行, 常在晶闸管两端并联RC浪涌吸收器, 利用电容两端电压不能突变的特性来限制电压上升率。因为电路总是存在电感的 (变压器漏感或负载电感), 所以与电容C串联电阻R可起阻尼作用, 它可以防止R、L、C 电路在过渡过程中, 因振荡在电容器两端出现的过电压损坏晶闸管。同时, 避免电容器通过晶闸管放电电流过大, 造成过电流损坏晶闸管。由于晶闸管过流过压能力很差, 如果不采取可靠的保护措施是不能正常工作的。RC浪涌吸收器就是常用的保护方法之一。

Surge absorber is also called the overvoltage limiter, electrical arcing, rc absorber. This product can be widely used in the contactor, relay, solenoid valve and so on which are prone to arc or disconnected and the overvoltage of the main circuit and control circuit, to eliminate electric arc, restrain overvoltage, in national defense, aerospace, chemical industry, metallurgical industry to reduce interference, prolong the service life of electrical components. It is indispensable over-voltage protection device for electromechanical integration products .

Surge absorption apparatus has small volume, light weight, low power consumption, high operation frequency and convenient installation. To limit the high circuit voltage build-up rate, to ensure the safe operation of the thyristor, we often parallel RC surge absorber on both ends of thyristor. To limit the voltage build-up rate of The capacitance voltage on both ends by it' unable mutation ability. Because there is always the inductance of the circuit (or leakage inductance of the transformer load inductance), so with the capacitance C series resistance R damping effect, it can prevent R, L, C circuit in the process of transition, because of the oscillation overvoltage damage is found on both ends of the capacitor thyristor. At the same time, avoid the capacitor by thyristor discharge current becoming too large as the over-current will damage thyristor. Because of the thyristor power flow pressure is very poor, if there is no reliable protection measures it will not working. RC surge absorber is one of the protection of the commonly used method.

P型透明罩



P型SSR

Protective covers designed for use with GOLD single-phase solid-state relays

使用说明

P保护罩材料为聚碳酸酯, 设计符合固特继电器标准。

使用说明

应按照说明小心使用p 型保护罩,以确保最大的保护

设计优势

P型保护罩是为固特继电器专门设计的, 安装简便。使用材料是有UL 94V-0 认证的聚碳酸酯。

Production Description

The P protective covers made of clear polycarbonate material, which are designed to fit over standard GOLD SSRs.

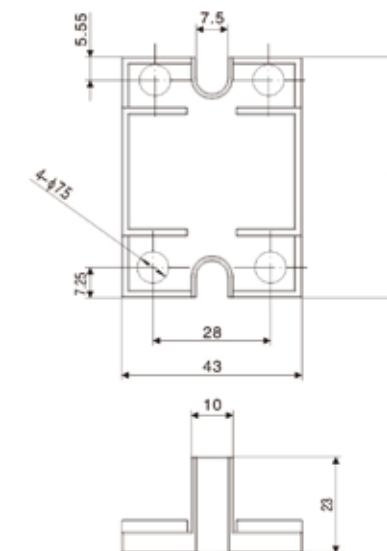
Use Guide

Care should be taken to fit the P Protective covers as per instructions to ensure maximum protection

Design Advantage

The P protective covers have been designed specially for GOLD Solid State Relays, and have been made simple to install. The polycarbonate material used is UL94V-0 approved.

机械规格 Mechanical Specifications



卡座



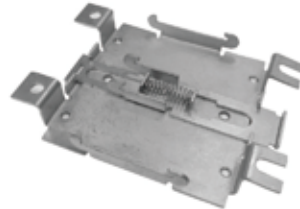
DIN35-645*442



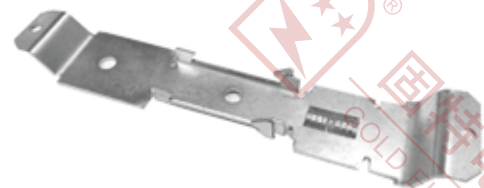
DIN35-645*400



DIN35-1640*340



DIN35-1052*770

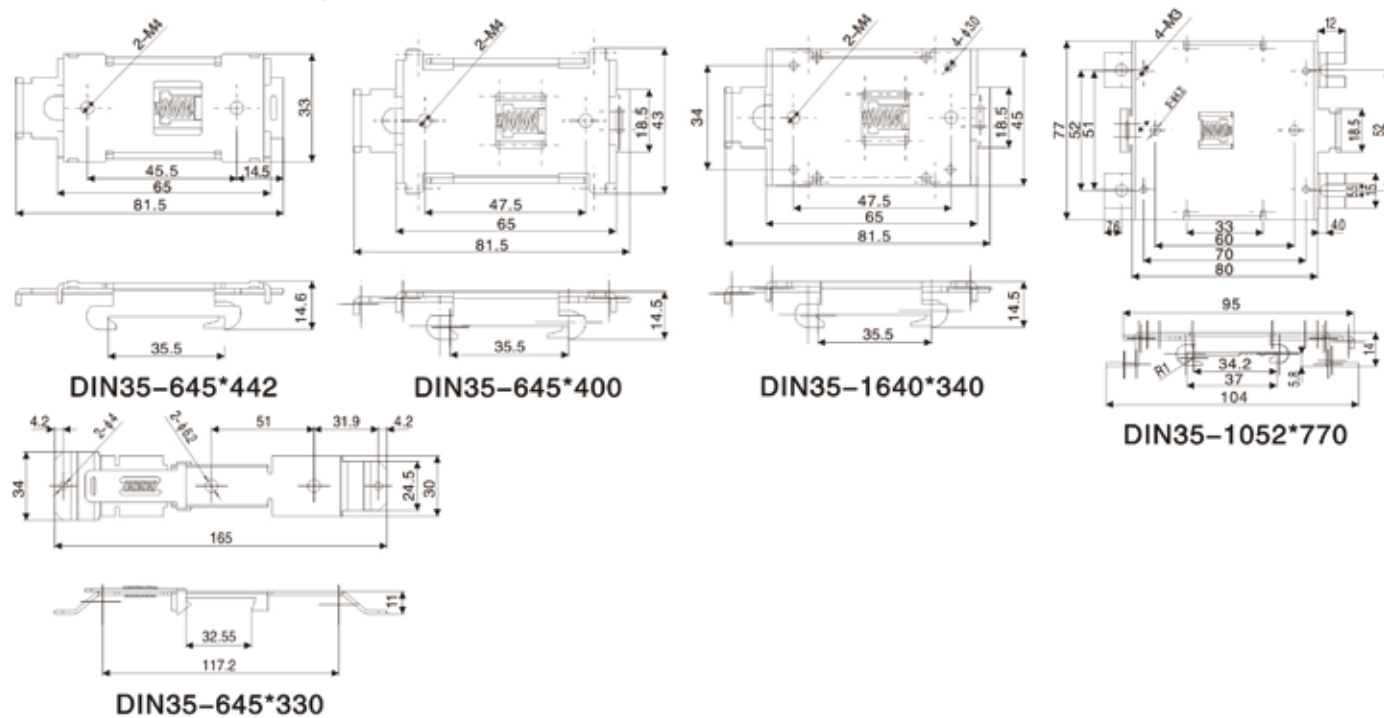


DIN35-645*330

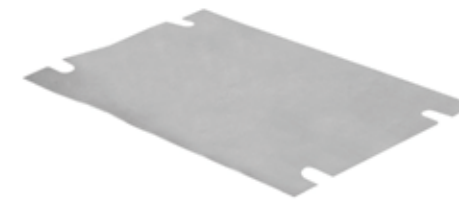
GENERAL SPECIFICATIONS

描述 Description	导轨安装 Din-Rail Mount
型号 Model number	DIN35-1640*340
耐热性 Thermal resistance[°C/W]	5
表面积 Surface area[in ² /cm ²]	19.0/122
散热器安装方式 Heat sink mounting	Din-Rail Mount
重量 Weight [g]	0.12/54
材质 Material	Steel
表面处理工艺 Finish	Yellow Zinc
安装孔 SSR Mounting Holes/threads	2,M4
安装螺丝扭矩 Mounting screw torque [in lbs/nm]	15-20/1.7-2.2
可安装继电器数量 Number and type of relay accepted	一个或两个 1 single or dual
是否需要风扇 Accepts Fan/size [mm]	否 No

机械规格 Mechanical Specifications



导热垫片



TP-T
三相导热垫片



TP-M25与TP-M34
M型导热垫片



TP-P
P型导热垫片

●使用方便的导热垫片，可用于固特三相和单相固态继电器。

●完美替代导热硅脂

HSP-P/HSP-M25/HSP-M34

可用于单相平板安装的固态继电器、控制模块和电力模块

HSP-3

可用于所有三相固态继电器

●Easy-to-use thermal interface Material designed for use with Standance GOLD single-phase and three-phase solid-state relays.

●Excellent alternative to thermal grease

HSP-P/HSP-M25/HSP-M34

For use with single phase panel mount SSR's,

Control modules and power modules.

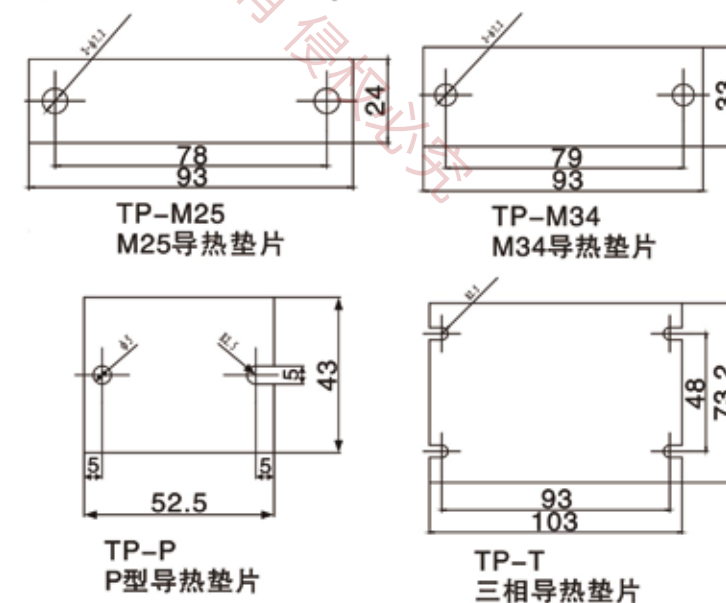
HSP-3

For use will all three phase panel mount SSR's

产品性能 Typical Properties

描述Description	HSP-P/HSP-M25/HSP-M34/HSP-3
颜色Color	白色 White
厚度 英尺Thickness,inch(mm)	0.2
是否能粘貼Adhesive One Side	NO
Thermal Impeadance[°C-in ² /W]	0.03@20psi
表面导热系数Apparent Thermal Conductivity[W/m-K]	1
相变温度Phase-Change Temperature[°C]	60
工作温度范围Operating Temperature Range[°C]	-55 to 150
体积电阻系数Volume Resistivity[ohm-cm]	1012ohm
比重Specific Gravity	NA
建议散热器夹压Suggested Heatsink Clamping Pressure,psi(MPa)	20 to 100(0.138 to 0.690)

机械规格 Mechanical Specifications



导热硅胶



产品性能

导热硅脂具有高导热率，极佳的导热性，良好的电绝缘性，较宽的使用温度，很好的使用稳定性，较低的稠度和良好的施工性能，该品无味、无毒、无刺激、无腐蚀，在-50℃~250℃范围内不熔化、不流失、补挥发、其导热性为普通绝缘硅脂的3倍。

产品用途

该品可填充于电子器件（如大功率二极管、三极管、行波管可控硅等）的管座和散热器配面降低电子器件的工作温度，具有优异的电绝缘性，又有优异的导热性。

Product performance

Thermal conductivity silicone grease with high thermal conductivity, good thermal conductivity, good electrical insulation, can be used in wide temperature range. Good use of stability, low consistency and good construction performance. It is odourless, non-toxic, no stimulation, no corrosion, within the range - 50 ℃ ~ 250℃ no melting, no evaporation loss. Its thermal conductivity is three times as many as ordinary insulation silicon grease.

Product usage

The goods can be filled in electronic devices, (such as high power diode, triode, traveling wave tube silicon controlled rectifier, etc.) of the header and the surface of the radiator to reduce the working temperature of electronic devices. It has excellent electrical insulation, and has excellent heat conductivity.

导热硅脂

产品性能：

导热硅脂具有高导热率，极佳的导热性，良好的电绝缘性，较宽的使用温度，很好的使用稳定性，较低的稠度和良好的施工性能，该品无味、无毒、无刺激、无腐蚀，在-50-250范围内不熔化不流失、补挥发、其导热性为普通绝缘硅脂的3倍。

产品用途：

它可广泛涂覆于各种电子产品，电器设备中的发热体（功率管、可控硅、电热堆等）与散热设施（散热片、散热条、壳体等）之间的接触面，具有传热作用和防潮、防尘、防腐蚀、防震等性能。适用于微波通讯、微波传输设备、微波专用电源、稳压电源等各种微波器件的表面涂覆或整体灌封，此类硅材料对产生热的电子元件，提供了极佳的导热效果。该品可填充于电子器件（大功率二极管、三极管、行波管可控硅等）的管座和散热面降低电子器件的工作温度，具有优异的电绝缘性，又有优异的导热性。



导热垫片

型号	厚度	是否能粘贴	表观导热系数	相变温度	体积电阻系数	比重	建议散热器夹压
TP-T	0.2	NO	1	60	10120hm	NA	20 to100(0.138 to 0.690)
TP-M25	0.2	NO	1	60	10120hm	NA	20 to100(0.138 to 0.690)
TP-P	0.2	NO	1	60	10120hm	NA	20 to100(0.138 to 0.690)

使用方便的导热垫片，可用于固特三相和单相固态继电器。完美替代导热硅脂，可用于单相平板安装的固态继电器、控制模块和电力模块可用于所有三相固态继电器。

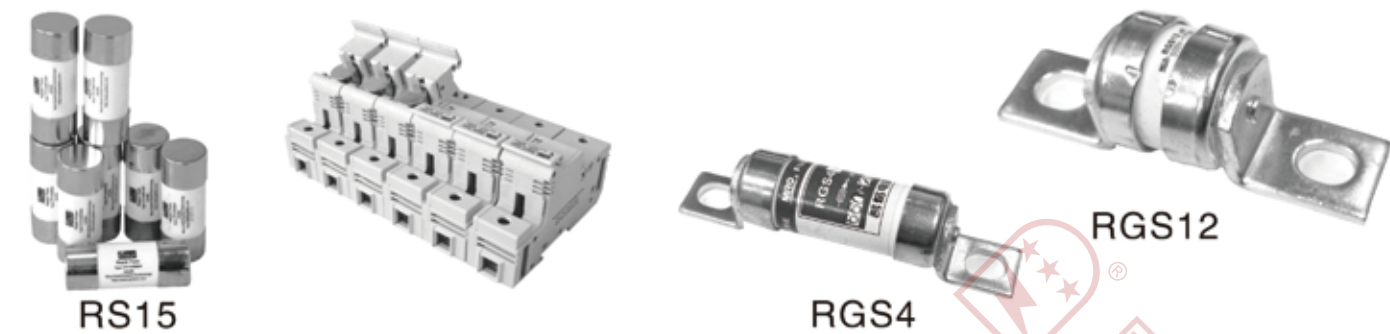


TP-T (三相导热垫片)
尺寸：103×73mm

TP-P (P型导热垫片)
尺寸：57×43mm

TP-M25 (M型导热垫片)
尺寸：93×24mm

熔断器



产品介绍

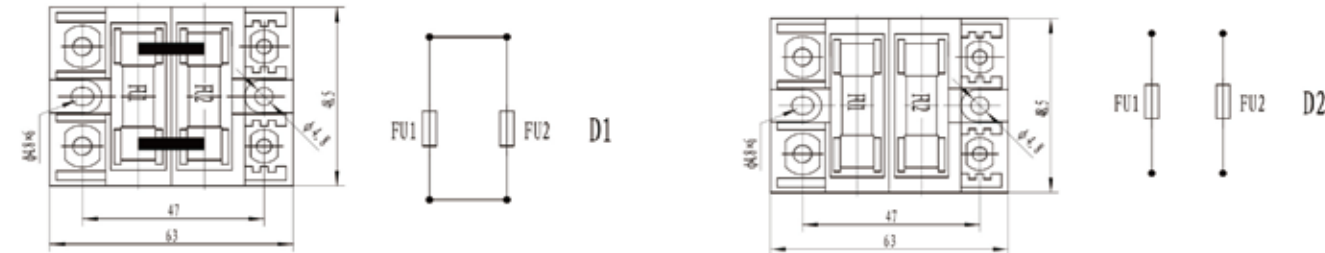
熔断器（fuse）是指当电流超过规定值时，以本身产生的热量使熔体熔断，断开电路的一种电器。熔断器是根据电流超过规定值一段时间后，以其自身产生的热量使熔体熔化，从而使电路断开；运用这种原理制成的一种电流保护器。熔断器广泛应用于高压配电系统和控制系统以及用电设备中，作为短路和过电流的保护器，是应用最普遍的保护器件之一。

Product Information

A fuse is one of the apparatus that allows disconnection of an electrical circuit by melting itself when current exceeds a certain specification. Due to the reliable electrical protection it offers, it is widely used in both high and low voltage applications, control systems and electrical equipment.

型号 Type	规格 Specification	适用范围Application
RS15	2A-32A	保险丝固态继电器、保险丝基座fuse ssr /fuse holder
RGS4	20A-125A	CTS-I series、CTH-II series
RGS12	40A-175A	SAM3E40 series、CTS-I series、CTH-II series、 CTS-DD series、CTH-DD series

机械规格 Mechanical Specifications



这是一款我公司特意为用户研发的产品，和固态继电器配套使用，非常安全便捷，我们也供应和这外型相似的带保险丝固态继电器系列产品。



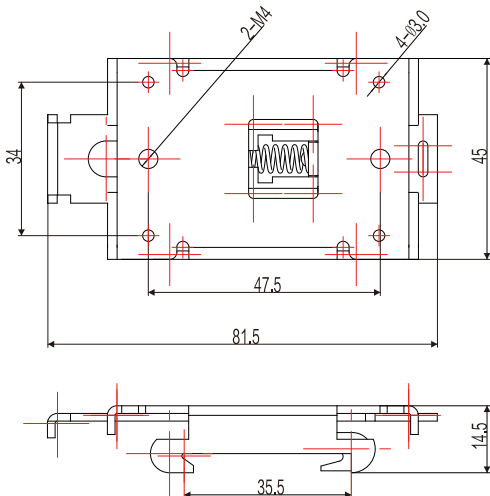
熔断器命名方法

F	P	50	32	D2
F:熔断器 F:Fuse	P:按装方式 P:instlation methods	电压 Voltage: 50: 500V 69: 690V	电流 Current: 1: 1A ... 32: 32A	D1: 两个快熔并联 D1: two paralld fuses D2: 两路快熔 D2: two branch fuse

卡座



型号:DIN35-1640×340



型号	耐热性	材质	表面处理工艺	安装孔	安装螺丝扭矩
DIN35-1640*330	5	Steel	White Zinc	2-M4	15-20/1.7-2.2

风扇

型号	耐热性	材质	电源	安装孔	电流
120x120x38	5	黑烤漆铝合金	220-240VAC	4-M4	0.14A
92x92x25	5	黑烤漆铝合金	220-240VAC	4-M4	0.09A
80x80x25	5	黑烤漆铝合金	220-240VAC	4-M4	0.08A



尺寸:120×120×38



尺寸:92×92×25



尺寸:80×80×25

产品用途:

由于固态继电器使用晶体管作为电子开关元件/功率元件，当继电器处于导通状态时，它将承受 $P = V \times I$ （负载电流）的耗散功率，并且固态继电器的负载容量受环境温度及其自身的温度影响很大。如果环境温度过高，固态继电器的负载容量将不可避免地相应降低，此外，固态继电器开关可能失控，甚至永久性损坏。因此，有必要根据实际工作环境设定一定的余量，并选择合适的散热片尺寸以确保散热条件。对于大于5A的负载电流，应安装散热器。对于高于100A的电流，应配备散热器和风扇以实现强冷却，降低固态继电器的工作环境温度,延长固态继电器的使用寿命。

本公司散热风扇采用真空浸漆机保证绝缘漆渗透电机线圈内，提高线圈的机械、绝缘强度，起到良好的散热、防潮效果。具有运行寿命长、噪音低、振动小，安装方便等优点。

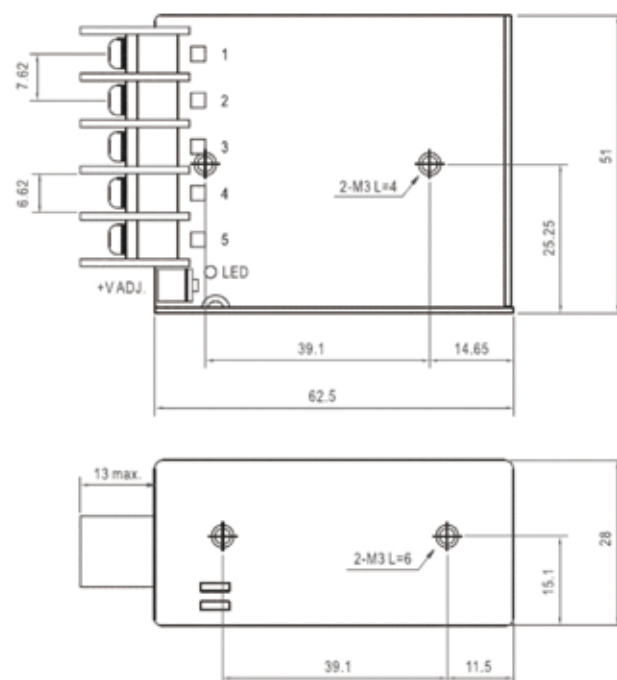
开关电源



电气特性参数 Electrical specification

型号 Type	GT-15W-5V	GT-15W-12V	GT-15W-24V
输出 Output	额定电压 Rated voltage	5V	12V
	额定电流 Rated current	3.0A	1.3A
	额定功率 Rated power	15W	15W
输入 Input	电压范围 Voltage	90-260VAC	
	频率范围 Frequency range	45-65Hz	
	工作温度 Temperature	20-80℃	
环境 Enviroment	工作湿度 Humidity	20-90%, 无冷凝 No Condensation	
其他 Others	尺寸 Size	62.5*51*28	

机械规格 Mechanical Specifications



温控仪表



48 × 48mm



48 × 96mm



72 × 72mm



96 × 96mm

产品简介

本公司生产的温控表采用国外的先进技术，与本公司生产的固态继电器和调压调功控制器配套使用能更有效的对温度进行精确控制，确保温控表和固态继电器的最佳兼容与匹配，主要有两种款项的温控表：一种是匹配固态继电器，对温度进行渐进式通断控制；另一种是匹配固态继电器对温度进行分段式的程序化控制。

型号定义

GD-118仪表型号由5部分组成，如下：

GD-118P—EIK—J1—J1—RA

表示仪表型号为Gd-118P型

表示仪表面板尺寸规格

面板48×48mm，开口44×44mm，插入深度95mm

面板48×96mm，开口45×92mm，插入深度110mm

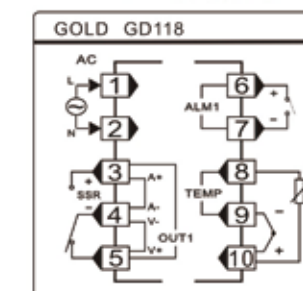
面板72×72mm，开口68×68mm，插入深度95mm

面板96×96mm，开口92×92mm，插入深度110mm

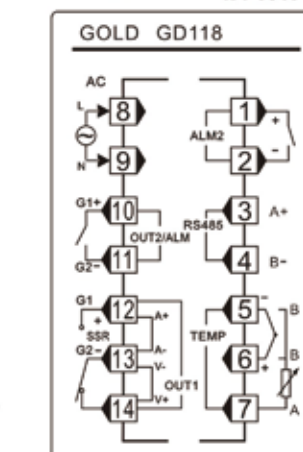
主要特点

- 输入采用数字校正系统，内置常用热电阻，热电偶非线性校正表格，测量精确稳定。
- 具备位式控制（ON-OFF）、专家PID智能调节等多种调节方式。先进的专家PID智能调节算法具有整定、自学习功能，无超调及无欠调的优良控制特性。
- 模块化输出支持 SSR 电压、线性电流（电压）、继电器触点开关、可控硅无触点开关、单相、三相可控硅过零触发及单相可控硅移相触发输出。
- 加热/制冷双输出控制功能，并且支持加热/冷却输出均为线性电流输出的应用。
- 自定义报警功能，支持上限、下限、正偏差及负偏差等多种报警功能，并可自由定义报警输出端口（AL1、AL2、AU1及AU2），支持多个报警信号从同一位置输出。具备上电免除报警，避免上电报警误动作等功能。
- 变送输出功能可将测量值或给定值变送为标准电流信号输出，采用新一代高精度电流输出模块，0.2级输出精度及优于100ppm/℃温度漂移性能的电输出。
- 程序型仪表多段程序控制，可实现任意斜率的升、降温控制，具有跳转（循环）、运行、暂停及停止等可编程/可操作命令，并允许在程序的控制运行中随时修改程序。采用具备曲线拟合功能的专家PID智能调节算法，能获得光滑平缓的曲线控制效果。
- 可在程序控制运行中编辑事件输出功能，配合控制外部设备动作。
- 程序控制具有测量值启动功能件及准备功能，具备五种停电/开机事件处理模式选择。
- 外部控制输入开关量输入，可切换SV1/SV2或用于程序控制的运行/暂停及停止操作。
- 可定义参数查看及修改的权限，及允许用户自定义密码。

48 × 48接线标示



72 × 72/96 × 96接线标示



荣誉资质与证书



国家高新技术企业(连续获得十年)



高新技术产品认定证书



高新技术产品认定证书



固态继电器工程研究中心



十佳科技进步企业



优秀民营科技企业

质量体系认证



Yin chenzhong: World finance and industrial celebrity of the collection by America 公司董事长殷晨钟先生被编入《世界财务与工业名人录》



固态行业标准起草单位



ISO 9001 Certificate ISO 9001 质量体系证书



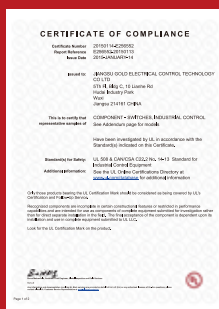
TUV认证



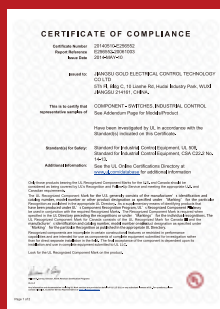
ROSH认证

认证证书

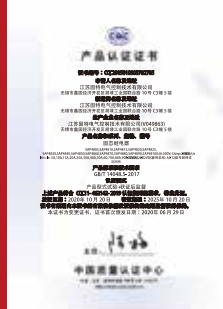
UL认证



SAP SAM UL Certificate SAP SAM UL认证



SA3 UL Certificate SA3 UL认证



CQC认证



CQC认证

认证证书



单相P型系列SSR CE认证



三相固态继电器系列 CE认证



散热一体化系列 CE认证



电力电子模块系列 CE认证



电力电子模块(整流桥)系列 CE认证



单相M型系列SSR CE认证



固态调压模块 CE认证



可控硅电力调整器 CE认证



风机调速控制器 CE认证



三相电机正反转控制模块 CE认证



三相调压调功控制器 CE认证



单相整流模块 CE认证



SAM3E 固态继电器整机 CE认证



直流固态继电器 CE认证



CKA电力调整器CE认证

专利证书

发明专利(部分)



俄罗斯发明专利大功率压接式固态继电器模块及其制作工艺



多电路集成封装三相调压模块发明专利



一种发热量小的固态继电器发明专利证书



插拔式固态继电器发明专利



散热一体化固态继电器发明专利

专利证书

实用新型专利 (部分)



防滑型端子
实用新型专利证书



PWM交流风机调速控制器
实用新型专利证书



多路固态继电器控制板
实用新型专利证书



固态整机保护用消盖
实用新型专利证书



三相风机调速器
实用新型专利证书



一种散热一体式固态继电器装置
实用新型专利证书



一种电容投切开关
实用新型专利证书



一种具有恒流输入指示的常闭式
固态继电器实用新型专利证书



带有过载指示的双灯固态继电器
实用新型专利证书



横流式常开常闭固态继电器
实用新型专利证书



一种无金属底板的新型固态继电器
实用新型专利证书



多路固态继电器
实用新型专利证书



一种方型固态继电器
实用新型专利证书



一种延时通继电器
实用新型专利证书



一种长方体继电器
实用新型专利证书

外观专利 (部分)



交流固态继电器外壳外观专利证书



调压控制器外观专利证书



保险丝固态继电器外观专利证书



散热一体化固态继电器外观专利证书



散热一体化固态继电器
透明罩外观专利证书



防滑式固态继电器外观专利证书



固态继电器外观专利证书



长条型固态继电器外观专利证书



智能检测固态继电器外观专利证书



继电器外观专利证书

我司自成立以来,坚持以技术创新为核心战略,迄今累计拥有近100余项专利。每年,我们持续保持超过10项新专利的增长速度,充分体现了我们在行业中的引领地位和持续创新的决心。

合作客户

Cooperative clients

塑机行业 Plastic Machinery Industry

聚焦行业头部客户,为客户专研行业解决方案DH、DB、DS款。并提供定制化产品方案。

行业大型客户累计 **32** 家,累计销售额 **65000000** 元。

新能源光伏行业 New energy photovoltaic industry

聚焦行业头部客户,为客户专研行业解决方案高性能经济款。并提供定制化产品方案。

行业大型客户累计 **27** 家,累计销售额 **50000000** 元。

钢化玻璃行业 Tempered glass industry

聚焦行业头部客户,为客户专研行业解决方案DG款。并提供定制化产品方案。

行业大型客户累计 **38** 家,累计销售额 **45000000** 元。

纺织机械行业 Textile machinery industry

聚焦行业头部客户,为客户专研行业解决方案双灯独家专利款。并提供定制化产品方案。

行业大型客户累计 **55** 家,累计销售额 **95000000** 元。

其他行业/自动化设备 Other industries

提供经济款、高性能款、特殊工况型等等,如DA温度保护款、DR电机专用款、DF带熔断保护款

行业大型客户累计 **89** 家,累计销售额 **68000000** 元。