



# Smart SSR Electricbox 智能固态开关箱 (SSE)

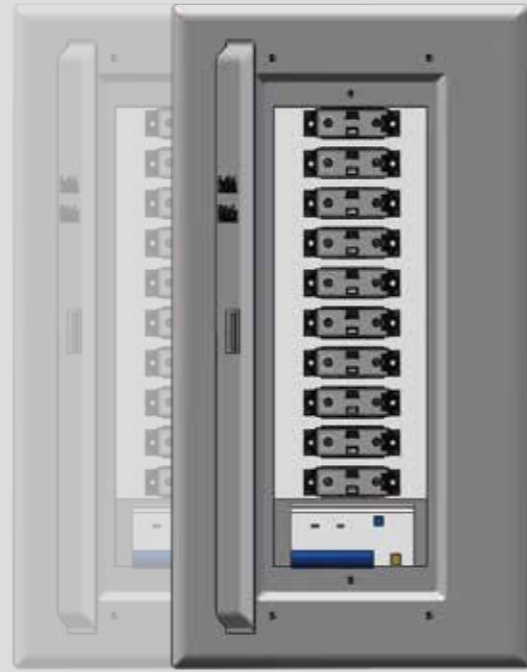
固态行业定制专家

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# 智能固态 开关箱

## Smart SSR Electricbox



该产品获得实用新型与外观专利 专利号:2012206519899 2018303861251

This product has obtained utility model and design patent number: 2012206519899 2018303861251

### 产品优点 Product advantage



固态开关無磨损寿命超长50年  
並且从工作原理上免更換免維修

Solid state switches have a lifespan of over 50 years without wear and tear And in terms of working principle it is free of replacement and maintenance



无火花可用于任何  
有危險气体的地方, 更加安全

No sparks can be used for any purpose Places with hazardous gases are safer



工作状态有接通  
指示灯故障指示灯, 巡查很明了方便

The working status is connected The indicator light for malfunction is very clear and easy to inspect



未來易于加上  
远程控制等

Easy to add in the future Remote control, etc

### 核心优势与市场需求匹配度

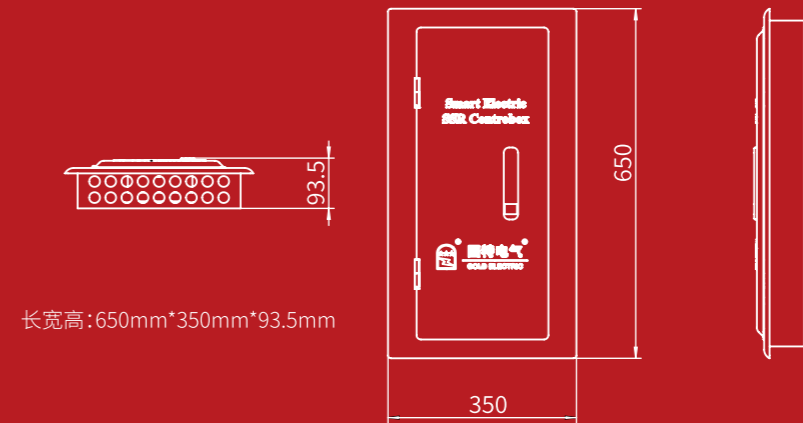
Matching degree between core advantages and market demand

高效安全:固态断路器通过半导体器件(如SiC/GaN)实现微秒级断电, 特别适合对电涌敏感的高价值设备(如数据中心、智能家居、医疗办公设备),能有效减少电气火灾风险。  
智能化集成:支持实时电流监测、远程控制、故障诊断等功能,契合办公和家庭场景对“智能用电管理”的需求(如与IoT平台联动)。  
长寿命与低维护:无机触点磨损,适合高频操作场景(如商业办公场所的电器循环使用),降低长期成本。

Efficient and safe: Solid state circuit breakers achieve microsecond level power outages through semiconductor devices such as SiC/GaN, making them particularly suitable for high-value equipment sensitive to power surges (such as data centers, smart homes, medical office equipment), effectively reducing the risk of electrical fires.  
Intelligent integration: supports real-time current monitoring, remote control, fault diagnosis and other functions, meeting the needs of "intelligent power management" in office and home scenarios (such as linkage with IoT platforms).  
Long lifespan and low maintenance: No mechanical contact wear, suitable for high-frequency operation scenarios (such as electrical cycling in commercial offices), reducing long-term costs.

### 产品尺寸图 Product dimension diagram

单位 (mm)



长宽高: 650mm\*350mm\*93.5mm

\*尺寸存在少许偏差,具体以实物为准。

\*There is a slight deviation in size, please refer to the actual product for details.

### 市场驱动因素

Market drivers

国内政策支持:中国“双碳”目标推动电气设备节能化,新基建(如5G基站、充电桩)对智能配电需求旺盛,可能带动配套固态断路器应用。  
国际趋势:欧美对电气安全标准(如UL、IEC)要求严格,且智能家居渗透率高(2023年美国达48%),为高端固态断路器提供机会。  
新兴场景需求: 高端家电(变频空调、大功率厨电)的电路保护升级; 办公场景的模块化配电(如共享办公空间快速扩容需求)。

Domestic policy support :China's "dual carbon" goals promote energy conservation of electrical equipment, and new infrastructure such as 5G base stations and charging piles have a strong demand for intelligent distribution, which may drive the application of supporting solid-state circuit breakers.  
International Trends:Europe and America have strict requirements for electrical safety standards such as UL and IEC, and the penetration rate of smart homes is high (reaching 48% in the United States by 2023), providing opportunities for high-end solid-state circuit breakers.  
merging scene requirements :For example:Upgrading circuit protection for high-end household appliances (variable frequency air conditioners, high-power kitchen appliances);  
-Modular power distribution in office scenarios (such as rapid expansion of shared office spaces).

### 主要挑战与风险

Main challenges and risks

成本壁垒: 当前固态断路器价格是传统产品的3-5倍,民用市场对价格敏感,可能优先在高端场景(如智能别墅、高端商用楼宇)渗透。  
技术成熟度: 大电流场景(如家庭总闸)的散热和可靠性仍需验证,部分厂商需与机械断路器混合使用。  
标准与认证: 国内外认证周期长(如UL认证需1-2年),可能延缓市场推广速度。  
用户认知: 民用市场对固态断路器认知不足,需联合家电品牌或房企进行场景化推广(如“零触电智能住宅”)。

Cost barrier: The current price of solid-state circuit breakers is 3-5 times that of traditional products, and the civilian market is price sensitive, which may prioritize penetration in high-end scenarios such as smart villas and high-end commercial buildings.  
Technological maturity: The heat dissipation and reliability of high current scenarios (such as household main switches) still need to be verified, and some manufacturers need to mix them with mechanical circuit breakers.  
Standards and Certification: The certification cycle at home and abroad is long (such as UL certification taking 1-2 years), which may slow down the speed of market promotion.  
User awareness: The civilian market lacks awareness of solid-state circuit breakers and needs to collaborate with home appliance brands or real estate companies for scenario based promotion (such as "zero electric shock smart homes").

### 竞争格局与机会点

Competitive landscape and opportunity points

国内竞争对手: 如正泰、德力西等传统企业已布局固态断路器,但主打工业市场;固特若聚焦民用细分场景(如智能插座内置微型SSCB),可差异化竞争  
国际对手: ABB、Eaton等巨头技术领先,但价格高昂,固特可通过性价比(如基于国产SiC器件)抢占中端市场。  
合作模式: 与家电厂商(海尔、美的)、智能家居平台(华为HiLink、涂鸦)合作,将SSCB作为增值模块打包销售。

Domestic competitors: Traditional enterprises such as Chint and Delixi have already laid out solid-state circuit breakers, but mainly focus on the industrial market; If Gute focuses on civilian segmented scenarios (such as smart sockets with built-in micro SSCBs), it can differentiate competition  
International competitors: ABB, Eaton and other giants have leading technology, but their prices are high. Gute can seize the mid-range market through cost-effectiveness (such as based on domestic SiC devices).  
Cooperation mode: Cooperate with home appliance manufacturers (Haier, Midea) and smart home platforms (Huawei HiLink, TuTu) to package and sell SSCB as a value-added module.

## 市场前景预测

Market drivers

短期(1-3年): 以B端商用为主(如数据中心、高端办公楼), 民用市场可能通过“爆款高端电器”试点(如单价超万元的智能冰箱)。

中长期(3-5年): 若成本下降30%-50% (依赖半导体工艺进步), 或随智能家居普及进入家庭配电箱市场, 国内年需求有望突破百亿元。

Short term [1-3 years]: Mainly focused on B2B commercial use [such as data centers and high-end office buildings], the civilian market may pilot "popular high-end appliances" [such as smart refrigerators with a unit price exceeding 10000 yuan].

Medium to long term [3-5 years]: If costs decrease by 30% -50% [relying on advances in semiconductor technology], or enter the home distribution box market with the popularization of smart homes, domestic annual demand is expected to exceed 10 billion yuan.

## 建议行动策略

Suggested action strategy

场景聚焦: 优先切入高附加值场景(如智能办公配电箱、充电桩保护模块), 而非替代家庭总闸。

生态合作: 与芯片厂商(如三安光电)联合开发低成本方案, 或与物业公司合作推广安全用电套餐。

政策借力: 参与国内“智能电网”或“绿色建筑”标准制定, 争取补贴或试点项目。

Scenario focus: Prioritize entering high value-added scenarios [such as smart office distribution cabinets, charging pile protection modules], rather than replacing home main switches.

Ecological cooperation: Collaborate with chip manufacturers [such as Sanan Optoelectronics] to develop low-cost solutions, or collaborate with property management companies to promote safe electricity packages. Policy leverage: Participate in the formulation of domestic "smart grid" or "green building" standards, and strive for subsidies or pilot projects.

## 行业应用图谱

Industry Application Graph



结论: 固特固态断路器在办公和民用市场具备长期潜力, 但需解决成本与市场教育问题, 建议采取“由高到低”的阶梯式渗透策略, 3-5年内有望成为细分市场的重要玩家。

Conclusion: Solid state circuit breakers have long-term potential in the office and civilian markets, but cost and market education issues need to be addressed. It is recommended to adopt a "top-down" penetration strategy, which is expected to become an important player in the segmented field within 3-5 years.

## 产品参数

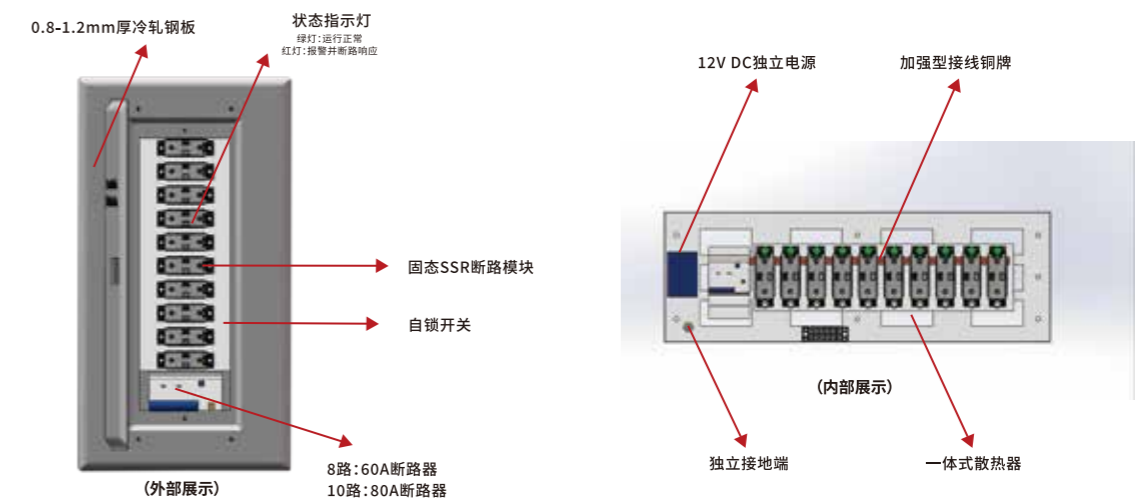
Product parameters

SSE-60A-8路	SSE-80A-10路
额定电压: 400/230V	额定电压: 400/230V
额定电流: 60A	额定电流: 80A
环境温度: -40°C~80°C	环境温度: -40°C~80°C
安装方式: 暗装/明装	安装方式: 暗装/明装
防护等级: IP40	防护等级: IP40
生产日期: 详见箱体底部	生产日期: 详见箱体底部

特点: 安静无噪音, 自带散热背板, 状态指示灯, 固态SSR断路/短路保护, 可复位自锁开关, 0.8-1.2mm厚冷轧钢板, 分体式设计。

## 产品功能介绍

Product Function Introduction



## 产品接线示意图

Product wiring diagram

