



驱动电力智慧节能
—我是小能

浙江锦能电力科技有限公司

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■ 专注于无功补偿、谐波治理

驱动电力智慧节能
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APF/SVG 系列产品手册

电能质量解决方案

APF/SVG Selection Guide

2025.8



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JN-APF 系列

有源滤波器 (NE)

Active power filter (NE)

CCC CE RoHS ISO9001

1. 适用机架式、壁挂式、立式等多种安装类型；
2. 可灵活搭配组柜，便携安装，模块化设计，支持智能化并机；
3. 内部关键器件选型裕量大，耐冲击性强。

1. Supports multiple installation types including rack-mount, wall-mount, and floor-standing configurations;
2. Can be flexibly combined and assembled into cabinets, portable installation, modular design, and support intelligent parallel operation;
3. The internal key components have a large selection margin and strong shock resistance.



驱动电力智慧节能
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产品概述

Product overview

JN-APF 有源滤波器 (NE) JN-APF active power filter(NE)

HNJN® 锦能

JN-APF 30A ~ 200A 系列有源滤波器是由锦能电力科技有限公司自主研发，用于抑制电力谐波、动态无功补偿的三电平、高功率密度电力电子产品。该产品技术达到国内领先水平，产品系列包括 30A、50A、75A、100A、150A、200A 容量；具备谐波补偿，无功补偿，三相不平衡补偿功能，可灵活配置成单一、混合模式的补偿方式，可广泛应用于 400V 供电系统的电能质量改善。设计余量大，过载能力强，稳定性高，可适用于恶劣环境。

JN-APF 30A ~ 200A series active power filter is a multi-level inverters, high-power density power electronic product which is independently developed by Jinneng Power Technology Co., LTD., which is for suppressing power harmonics and dynamic reactive power compensation. The product technology has reached the domestic leading level, the product series includes 30A, 50A, 75A, 100A, 150A, 200A capacity; With harmonic compensation, reactive power compensation, three-phase imbalance compensation function, can be flexibly configured into a single, mixed mode of compensation, can be widely used in 400V power supply system for power quality improvement. It has a large design margin, high overload capacity, high stability and can be applied in harsh environments.



应用灵活 Flexible Application

支持谐波、无功、三相不平衡、零线治理等多种应用模式搭配使用

Supports multiple application modes including harmonic filtering, reactive power compensation, three-phase imbalance correction, and neutral line treatment, which can be combined as needed.



安全可靠 Safe and Reliable

完善的软硬件保护，在较为恶劣电网环境下可稳定持续运行

Comprehensive hardware and software protection ensures stable and continuous operation even in harsh power grid environments



适用性强 Highly adaptability

适用于 THDu-16% 电网应用环境，支持小电流精细化补偿

Suitable for grid application environments with THDu \leq 16%, supporting precise compensation for small currents



高效稳定 Highly efficiency and stability

滤波范围广，2~50 次谐波滤除率可达 95% 实现电流畸变率 THDi \leq 5%

Wide filtering range, with harmonic filtering efficiency of 2-50th harmonics reaching up to 95%, achieving current distortion rate THDi \leq 5%



损耗低 Low loss

只有一半的开关电压，从而降低半导体开关的损耗。采用三电平的解决方案，有利于减少电路损耗，保持更高的效率从而符合节能的理念。

Only half the switching voltage is required, thereby reducing losses in semiconductor switches. The three-level solution helps minimize circuit losses and maintain higher efficiency, aligning with energy-saving principles.



较小的输出纹波电流 Lower output ripple current

三电平 NPC 拓扑结构保持较低的纹波的输出电流，这归功于其高质量的输出电压。提高产品性能并降低内部滤波的需求。

The three-level NPC topology maintains low ripple in the output current, which is attributable to its high-quality output voltage. This enhances product performance and reduces the need for internal filtering.

JN-APF 有源滤波器 (NE) JN-APF active power filter(NE)

CHNPN® 锦能

JN-APF 有源滤波器 (NE) JN-APF active power filter(NE)

CHNPN® 锦能

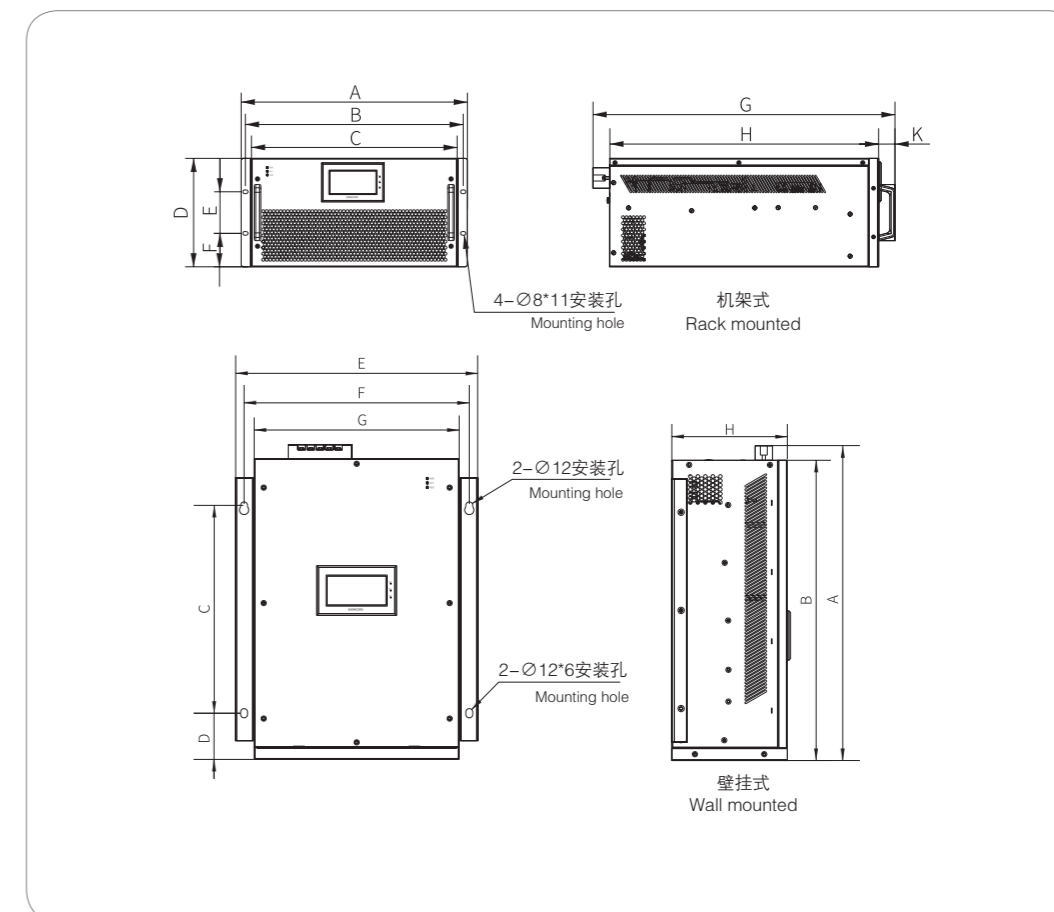
技术数据和规格

Technical data and specifications

APF 电气参数 APF Electrical Parameters (NE)	
额定电压 (V) Rated voltage (V)	400V AC 交流
输入电压范围 Input voltage range	400V ± 20%
容量 (A) Capacity	30A、50A、75A、100A、150A、200A
频率 (Hz) Frequency	50/60(±10%)
滤波范围 Filter range	2~50 次可选, 单次可选 Selectable from 2~50 times, single time is selectable
滤波能力 Harmonic filtering capability	在额定负载下 >95% > 95% at rated load
CT 安装方式 (installation method)	开环或闭环 (并机情况下建议开环) Open-loop or closed-loop (open-loop recommended in parallel operation)
响应时间 (ms) Response time	< 10
线制 Wiring configuration	三相三线 / 三相四线 Three-phase three-wire/three-phase four-wire
过载能力 (Overload capacity)	1.1 倍 额定电流时能连续运行, 1.2 额定电流时运行 1min Can operate continuously at 1.1x rated current, 1 min at 1.2x rated current
电路拓扑 Circuit topology	三电平拓扑 Three-level topology
开关频率 (kHz) Switching frequency	20
并机数量 Number of parallel units	≤ 20 个模块并机 modules in parallel ≤ 20
冗余 Redundancy	任何单元都可以成为独立的单元 Any unit can function as an independent unit
效率 Efficiency	≥ 97.5%
功率因数控制 Power factor control	全部感性或容性电流补偿 0~100% Full inductive or capacitive current compensation
不平衡补偿 Unbalance compensation	可提供 Available(Optional)
显示 display	4.3/7 英寸屏幕 (可选) 4.3/7 inch screen (optional)
通讯接口 communication interface	RS485 CAN 协议, RJ45 接口, 用于模块之间的通信 CAN protocol, RJ45 interface, used for communication between modules
噪音等级 Noise level (dB)	<56 最大到 < 69 (根据不同模块或负载条件) <56 ~ < 69 (depending on different modules or load conditions)
海拔高度 Altitude (m)	>1500m 时降额使用 Derated use when >1500m
环境温度 Ambient temperature (°C)	工作温度: -25°C ~ 55°C, 45°C 以上降额使用 Operating temperature: -25°C to 55°C, derated use above 45°C
储存温度 Storage temperature:	-45°C ~ 70°C
湿度 Humidity	5%~95%RH, 无冷凝 no condensation
防护等级 Protection rating	IP20
结构和安全标准 Structure and Safety Standard	EN 62477-1(2012), EN 61439-1(2011)
应用注意 Application environment	THDu < 16%
EMC	EN/IEC 61000-6-4
认证 Certification	CE CQC

外形尺寸图

Overall dimension



外形尺寸

Overall dimension

安装方式 Installation mode	机架式 Rack type					壁挂式 wall-mounted				
尺寸 Size (mm)	30A/50A	75A	100A	150A	200A	50A	75A	100A	150A	200A
A	359	399	484	554	674	525	556	611	621	680
B	341	381	466	536	656	500	520	575	585	640
C	315	355	440	510	630	300	360	300	300	420
D	200	200	232	250	250	120.5	80	137.5	142.5	110
E	89	89	89	89	89	378	418	503	573	694
F	55.5	55.5	71.5	80.5	80.5	350	390	475	545	666
G	538	626	646	656	715	315	355	440	510	633
H	500	555	575	585	640	200	200	232	250	250
K	13	35	35	35	35	/	/	/	/	/
NW(kg)	18.5	24.5	35	43.5	65	19.5	25.3	35.7	44.2	68.5

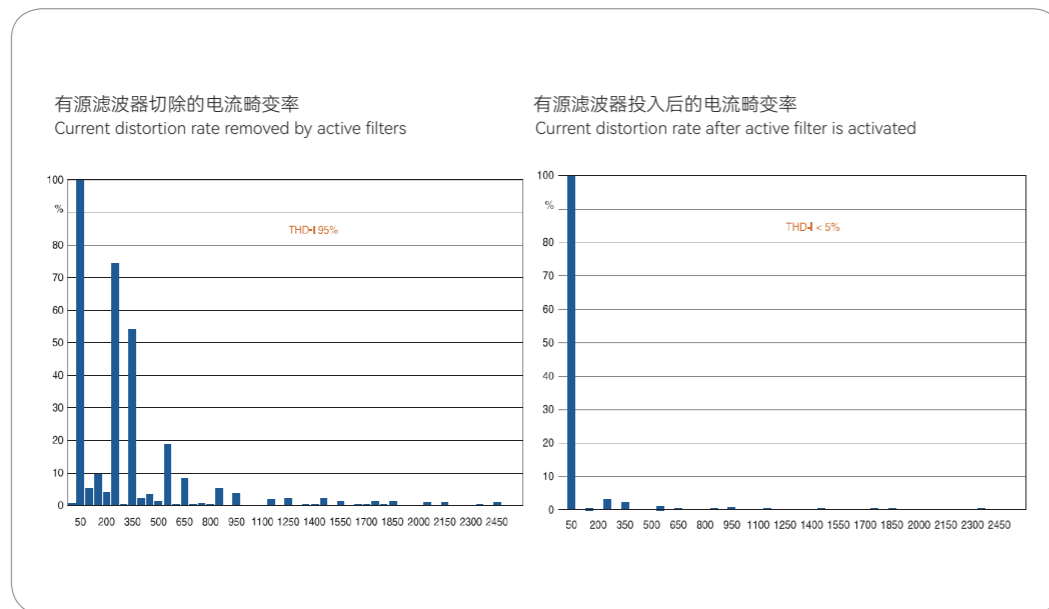
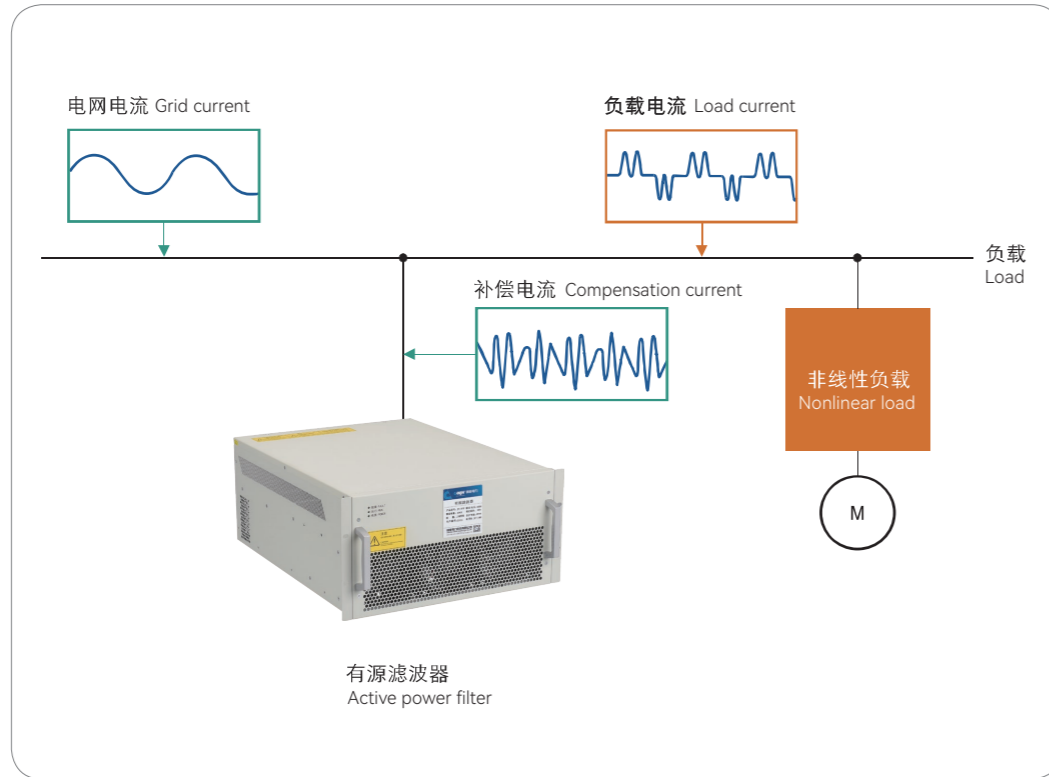
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Note: The above parameters are typical values for reference, can be customized according to customer requirements, our company reserves the right to change the data.

JN-APF 有源滤波器 (NE)
JN-APF active power filter(NE)



工作原理
Working principle



JN-SVG 系列



静止无功发生器 (NE)

Static var generator (NE)

1. 适用机架式、壁挂式、立式等多种安装类型；
2. 可灵活搭配组柜，便携安装，模块化设计，支持智能化并机；
3. 内部关键器件选型裕量大，耐冲击性强。

1. Supports multiple installation types including rack-mount, wall-mount, and floor-standing configurations;
2. Can be flexibly combined and assembled into cabinets, portable installation, modular design, and support intelligent parallel operation;
3. The internal key components have a large selection margin and strong shock resistance.



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Driving power intelligent energy saving
— I am Xiao Neng

产品概述
Product overview

静止无功发生器主要用于无功功率补偿, 提高功率因数, 优化电能质量。JN 系列 SVG 涵盖 35kvar, 50kvar, 75kvar, 100kvar, 150kvar 规格型号产品, 具有连续可调的补偿输出, 极好的解决了传统无功补偿器台阶式补偿的缺点。能快速响应无功需求, 维持电网电压稳定, 输出容量大, 无功调节连续平滑, 动态响应负载变化, 提高电路系统稳定性。

Static Var Generator is mainly used for reactive power compensation, to improve power factor and optimize power quality. The JN series SVG covers specifications such as 35kvar, 50kvar, 75kvar, 100kvar and 150kvar. It has continuously adjustable compensation output and excellently solves the shortcomings of the traditional reactive power compensator's stepwise compensation. It can quickly respond to reactive power demand, maintain grid voltage stability, has a large output capacity, continuous and smooth reactive power regulation, and can dynamically respond to load changes, thereby improving the stability of the circuit system.



应用灵活 Flexible Application

同时具备无功、谐波、三相不平衡等补偿模式且优先级可选, 分配比例可调

It has reactive power compensation, harmonic filtering, and three-phase imbalance correction with adjustable priority levels and allocation ratios.



无功补偿 Reactive compensation

支持目标功率因数设定、恒无功补偿

Supports target power factor setting and constant reactive power compensation



适用性强 Highly adaptability

支持控制国内主流智能电容器投切

Compatible with controlling mainstream smart capacitor switching in domestic applications.



高效稳定 Highly efficiency and stability

效率 >97.5%, 无功补偿率 >99%

Efficiency > 97.5%, reactive power compensation rate > 99%



损耗低 Low loss

只有一半的开关电压, 从而降低半导体开关的损耗。采用三电平的解决方案, 有利于减少电路损耗, 保持更高的效率从而符合节能的理念。

Only half the switching voltage is required, thereby reducing losses in semiconductor switches. The three-level solution helps minimize circuit losses and maintain higher efficiency, aligning with energy-saving principles.



较小的输出纹波电流 Lower output ripple current

三电平 NPC 拓扑结构保持较低的纹波的输出电流, 这归功于其高质量的输出电压。提高产品性能并降低内部滤波的需求。

The three-level NPC topology maintains low ripple in the output current, which is attributable to its high-quality output voltage. This enhances product performance and reduces the need for internal filtering.

技术数据和规格

Technical data and specifications

SVG 电气参数 SVG Electrical Parameters (NE)	
额定电压 (V) Rated voltage (V)	400V AC 交流
输入电压范围 Input voltage range	400V ± 20%
容量 (kvar) Capacity	35kvar, 50kvar, 75kvar, 100kvar, 150kvar
频率 (Hz) Frequency	50/60(±10%)
可分配补偿谐波容量 (可选) Allocatable compensation harmonic capacity(Optional)	最多可以分配 60% 容量过滤谐波 Up to 60% of the capacity can be allocated for filtering harmonics.
CT 安装方式 installation method	开环或闭环 Open-loop or closed-loop
响应时间 (ms) Response time	< 5
线制 Wiring configuration	三相三线 / 三相四线 Three-phase three-wire/three-phase four-wire
过载能力 Overload capacity	1.1 倍 额定电流时能连续运行, 1.2 额定电流时运行 1min Can operate continuously at 1.1x rated current, 1 min at 1.2x rated current
电路拓扑 Circuit topology	三电平拓扑 Three-level topology
开关频率 (kHz) Switching frequency	20
并机数量 Number of parallel units	≤ 20 个模块并机 modules in parallel ≤ 20
冗余 Redundancy	任何单元都可以成为独立的单元 Any unit can function as an independent unit
效率 Efficiency	≥ 97.5%
目标功率因数 Target power factor	± 1
谐波补偿 (可选) Harmonic compensation(Optional)	2~13 次 (2~13 times)
不平衡补偿 Unbalance compensation	可选 (optional)
显示 display	4.3/7 英寸屏幕 (可选) 4.3/7 inch screen (optional)
通讯接口 communication interface	RS485, CAN 协议, RJ45 接口, 用于模块之间的通信 CAN protocol, RJ45 interface, used for communication between modules
噪音等级 Noise level (dB)	<56 最大到 < 69 (根据不同模块或负载条件) <56 ~ < 69 (depending on different modules or load conditions)
海拔高度 Altitude (m)	>2000m 时降额使用 Derated use
环境温度 Ambient temperature (°C)	工作温度: -35°C ~ 60°C, 55°C 以上降额使用 Operating temperature: -35°C to 60°C, derated use when above 55°C
储存温度 Storage temperature:	-45°C ~ 70°C
湿度 Humidity	5%~95%RH, 无冷凝 no condensation
防护等级 Protection rating	IP20
一般结构和安全问题 General structure and safety issues	EN 62477-1(2012), EN 61439-1(2011)
EMC	EN/IEC 61000-6-4
认证 Certification	CE CQC

备注: 额定电压为 200V 时, 无功补偿容量是额定电压为 400V 补偿容量的一半。

Note: When the rated voltage is 200V, the reactive power compensation capacity is half of the compensation capacity at a rated voltage of 400V.

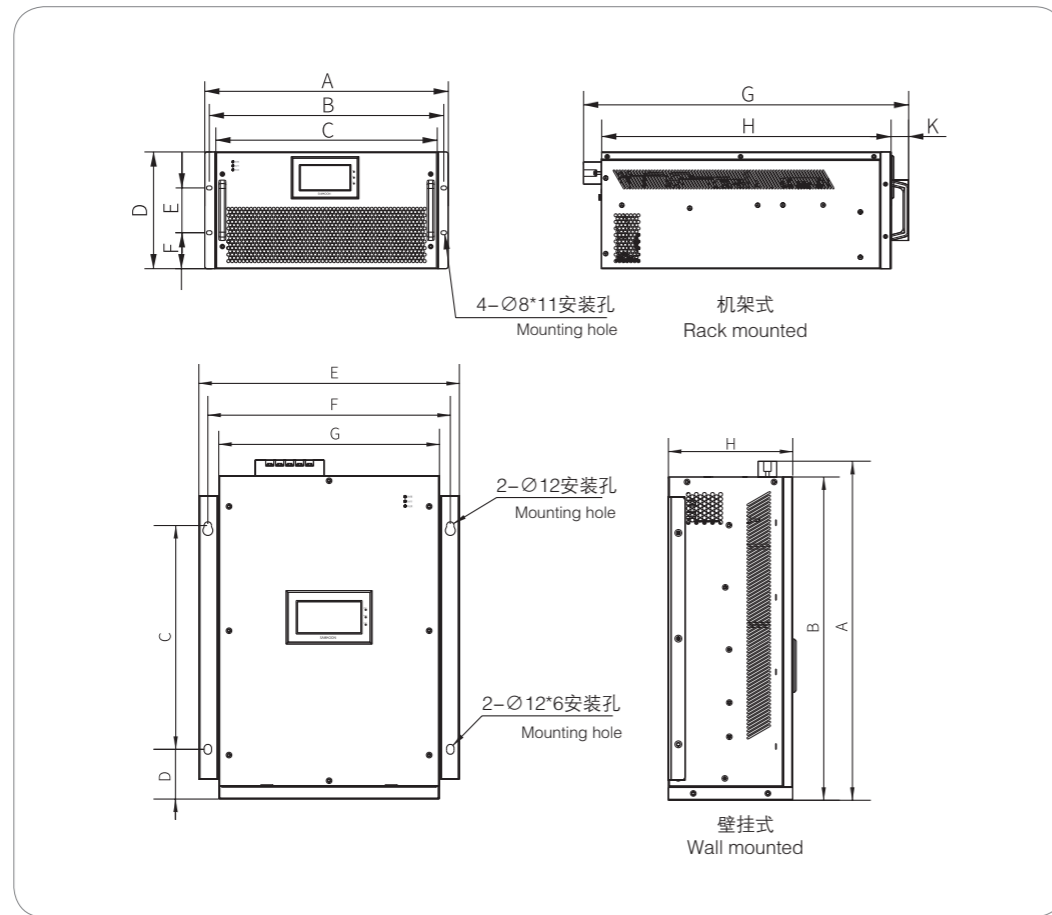
JN-SVG 静止无功发生器 (NE) JN-SVG Static var generator (NE)



JN-SVG 静止无功发生器 (NE) JN-SVG Static var generator (NE)



外形尺寸图 Overall dimension



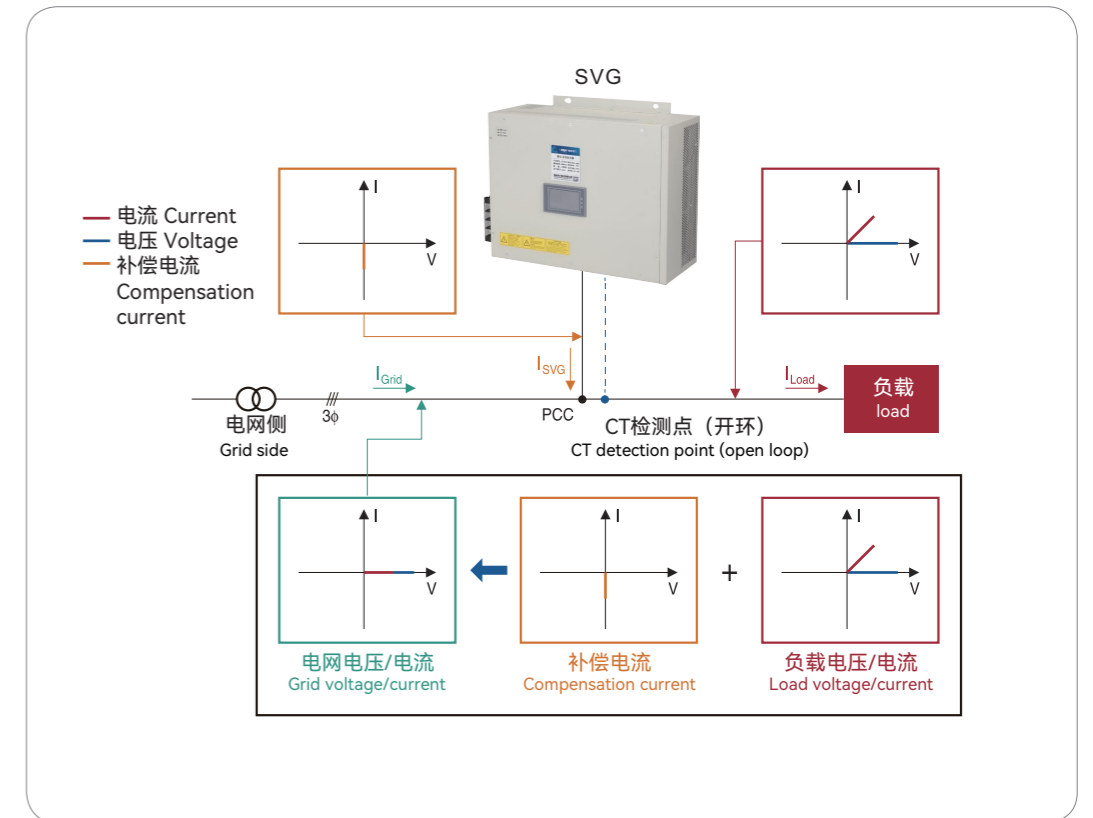
外形尺寸 Overall dimension

安装方式 Installation mode	机架式 Rack type					壁挂式 wall-mounted				
	20/35kvar	50kvar	75kvar	100kvar	150kvar	35kvar	50kvar	75kvar	100kvar	150kvar
尺寸 Size(mm)										
A	359	399	484	554	674	525	556	611	621	680
B	341	381	466	536	656	500	520	575	585	640
C	315	355	440	510	630	300	360	300	300	420
D	200	200	232	250	250	120.5	80	137.5	142.5	110
E	89	89	89	89	89	378	418	503	573	694
F	55.5	55.5	71.5	80.5	80.5	350	390	475	545	666
G	538	626	646	656	715	315	355	440	510	633
H	500	555	575	585	640	200	200	232	250	250
k	13	35	35	35	35	/	/	/	/	/
NW(kg)	18.5	24.5	35	43.5	65	19.5	25.3	35.7	44.2	68.5

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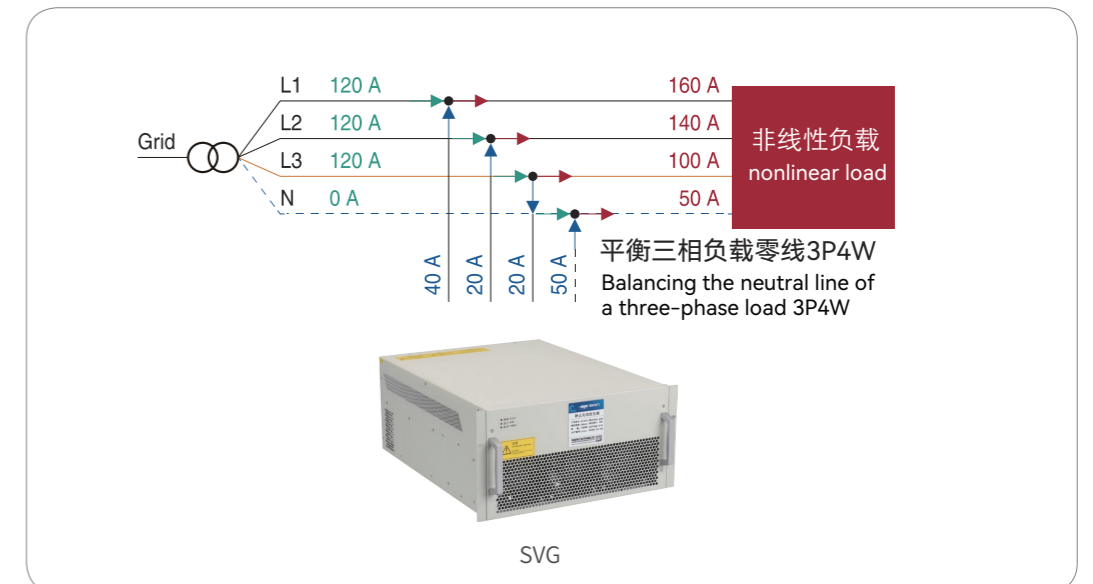
Note: The above parameters are typical values for reference, can be customized according to customer requirements, our company reserves the right to change the data.

工作原理 Working principle



平衡三相负载 Balancing three-phase loads

SVG 3P3W 和 3P4W 平衡三相负载



NE 系列 SVG 可以在三相三线系统和三相四线系统中用于平衡三相负载或降低中性线负载。因此，在不平衡情况严重的农村地区，和一些工业场合，NE 系列 SVG 是理想的解决方案。

The NE series SVG can be used in three-phase three-wire systems and three-phase four-wire systems to balance three-phase loads or reduce neutral line loads. Therefore, in rural areas with severe imbalance and some industrial settings, the NE series SVG is an ideal solution.

JN-APF & SVG 优点 (NE) Active power filter & static var generator(NE)

CHNJN® 锦能

产品优势

Product advantages

硬件以及设计方面:

1. 装置的模块电路采用三电平拓扑结构, 关键器件全部采用进口, 国际一流厂家。功率密度高, 易于集成, 安装、维护方便, 产品运行稳定、可靠;
2. 模块产品齐全, 单模块容量从 35kvar~150kvar, 30~200A, 安装方式包含机架式、立式、壁挂, 可提供全套综合解决方案;
3. 装置采用多芯片控制方式, 效率高达 98%;
4. 装置逆变电感采用独特铜箔立绕工艺, 确保系统的散热和可靠性;
5. 装置可通过 U 盘导出运行数据和故障记录信息, 同时可通过 U 盘进行升级;
6. 可选配内置 16 路 IO 口直接控制可控硅或接触器投切功能;
7. 采用超强防护灌胶工艺, 可轻松应对各类强腐蚀、强盐雾、霉菌、多粉尘等场所。

Hardware and Design:

1. The device's module circuitry adopts a three-level topology structure, with all critical components sourced from international leading manufacturers. It features high power density, ease of integration, and convenient installation and maintenance, ensuring stable and reliable operation;
2. The module product range is comprehensive, with single-module capacities ranging from 35kvar to 150kvar and current ratings from 30A to 200A. Installation options include rack-mounted, upright, and wall-mounted configurations, enabling the provision of a complete integrated solution;
3. The device employs multi-chip control technology, achieving efficiency as high as 98%;
4. The inverter inductors utilize a unique copper foil vertical winding process to ensure system heat dissipation and reliability;
5. The device can export operational data and fault records via a USB drive and also supports firmware updates via USB;
6. An optional built-in 16-channel IO interface is available for direct control of thyristors or contactors;
7. The device employs a robust protective potting process, enabling it to withstand various harsh environments such as strong corrosion, high salt fog, mold, and high dust levels.

软件方面:

1. 装置支持 15 种以上的运行模式, 包含谐波, 无功, 不平衡任意组合、独立和任意优先级的补偿方式, 及补偿容量百分比设置;
2. 装置补偿效果好, 三相不平衡补偿率 $\geq 99\%$, 无功补偿率 $\geq 99\%$, 谐波过滤 $\geq 95\%$;
3. 装置可通过 485 直接与智能电容器组网, 可控制多达 24 路智能电容器, 可支持控制 16 路分离式电容投切, 不需要额外增加电容投切控制器;
4. 多个模块并机使用时可同时支持负载侧 (开环) 和电源侧 (闭环) 采样;
5. 电网适用性强, 高 THDu-16% 场合稳定运行, 不宕机;

Software Features:

1. The device supports over 15 operating modes, including harmonic filtering, reactive power compensation, and unbalanced correction in any combination, as well as independent and arbitrary priority compensation methods, and compensation capacity percentage settings;
2. The device has excellent compensation performance, with a three-phase unbalanced compensation rate $\geq 99\%$, reactive power compensation rate $\geq 99\%$, and harmonic filtering rate $\geq 95\%$;
3. The device can be directly networked with intelligent capacitor banks via 485, supporting control of up to 24 intelligent capacitor banks, and can control the switching of 16 separate capacitors without the need for additional capacitor switching controllers;
4. When multiple modules are used in parallel, they can simultaneously support load-side (open-loop) and power-side (closed-loop) sampling;
5. Strong grid adaptability, stable operation in high THDu-16% environments without shutdowns;

JN-APF 系列

有源滤波器 (NL)

Active power filter (NL)

CCC CE RoHS ISO9001

1. 轻巧便携, 安装便利, 节约成本;
2. 适用机架式、壁挂式、立式等多种安装类型;
3. 小体积, 完美适配嵌入式安装项目, 提升空间使用效率。

1. Lightweight and portable, easy to install and cost-saving;
2. Suitable for various installation types such as rack-mounted, wall-mounted, and floor-standing;
3. Compact size perfectly suited for embedded installation projects, enhancing space utilization efficiency.



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— I am Xiao Neng

JN-APF 有源滤波器 (NL) JN-APF active power filter(NL)



JN- APF 系列有源滤波器 (NL) 是由锦能电力科技有限公司自主研发、采用三电平拓扑结构, 提供动态谐波滤除、无级功率因数校正和负载平衡等电能质量解决方案。有源谐波滤波器的模块容量从 30A 到 220A, 允许 20 个模块并联, 用户可轻松得到目标滤波电流容量。

JN-APF series active filters (NL) are independently developed by Jineng Electric Power Technology Co., Ltd. They use a three-level topology structure to provide dynamic harmonic filtering, continuous power factor correction, and load balancing for power quality solutions. With module capacities ranging from 30A to 220A and support for parallel connection of up to 20 modules, users can easily achieve their target filtering current capacity.



应用灵活 Flexible Application

同时具备无功、谐波、三相不平衡等补偿模式且优先级可选, 分配比例可调

Supports multiple application modes such as harmonic filtering, reactive power compensation, three-phase imbalance correction, with adjustable priority levels and allocation ratios.



适用性强 Highly adaptability

适应于 THDu-16% 电网应用环境, 支持小电流精细化补偿

Suitable for grid application environments with THDu \leq 16%, supporting precise compensation for low currents



安全可靠 Safe and Reliable

完善的软硬件保护, 在较为恶劣电网环境下可稳定持续运行

Comprehensive hardware and software protection ensures stable and continuous operation even in harsh power grid environments



高效稳定 Highly efficiency and stability

滤波范围广, 2~50 次谐波滤除率可达 95% 实现电流畸变率 THDi \leq 5%

Wide filtering range, with up to 95% elimination rate for 2nd to 50th order harmonics, achieving current distortion rate THDi \leq 5%

APF 电气参数 APF Electrical Parameters(NL)	
额定电压 (V) Rated voltage (V)	400V AC
输入电压范围 Input voltage range	\pm 20%
容量 (A) Capacity	30A、50A、75A、100A、150A
频率 (Hz) Frequency	50/60(\pm 10%)
滤波范围 Filter range	2 ~ 50 次可选, 单次可选 Selectable from 2 ~ 50 times, single time is selectable
谐波能力 Harmonic filtering capability	在额定负载下 > 95%, > 95% at rated load
CT 安装方式 installation method	开环或闭环 (并机情况下建议开环) Open-loop or closed-loop (open-loop recommended in parallel operation)
响应时间 (ms) Response time	\leq 10
线制 Wiring configuration	三相三线 / 三相四线 Three-phase three-wire/three-phase four-wire
过载能力 Overload capacity	1.1 倍额定电流时能连续运行, 1.2 额定电流时运行 1min Can operate continuously at 1.1x rated current, 1 min at 1.2x rated current
电路拓扑 Circuit topology	三电平拓扑 Three-level topology
开关频率 (kHz) Switching frequency	20
并机数量 Number of parallel units	\leq 20 个模块并机 modules in parallel
冗余 Redundancy	任何单元都可以成为独立的单元 Any unit can function as an independent unit
效率 Efficiency	\geq 97.5%

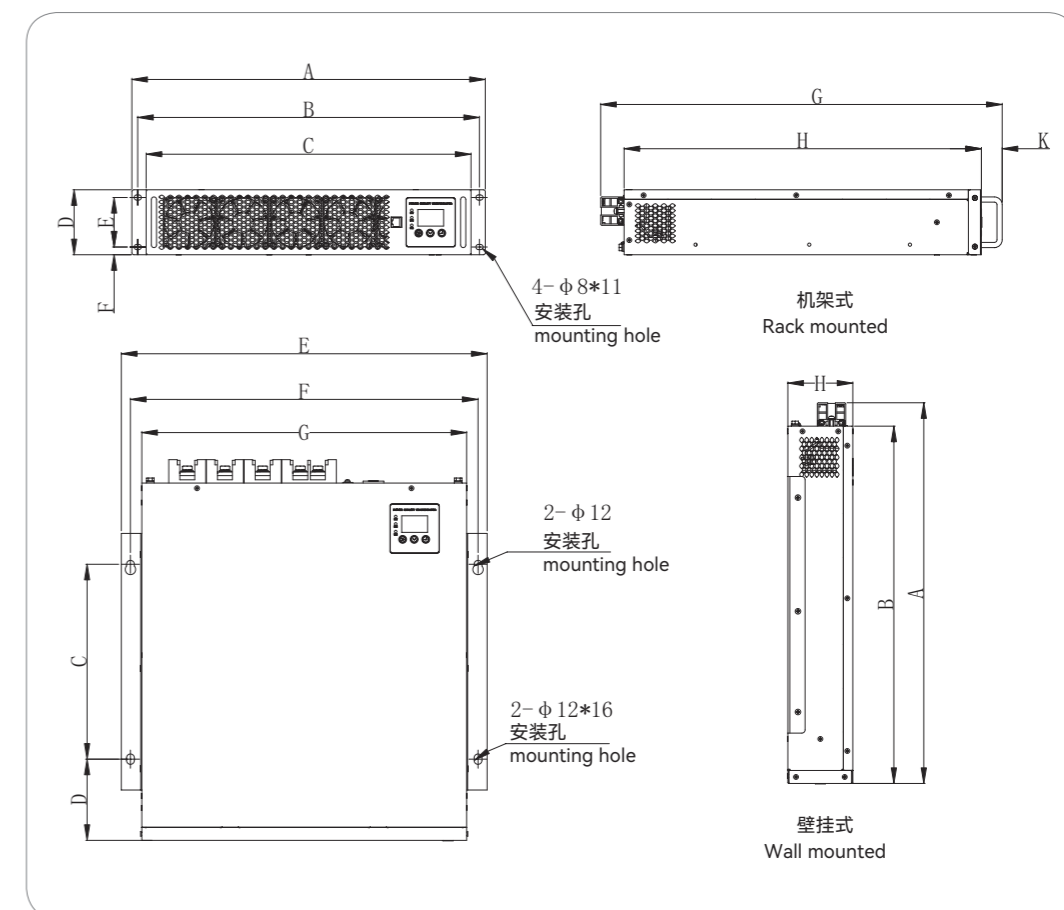
JN-APF 有源滤波器 (NL) JN-APF active power filter(NL)



功率因数控制 Power factor control	全部感性或容性电流补偿 0~100% Full inductive or capacitive current compensation
补偿效果 Compensation effect	不平衡电容和功率 100% 补偿; 容性感性连续可调 Unbalanced capacitance and 100% power compensation; capacitive inductance continuously adjustable
显示 display	4.3/7 英寸屏幕 (可选) inch screen (optional)
通讯接口 communication interface	RS485/CAN 接口 interface CAN 协议, RJ45 接口, 用于模块之间的通信 CAN protocol, RJ45 interface, used for communication between modules
噪音等级 Noise level (dB)	<56 最大到 <69 (根据模块或负载条件) <56 up to 69 (depending on module or load conditions)
海拔高度 Altitude (m)	>1500m 时降额使用 Derated use above 1500m
环境温度 Ambient temperature (°C)	工作温度 :-25°C ~55°C, 45°C 以上降额使用 Operating temperature: -25°C to 55°C, derated use above 45°C 储存温度 Storage temperature :-45°C ~70°C
湿度 Humidity	5%~95%RH, 无冷凝 no condensation
防护等级 Protection rating	IP20
一般结构和安全问题 General structure and safety issues	EN 62477-1(2012), EN 61439-1(2011)
应用注意 Application environment	THDu < 10%
EMC	EN/IEC 61000-6-4, A 类 Class A
认证 Certification	CE CQC

外形尺寸图

Overall dimension



JN-APF 有源滤波器 (NL) JN-APF active power filter(NL)



CCC CE RoHS ISO9001

JN-SVG 系列

静止无功发生器 (NL)

Static var generator (NL)

1. 轻巧便携, 安装便利, 节约成本;
2. 适用机架式、壁挂式、立式等多种安装类型;
3. 小体积, 完美适配嵌入式安装项目, 提升空间使用效率。

1. Lightweight and portable, easy to install and cost-saving;
2. Suitable for various installation types such as rack-mounted, wall-mounted, and floor-standing;
3. Compact size perfectly suited for embedded installation projects, enhancing space utilization efficiency.

外形尺寸

Overall dimension

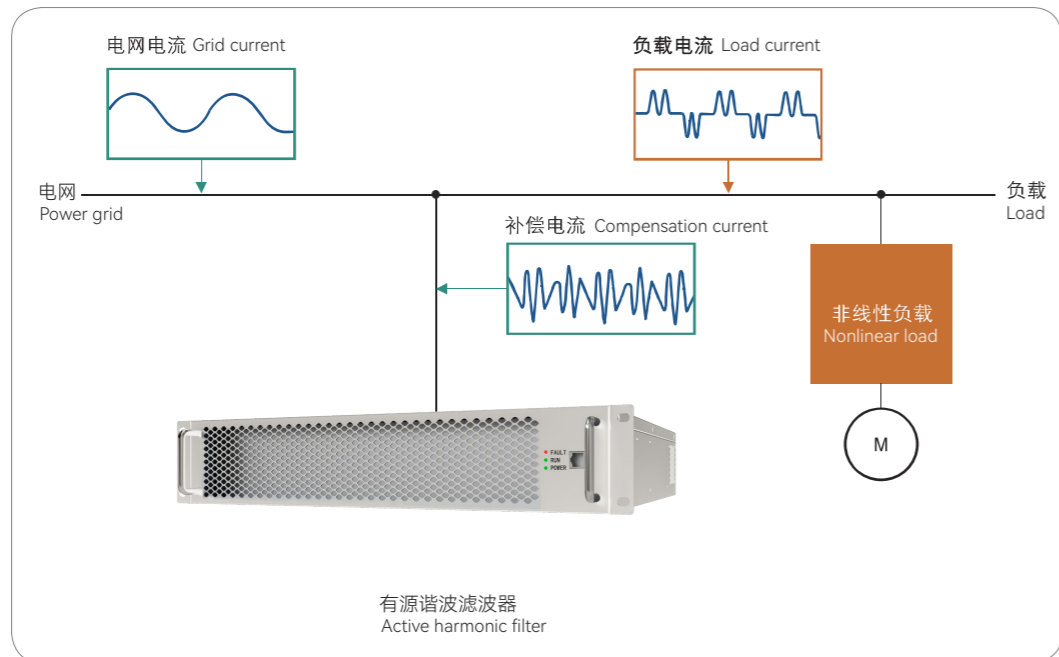
安装方式 Installation mode	机架式 Rack type					壁挂式 wall-mounted				
	30A/50A	75A	100A	150A	200A	30A/50A	75A	100A	150A	200A
尺寸 Size (mm)										
A	484	484	544	544	544	454.5	454.5	586	586	680
B	466	466	526	526	526	425	425	550	550	640
C	440	440	500	500	500	300	300	300	300	420
D	88	88	100	100	100	82.5	82.5	125	125	110
E	76.2	76.2	76.2	76.2	76.2	503	503	563	563	564
F	5.9	5.9	11.9	11.9	11.9	475	475	535	535	536
G	486.5	486.5	618	618	618	443	443	500	500	500
H	425	425	550	550	550	88	88	100	100	200
K	32	32	32	32	32	/	/	/	/	/
NW(kg)	14	16	29	31	55	14	16	29	31	55

备注: 以上参数为典型值供参考, 可根据客户要求定做, 我公司保留对数据的变更权利。

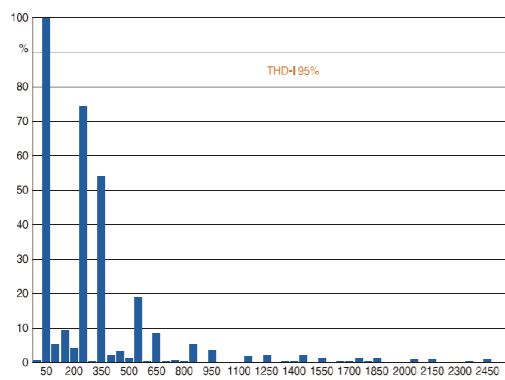
Note: The above parameters are typical values for reference, can be customized according to customer requirements, our company reserves the right to change the data.

工作原理

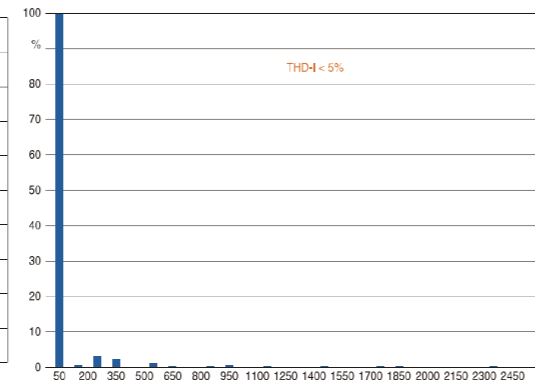
Working principle



有源滤波器切除的电流畸变率
Current distortion rate removed by active filters



有源滤波器投入后的电流畸变率
Current distortion rate after active filter is activated



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Driving power intelligent energy saving
— I am Xiao Neng

JN-SVG 静止无功发生器 (NL) Static var generator (NL)



产品概述 Product overview

静止无功发生器采用三电平拓扑结构, 提供快速响应的无功功率补偿、谐波滤除和负载平衡等电能质量解决方案。静止无功发生器的模块容量从 20kvar 到 150kvar, 允许 20 个模块并联, 用户可轻松得到无功补偿的容量。

The static var generator uses a three-level topology structure to provide fast-response solutions for reactive power compensation, harmonic filtering, load balancing, etc. The static var generator's module capacity ranges from 20kvar to 150kvar, allowing for 20 modules to be connected in parallel, so users can easily obtain the reactive compensation capacity they need.



应用灵活 Flexible Application

同时具备无功、谐波、三相不平衡等补偿模式且优先级可选, 分配比例可调

It has reactive power compensation, harmonic filtering, and three-phase imbalance correction modes, with adjustable priority levels and allocation ratios.



无功补偿 Reactive compensation

支持目标功率因数设定、恒无功补偿

Supports target power factor setting and constant reactive power compensation.



适用性强 Highly adaptability

支持控制国内主流智能电容器投切

Compatible with controlling mainstream smart capacitor switching in domestic applications.



高效稳定 Highly efficiency and stability

效率 >97.5%, 无功补偿率 >99%

Efficiency > 97.5%, reactive power compensation rate > 99%



损耗低 Low loss

只有一半的开关电压, 从而降低半导体开关的损耗。采用三电平的解决方案, 有利于减少电路损耗, 保持更高的效率从而符合节能的理念。

Only half the switching voltage is required, thereby reducing losses in semiconductor switches. The three-level solution helps minimize circuit losses and maintain higher efficiency, aligning with energy-saving principles.



较小的输出纹波电流 Lower output ripple current

三电平 NPC 拓扑结构保持较低的纹波的输出电流, 这归功于其高质量的输出电压。提高产品性能并降低内部滤波的需求。

The three-level NPC topology maintains low ripple in the output current, which is attributable to its high-quality output voltage. This enhances product performance and reduces the need for internal filtering.

技术数据和规格

Technical data and specifications

JN-SVG 静止无功发生器 (NL) Static var generator (NL)

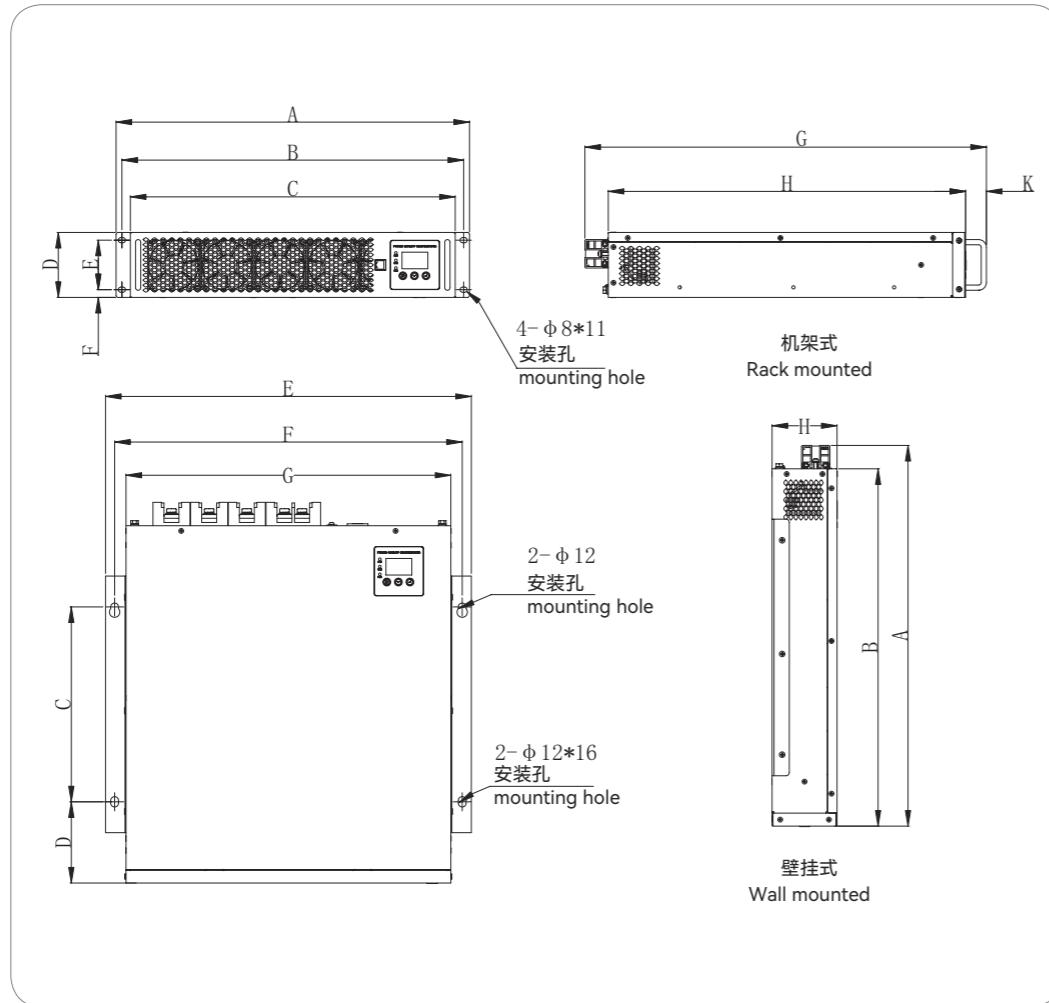


SVG 电气参数 SVG Electrical Parameters(NL)	
额定电压 (V) Rated voltage (V)	400V AC
输入电压范围 Input voltage range	± 20%
容量 (kvar) Capacity	20kvar,35kvar,50kvar,75kvar,100kvar,150kvar
频率 (Hz) Frequency	50/60(±10%)
谐波范围 Harmonic range	2 ~ 50 次可选, 单次可选 Selectable from 2 ~50 times, single time is selectable
谐波滤除能力 Harmonic filtering capability	在额定负载下优于 95% Better than 95% under rated load
CT 安装方式 installation method	开环或闭环 (并机情况下建议开环) Open loop or closed loop (open loop recommended in parallel operation)
响应时间 (ms) Response time	≤ 5
线制 Wiring configuration	三相三线 / 三相四线 Three-phase three-wire/three-phase four-wire
过载能力 Overload capacity	1.1 倍额定电流时能连续运行, 1.2 额定电流时运行 1min Can operate continuously at 1.1x rated current, 1 min at 1.2x rated current
电路拓扑 Circuit topology	三电平拓扑 Three-level topology
开关频率 (kHz) Switching frequency	20
并机数量 Number of parallel units	≤ 20 个模块并机 modules in parallel
冗余 Redundancy	任何单元都可以成为独立的单元 Any unit can function as an independent unit
效率 Efficiency	≥ 97.5%
功率因数控制 Power factor control	全部感性或容性电流补偿 0~100% Full inductive or capacitive current compensation 0~100%
补偿效果 Compensation effect	不平衡电容和功率 100% 补偿; 容性感性连续可调 Unbalanced capacitance and 100% power compensation; capacitive inductance continuously adjustable
显示 display	4.3/7 英寸屏幕 (可选) inch screen(optional)
通讯接口 communication interface	RS485/CAN 接口 interface CAN 协议, RJ45 接口, 用于模块之间的通信 CAN protocol, RJ45 interface, used for communication between modules
噪音等级 Noise level (dB)	<56 最大到 < 69(根据模块或负载条件) <56.up to 69 (depending on module or load conditions)
海拔高度 Altitude (m)	>1500m 时降额使用 Derated use above 1500m
环境温度 Ambient temperature (°C)	工作温度: -25°C ~55°C, 45°C 以上降额使用 Operating temperature: -25°C to 55°C, derated use above 45°C 储存温度 Storage temperature: -45°C ~70°C
湿度 Humidity	5%~95%RH, 无冷凝 no condensation
防护等级 Protection rating	IP20
一般结构和安全问题 General structure and safety issues	EN 62477-1(2012), EN 61439-1(2011)
EMC	EN/IEC 61000-6-4, A 类 Class
认证 Certification	CE CQC

JN-SVG 静止无功发生器 (NL) Static var generator (NL)



外形尺寸图 Overall dimension



外形尺寸 Overall dimension

安装方式 Installation mode	机架式 Rack type					壁挂式 wall-mounted				
尺寸 Size(mm)	20/35kvar	50kvar	75kvar	100kvar	150kvar	35kvar	50kvar	75kvar	100kvar	150kvar
A	484	484	544	544	544	454.5	454.5	586	586	680
B	466	466	526	526	526	425	425	550	550	640
C	440	440	500	500	500	300	300	300	300	420
D	88	88	100	100	200	82.5	82.5	125	125	110
E	76.2	76.2	76.2	76.2	89	503	503	563	563	564
F	5.9	5.9	11.9	11.9	55.5	475	475	535	535	536
G	486.5	486.5	618	618	712	443	443	500	500	500
H	425	425	550	550	640	88	88	100	100	200
K	32	32	32	32	32	/	/	/	/	/
NW(kg)	14	16	29	31	55	14	16	29	31	55

备注：以上参数为典型值供参考，可根据客户要求定做，我公司保留对数据的变更权利。

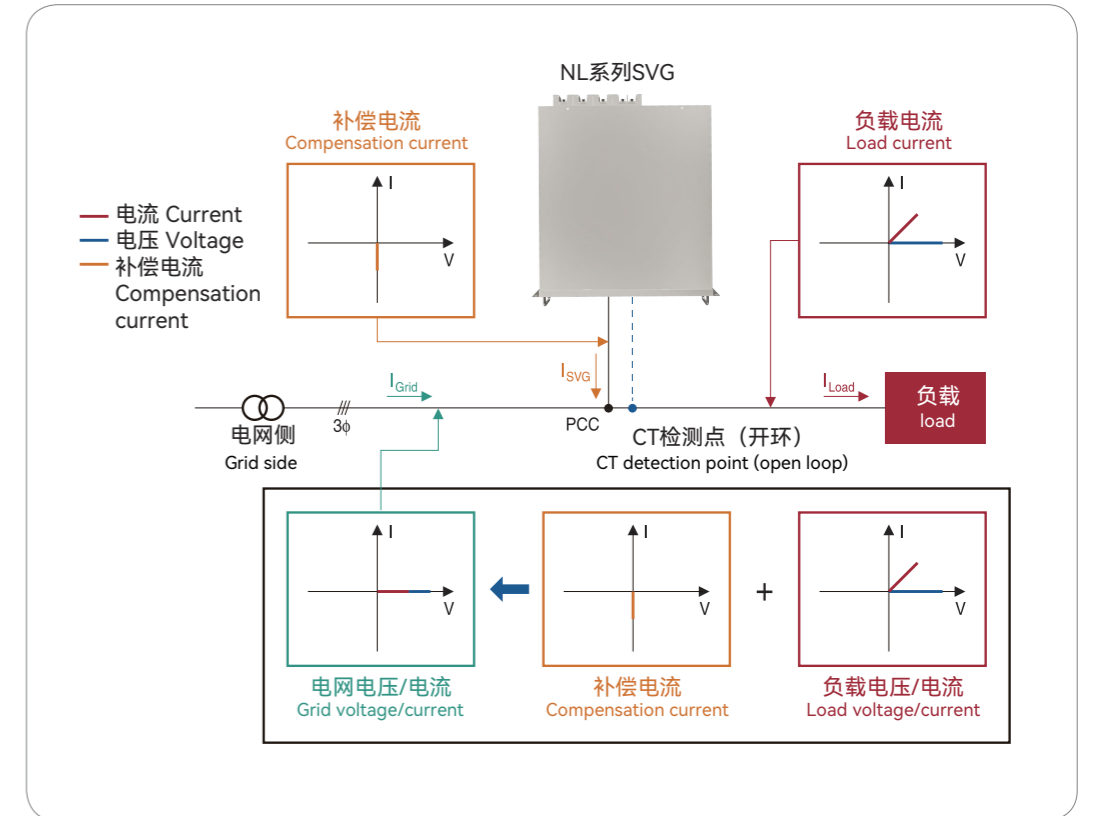
Note: The above parameters are typical values for reference, can be customized according to customer requirements, our company reserves the right to change the data.

工作原理 Working principle

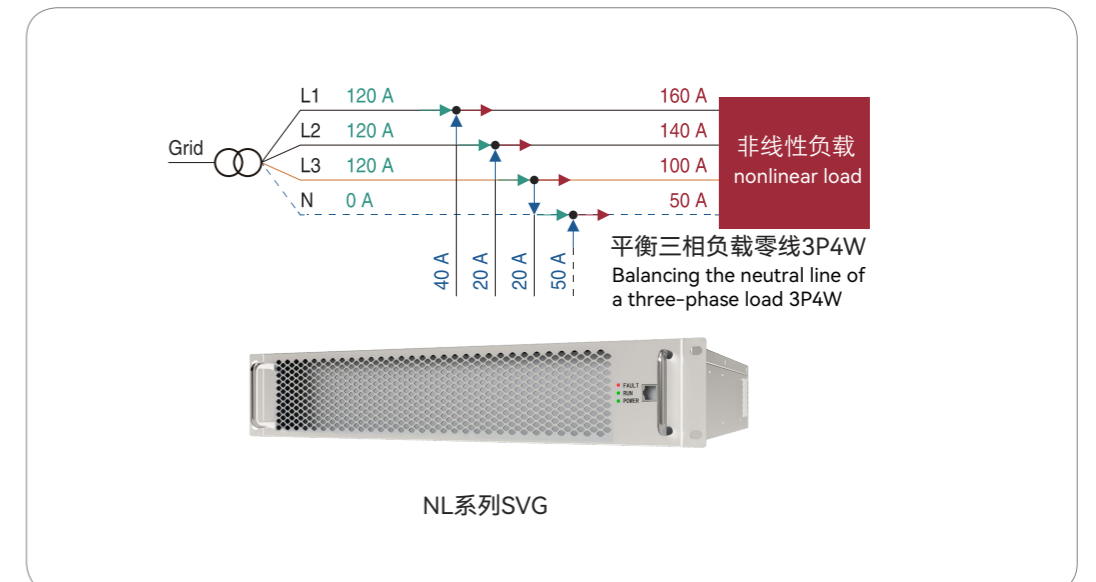
JN-SVG 静止无功发生器 (NL) Static var generator (NL)



平衡三相负载 Balancing three-phase loads



SVG 3P3W 和 3P4W 平衡三相负载



NL 系列 SVG 可以在三相三线系统和三相四线系统中用于平衡三相负载或降低中性线负载。因此，在不平衡情况严重的农村地区，和一些工业场合，NL 系列 SVG 是理想的解决方案。

The NL series SVG can be used in three-phase three-wire systems and three-phase four-wire systems to balance three-phase loads or reduce neutral line loads. Therefore, in rural areas with severe imbalance and some industrial settings, the NL series SVG is an ideal solution.

JN-APF 系列

有源滤波器 (Q)

Active power filter (Q)

CCC CE RoHS ISO9001

- 单台有源滤波器 (APF) 容量: 30-200A
- 商业及工业级应用场景
- 紧凑型设计, 兼容标准机架安装
- 重量轻

- 30-200A for Single Unit of APF
- Application for Business and Enterprises Use
- Compact Size, Compatible with Standard Rack
- Light-weight



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Driving power intelligent energy saving
—— I am Xiao Neng

产品概述

Product overview

电气参数

Specifications

JN-APF 有源滤波器 (Q) JN-APF Active power filter (Q)

CHNIN® 锦能

JN-APF 30A 至 200A 系列有源电力滤波器是锦能电力科技(湖北)有限公司自主研发的,用于抑制电力谐波,产品系列涵盖 30A、50A、75A、100A、150A、200A 规格;广泛应用于 400 伏供电系统的电能质量改善。

The JN-APF 30A to 200A series active power filters are developed independently by Jinneng Power Technology (Hubei) Co., Ltd., the JN-APF 30A-200A series active power filter is designed for effective harmonic suppression in power systems.

The product line includes models rated at 30A, 50A, 75A, 100A, 150A, and 200A, which is widely used for power quality enhancement in 400V power supply system.

APF 电气参数 APF Electrical Parameters (Q)	
电压等级 Voltage Class	400V AC
输入电压 Input Voltage	400V ± 15%
容量 (A) Capacity	30A、50A、75A、100A、150A、200A
频率 Frequency	50HZ/60HZ
并机数量 Qty of parallel installations	8 台 Units
滤波范围 Filter range	2 ~ 50 次可选 Selectable from 2 ~ 50 times
滤波能力 Harmonic filtering Capability	在额定负载下 > 95%, At rated load > 95%
有功功率损耗 Active Power Losses	在额定负载下 < 2.5% at rating load
快速响应时间 Rapid Response Time	< 55μs
全响应时间 Full Response Time	< 40ms
电网制式 Grid Form	3P/4W 三相四线
电流互感器 Current Sensor	50/5-10,000/5
目标功率因素 Target PF	-1 ~ +1 可设置 settable
噪音值 Noise Value	< 65dB
通信接口 Communication Interface	RS485, Ethernet Port
通信协议 Communication Protocol	Modbus-RTU, TCP/IP
人机界面 (可选) User interface (Optional)	4.3 英寸 LCD 触摸屏 + LED 指示灯 7 英寸 LCD 触摸屏 4.3 Inches LCD Touch Screen, LED indicators, 7 inch LCD touch screen
安装方式 Installation	壁挂式 / 导轨式 Wall Mounted / Rail Mounted
外形尺寸 (宽 × 深 × 高) W*D*H	480*570*175mm
颜色 Color	浅灰, 可定制 Light grey, can be customized
接线方式 CT Wiring CT	支持电网侧 / 负载侧接线 Supporting Utility Side / Load Side
海拔高度 Altitude	≤ 1500m, 1500 ~ 4000m, 每 100m 降容 1% ≤ 1500m, 1500 ~ 4000m, each 100m Capacity Decrease 1%
工作温度 Operation Temperature	-10°C ~ +55°C
湿度 Humidity	5% ~ 95%, no condensation (无凝露)
防护等级 IP Class IP	IP20
标准 Standard	IEEE519, IEC6100-3-6, ER G5/4
认证 Certification	CE CQC

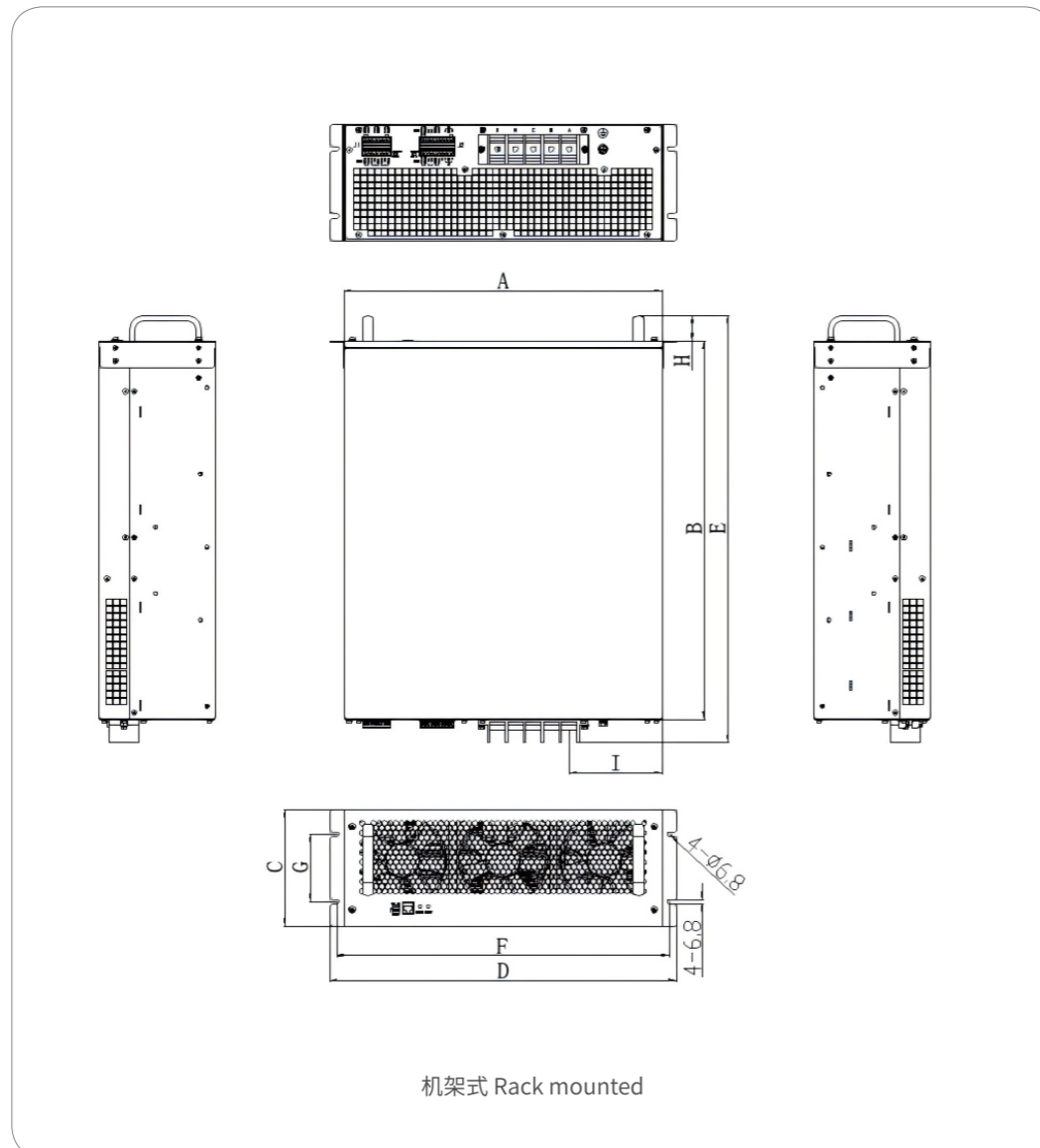
JN-APF 有源滤波器 (Q)
JN-APF Active power filter (Q)



1. 防止共振, 技术独特
2. 内置偶次谐波抑制
3. 可靠性高, 耐热防尘
4. 高效, 热损耗低
5. 功率密度高, 灵活性强

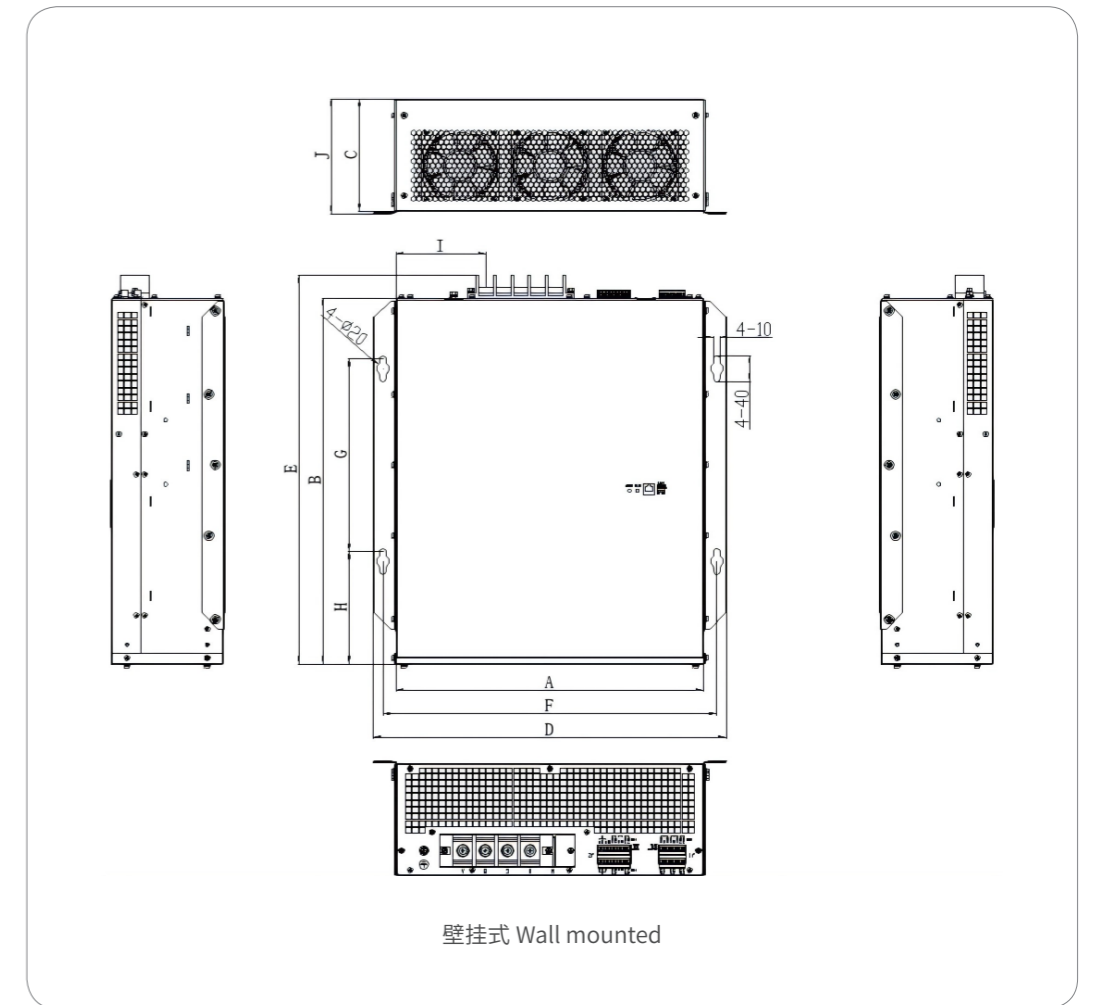
1. Prevent resonance, with unique technology.
2. Built-in even harmonic suppression.
3. Strong reliability, heat-resistant and dust-proof.
4. High efficiency, low heat loss.
5. High power density, strong flexibility.

外形尺寸图
Overall dimension



外形尺寸图
Overall dimension

JN-APF 有源滤波器 (Q)
JN-APF Active power filter (Q)



外形尺寸
Overall dimension

安装方式 Installation mode	机架式 Rack type						壁挂式 wall-mounted					
	30A	50A	75A	100A	150A	200A	30A	50A	75A	100A	150A	200A
尺寸 Size (mm)	30A	50A	75A	100A	150A	200A	30A	50A	75A	100A	150A	200A
A	380	480	480	480	480	480	380	480	480	480	480	480
B	400	570	570	570	570	570	400	570	570	570	570	570
C	88	175	175	175	175	175	88	175	175	175	175	175
D	465	522.6	522.6	522.6	522.6	522.6	465	550	550	550	550	550
E	456	637	637	637	643	643	456	599	599	599	605	605
F	430	501.5	501.5	501.5	501.5	501.5	430	520	520	520	520	520
G	12	101.6	101.6	101.6	101.6	101.6	12	300	300	300	300	300
H	32	38	38	38	38	38	32	175	175	175	175	175
I	89	161.5	161.5	161.5	140.5	140.5	89	140.5	140.5	140.5	140.5	140.5
J	/	/	/	/	/	/	/	178.2	178.2	178.2	178.2	178.2
NW(kg)		23	25	27	33	38		23	25	27	33	38

备注: 以上参数为典型值供参考, 可根据客户要求定做, 我公司保留对数据的变更权利。

Note: The above parameters are typical values for reference, can be customized according to customer requirements, our company reserves the right to change the data.

JN-SVG 系列

静止无功发生器 (Q)

Static var generator (Q)

CCC CE RoHS ISO9001

- 单台静止无功发生器 (SVG) 容量: 30 ~150kvar
- 商业及工业级应用场景
- 紧凑型设计, 兼容标准机架安装
- 重量轻
- 30~150kvar for Single Unit of SVG
- Application for Business and Enterprises Use
- Compact Size, Compatible with Standard Rack
- Light-weight



驱动电力智慧节能
—我是小能

JN-SVG 静止无功发生器 (Q)

JN-SVG static var generator (Q)

产品概述

Product Overview

JN-SVG 30kvar 至 150kvar 系列静止无功发生器是锦能电力科技 (湖北) 有限公司研发生产的, 用于无功补偿和过滤谐波, 产品系列涵盖 30kvar, 50kvar, 75kvar, 100kvar, 150kvar 规格; 广泛应用于 400 伏供电系统的电能质量改善。

The JN-SVG 30kvar to 150kvar series of static var generators are developed and produced by Jineng Power Technology (Hubei) Co., Ltd. They are used for reactive power compensation and harmonic filtering. The product series includes specifications of 30kvar, 50kvar, 75kvar, 100kvar, and 150kvar. They are widely applied in the power quality improvement of 400V power supply systems.

电气参数

Specifications

SVG 电气参数 SVG Electrical Parameters (Q)	
电压等级 Voltage Class	400V AC
输入电压 Input Voltage	400V ± 15%
容量 (kvar) Capacity	30kvar, 50kvar, 75kvar, 100kvar, and 150kvar
频率 Frequency	50HZ/60HZ
并机数量 Qty of parallel installations	8 台 Units
有功损耗 Active Power Losses	额定负载 <2.5% rating load
电网制式 Grid Form	3P/4W
电流互感器 Current Sensor	50/5-10,000/5
谐波补偿 (可选) Harmonic compensation(selectable)	2~13 次 (2~13times)
可分配补偿谐波容量 (可选) Allocatable compensation harmonic capacity (Optional)	50%
滤波能力 Filter Capacity	THDi<5% rated load 额定负载
快速响应时间 Rapid Response Time	<55μs
全响应时间 Full Response Time	<20ms
目标功率因素 Target PF	-1 ~ +1 settable 可设置
噪音值 Noise Value	<65dB
通信接口 Communication Interface	RS485, Ethernet Port
通信协议 Communication Protocol	Modbus-RTU, TCP/IP
人机界面 (可选) User interface(Optional)	4.3 英寸 LCD 触摸屏 +LED 指示灯 7 英寸 LCD 触摸屏 4.3 Inches LCD Touch Screen+LED indicators, 7 Inches LCD Touch Screen
安装方式 Installation	壁挂式 / 导轨式 Wall Mounted/Rail Mounted
颜色 Color	浅灰, 可定制 Light grey, can be customized
CT 接线方式 Wiring	支持电网侧 / 负载侧接线 Supporting Utility Side/Load Side
海拔高度 Altitude	≤ 1500m, 1500 ~ 4000m, 每 100m 降容 1% ≤ 1500m, 1500 ~ 4000m, each 100m Capacity Decrease 1%
工作温度 Operation Temperature	-10°C ~ +55°C
湿度 Humidity	5% ~ 95%, no condensation (无凝露)
防护等级 IP Class	IP20
标准 Standard	CE CQC

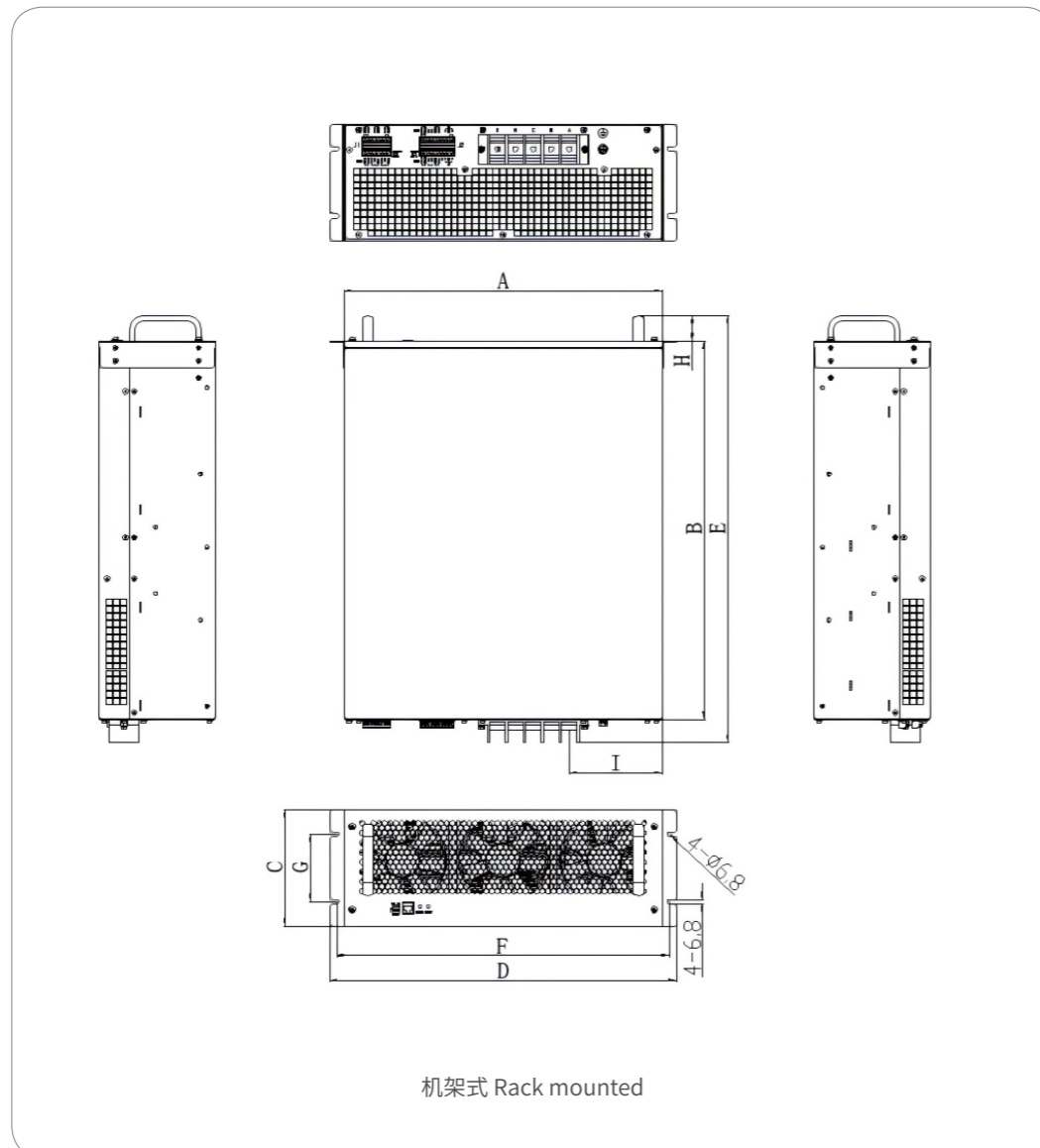
JN-SVG 静止无功发生器 (Q)
JN-SVG static var generator (Q)



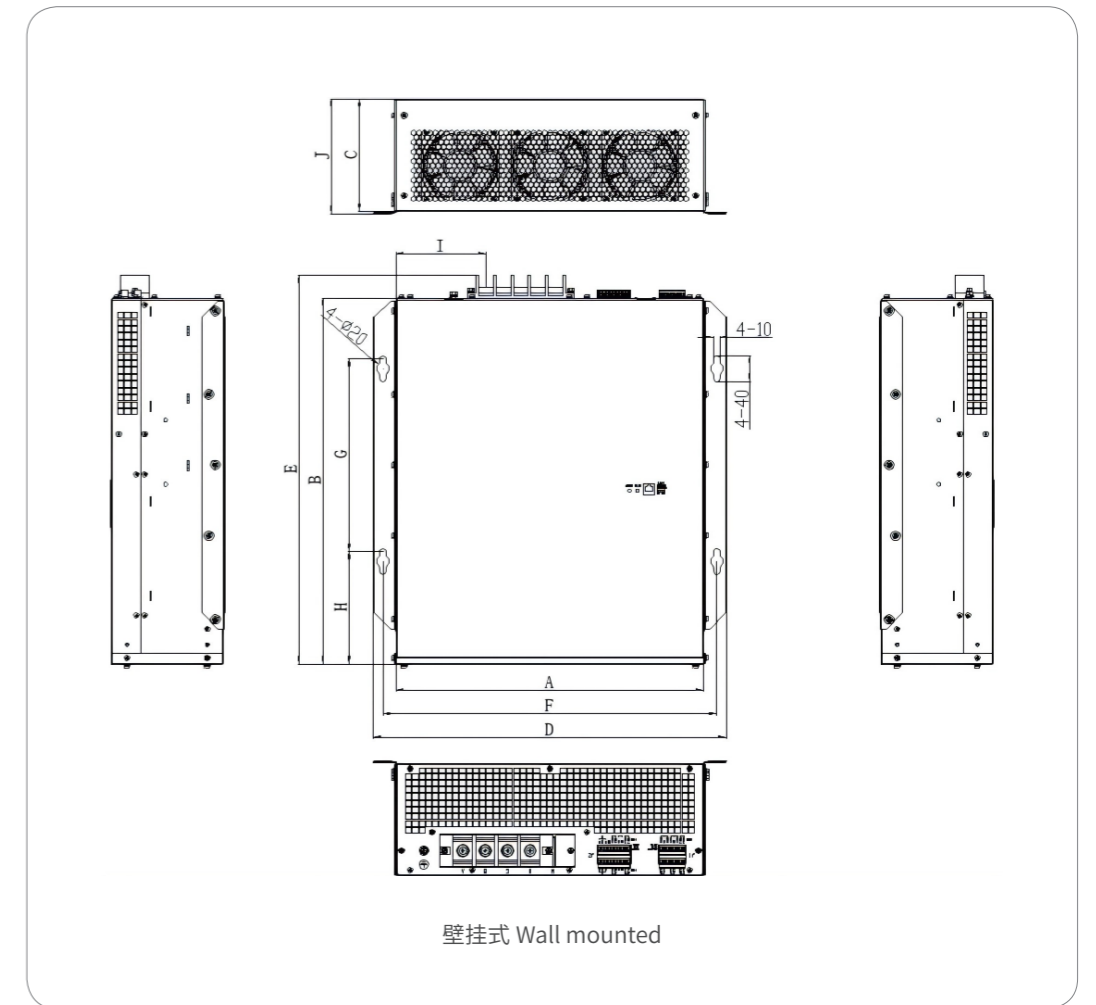
1. 防止共振, 技术独特
2. 内置偶次谐波抑制
3. 可靠性高, 耐热防尘
4. 高效, 热损耗低
5. 功率密度高, 灵活性强

1. Prevent resonance, with unique technology.
2. Built-in even harmonic suppression.
3. Strong reliability, heat-resistant and dust-proof.
4. High efficiency, low heat loss.
5. High power density, strong flexibility.

外形尺寸图
Overall dimension



JN-SVG 静止无功发生器 (Q)
JN-SVG static var generator (Q)



外形尺寸
Overall dimension

安装方式 Installation mode	机架式 Rack type						壁挂式 wall-mounted					
	20kvar	35kvar	50kvar	75kvar	100kvar	150kvar	30kvar	35kvar	50kvar	75kvar	100kvar	150kvar
尺寸 Size(mm)												
A	380	480	480	480	480	480	380	480	480	480	480	480
B	400	570	570	570	570	570	400	570	570	570	570	570
C	88	175	175	175	175	175	88	175	175	175	175	175
D	465	522.6	522.6	522.6	522.6	522.6	465	550	550	550	550	550
E	456	637	637	637	643	643	456	599	599	599	605	605
F	430	501.5	501.5	501.5	501.5	501.5	430	520	520	520	520	520
G	12	101.6	101.6	101.6	101.6	101.6	12	300	300	300	300	300
H	32	38	38	38	38	38	32	175	175	175	175	175
I	89	161.5	161.5	161.5	140.5	140.5	89	140.5	140.5	140.5	140.5	140.5
J	/	/	/	/	/	/	/	178.2	178.2	178.2	178.2	178.2
NW(kg)		23	25	27	33	38		23	25	27	33	38

备注: 以上参数为典型值供参考, 可根据客户要求定做, 我公司保留对数据的变更权利。

Note: The above parameters are typical values for reference, can be customized according to customer requirements, our company reserves the right to change the data.