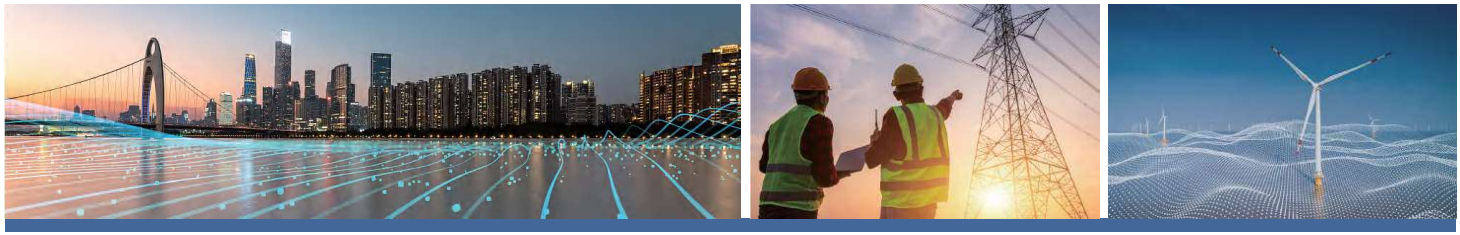
YT ELECTRIC

YT ELECTRIC | Nwt Ac inverter



YT ELECTRIC

Power Quality Specialists

-Making Every Watt Count

Shanghai YT Electric Co., Ltd.

Add: 777 Si Zhuan Road, Shanghai, China
Tel: +86-(021)33712042
Email: service@yt-electric.com
Web: www.ytelect.com

New West Technologies Ltd.

Add: Suite no. 20, 5th Floor Landmark
Plaza Jail Road Lahore - Pakistan
Tel: +92-42-35715206
Email: sales@nwtlimited.com
Web: www.nwtlimited.com

Global
Business Footprint

Leader in Power Quality

Since 2009, YT Electric has provided high-quality power quality equipment and services to over 3,000 projects in more than 50 countries around the world. Our expertise and global presence in the field of power quality not only ensures the delivery of superior products and solutions to our customers, but also helps our customers around the world to significantly improve their core competitiveness!

50+
Countries Worldwide

3000+
Successful Cases

15 Years
Experience in the Power Quality Field

CONTENTS

1 About Us 01
2 Power Quality Solutions 03
3 Power Quality Products 07
4 Capacitor Reactor Products 21
5 Switchgear Products 29
6 Total Quality Management 31
7 Honours and Qualifications 33
8 Customer Care 35

ENTERPRISE PROFILE

Shanghai YT Electric Co., Ltd., founded in 2009, is a national high-tech enterprise, specializing in power electronics and power automation. Through close cooperation with Jiao Tong University, it has built a high-quality R&D team. Driven by technology, it offers high-quality, reliable, and cost-effective product.

With clear strategies and talent allocation, the company has achieved product serialization, supply chain optimization, and service standardization, meeting the needs of customers in multiple fields like smart grid, power quality, and new energy power generation.

YT Electric adheres to a customer centered approach, aiming to realize the vision of "Gathering talents, achieving win-win, and becoming a top domestic provider of electrical system solutions". It has launched main products such as Active Harmonic Filter, Static Var Generator, SPC Hybrid, Energy Storage, Energy Efficiency Management System, and provides all-round customized services.

Welcome to
YTElectric

Shanghai YT Electric Co., Ltd founded in 2009, is a national high-tech enterprise subsidiary of the listed company China Solar Group (Stock Code: 300222, Market Value 4.5 Billion RMB), specializing in power electronics and power automation. Through close cooperation with Jiao Tong University, we have built a high-quality R&D team. Offer high quality, reliable, and cost-effective power quality products.

YT ELECTRIC

Vision

Becoming The World’s Top Power Quality Company

Mission

Creating Value for Our Customers

Fostering Happiness For All Employees

Contributing to Sustainable Development in Society

ODM
Biggest AHF/SVG ODM in China

200+ Employees
Extensive Elite Workforce

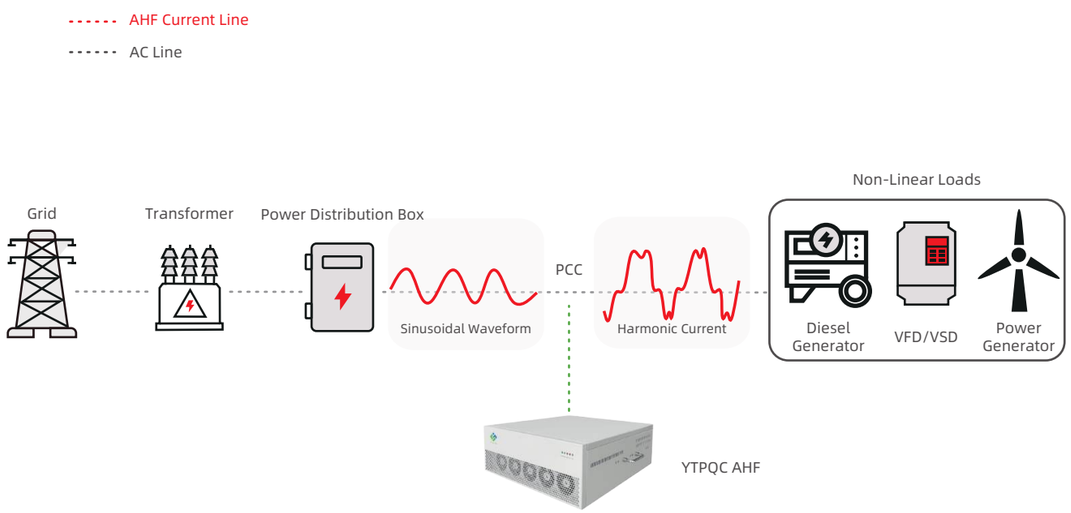
15 Years
Deep Cultivation in the Business

30% R&D
Robust R&D Department

125+ Patents
Technologies and Softwares

50+ Countries
Trusted by Partners Wordwide

Active Harmonic Filter Solution



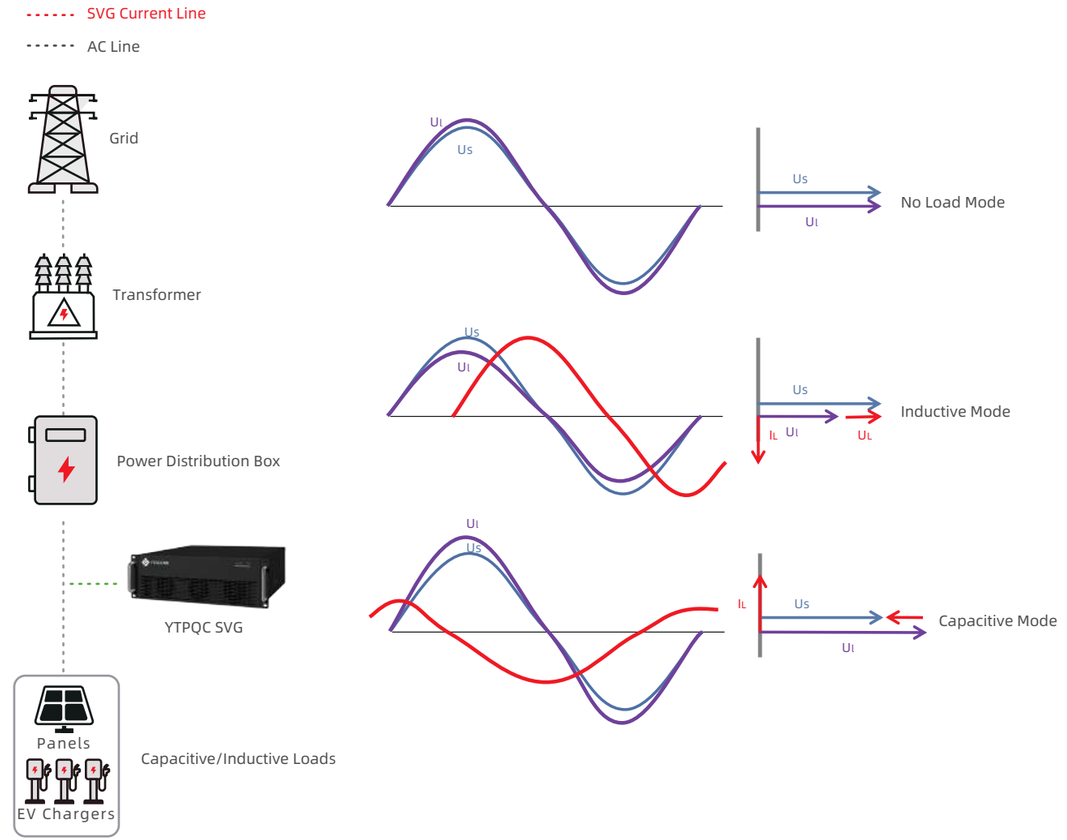
Principle & Function

YTPQC-AHF based on 3-level topology, is an Active Harmonic Filter system designed to eliminate harmonic oscillations and reduce costs consequently. AHF is a versatile solution, easily tailored to deliver power factor improvement, voltage variation control, flicker mitigation and load balancing functionality, highly improved power quality in networks while reducing harmonic pollution.

AHF System Benefits:

- Prevent down stream circuit from harmonics damaging
- Reduce the current of the neutral line
- Reduce the loss of the neutral line and heating
- Reduce transformer loss and improve transformer efficiency
- Reduce the line loss of power supply and distribution system
- Improve the efficiency of power generation and distribution
- Prevention of erroneous operation of relay protection devices
- Decrease THDi and THDv

Static Var Generator Solution



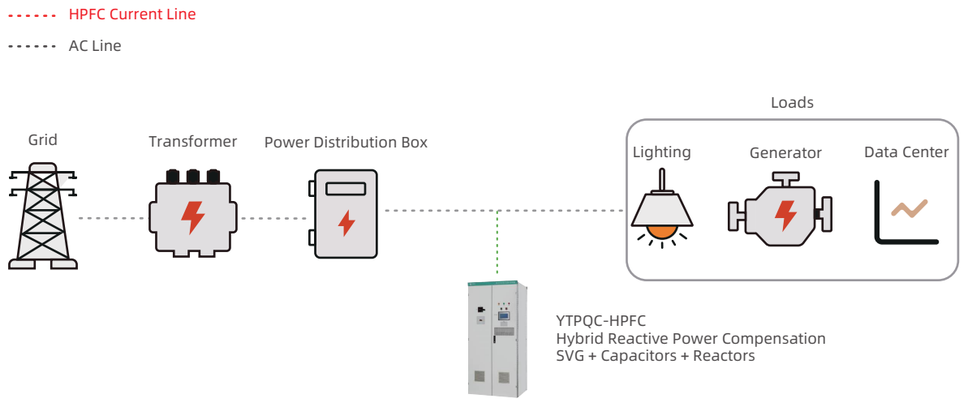
Principle & Function

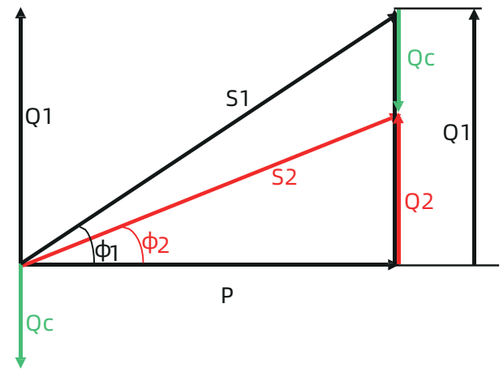
Based on the principle of voltage source inverter, YTPQC-SVG uses insulated gatebipolar transistor (lGBT) to control the magnitude and phase of inverter AC voltage, so as to achieve the purpose of reactive power, harmonic and imbalance compensation. Because the switching frequency of lGBT is very high (up to25.6kHz), SVG can compensate rapid reactive loads and achieve quite high compensation accuracy. SVG have the best cost performance with the function of reactive power and harmonics control.

SVG System Benefits

- Improve Power Factor (PF) to -1(Capacitive)/1(inductive)
- Compensate reactive power about loads and transformer
- Harmonics mitigation (2nd~25th)

Hybrid Reactive Power Factor Solution





Reactive Power Compensation:

Using Hybrid Reactive Power Compensation or Static Var Generator to reduce reactive power and improve Power Factor. The reduced reactive power is the compensation Qc.

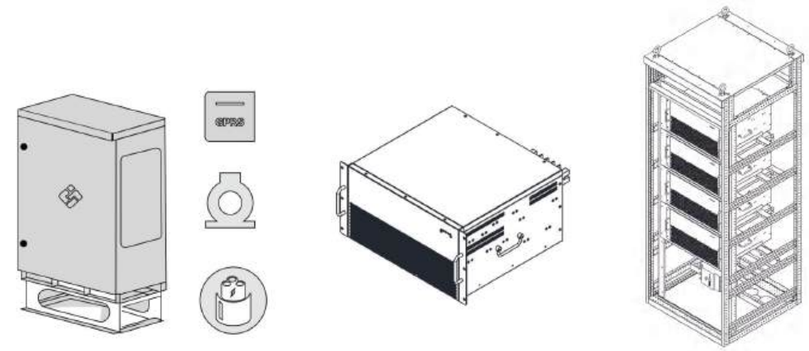
HPFC Principle & Function:

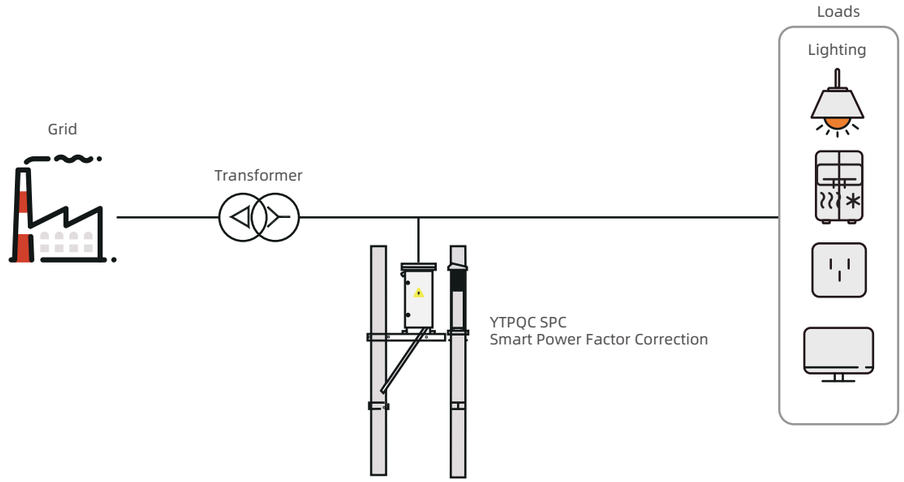
YTPQC-HPFC device consists of two parts: capacitor/reactor casting unit and SVG/APF module. Each unit is designed and produced by using low power, small size and low cost method, both are optional and can be combined in an optimal and flexible way according to the actual reactive power status at the site to achieve the highest cost performance.

HPFC System Benefits:

- Power factor -1~1 adjustable
- Compensation of reactive power of loads and transformers
- Harmonic management (2nd to 25th)
- More cost-effective than pure SVG systems
- SVG supports automatic control TSC (thyristor) and contactor control

Smart Power Factor Correction Solution





SPC Principle & Function:

Three-phase load imbalance automatic adjustment device adopts advanced power electronics technology and automatic control technology, different from traditional capacitor and reactor passive scheme, adopts active scheme to comprehensively solve the three-phase load imbalance, reactive power, harmonics and other power quality problems, especially applicable to the field of low-voltage power quality comprehensive control.

SPC System Benefits:

- Short distance wireless communication method and remote communication
- Small size, pole mounted or transformer rack mounted, outdoor installation
- Energy-efficient equipment through timed or load factor start-up and shutdown
- Lightweighted
- Harmonic control, power factor correction, three-phase load balancing

Power Quality Series

Active Harmonic Filter

AHF-220/400/440/480/690 Series

2U Miniaturization Static Var Generator

380x425x88mm

Static Var Generator

SVG-220/400/440/480/690 Series

Smart Power Factor Correction Device

SPC Series

Hybird PF Compensation

HPFC Series

STATCOM Synchronous Compensator

SVG - 10KV Series

Active Harmonic Filter

Optimal Power Quality Control

- Continuous power factor correction
- Capacitive & inductive reactive power compensation
- Accurate PF maintenance -1.0 ≤ CosΦ ≤ 1.0
- Three-phase load unbalance less than 5%
- Reduction of neutral current

Harmonic Filter

- Adaptive Algorithm (ADALINE)
- THDi less than 5% at rated loads
- Up to 98% filtration efficiency
- Full response time less than 5ms
- On-demand or fully compensated

Leading Edge Technology

- Three-level topology
- Ultra-compact modular design
- Fastest switching frequency 25.6kHz
- Lowest Power Consumption ≤ 2%
- Leading Thermal Dissipation Technology

Technical Parameter

Rated Voltage	220V (155-259V)	400V (296-465V)	480V (346-516V)	690V (500-825V)
Rated Capacity	15/25/50/75/100/150A	15/25/30/50/75/100/125/150A/200A	50/75/100/120/150A	50/100/125/150A
Phase System	3P3W/3P4W			
Main Frequency	50/60Hz ± 5%			
Circuit Topology	Three-level			
Multiple Compensation Modes	Harmonic, reactive power, three-phase load imbalance compensation			
Filter Range	2 to 50 odd harmonics (by order or full compensation)			
Harmonic Filtering Rate	≥98%			
Filtering Performance	Typically, THDi≤ 5% at rated loads			
Three-Phase Load Balancing Effect	≤ 5% to mitigate negative and zero sequence currents			
Neutral Linear Filtering Capability	3 times the rated filter current (in case of 4-wire equipment)			
Initial Response Time	≤50us			
Output Current Limit	Automatic output limitation within 100% of rated capacity			
Control Algorithm	Intelligent FFT, ADALINE, Fast Fourierand Instantaneous Reactive Power Algorithms			
Controller	DSP+FPGA			
Protection	Hardware protection, software protection			
Control Connections	Electrical Connections			
Human Machine Interface	4.3" / 7" / 10" Touch TFT LCD HMI			
Noise	<60db (<45db at low speed operation)			
Installation Method	Module embedded (rack), wall-mounted, floor-mounted			
Protection Level	IP30 maximum			
Cooling Method	Speed controlled intelligent air-cooled PWM fan			
Colour	RAL 7035 Industrial Grey/Black			
Ambient Temperature	-20~55℃			
Relative Humidity	95% max, no condensation			
Installation Height	Rated capacity at altitude ≤2000m, appropriate load shedding at altitude >2000m			
Qualification	CE, IEC61000, Type test report, ISO9001:2015			
Conformity Standard	IEEE 519, ERG5/4			
Communication Protocol	Adopts Modbus RTU remote communication protocol and TCP/IP protocol; Two channel RS485 and CAN bus, support mobile APP operation, support Ethernet			

Static Var Generator

Optimal Power Factor Correction

- Continuous power factor correction
- Accurate PF maintenance -1.0 ≤ CosΦ ≤ 1.0
- Capacitive and inductive control
- No overcompensation or undercompensation
- Mixed power factor correction

Advanced Performance

- Harmonic Control
- Three-phase load balancing
- Low noise
- Friendly human-machine interface

Quality Assurance

- TI DSP, Top Brand IGBT (Infineon)
- High stability, resonance avoidance
- Hardware and software protection
- High reliability testing
- Good environmental adaptation

Technical Parameter

Rated Voltage	220V (155-259V)	400V (296-465V)	480V (346-516V)	690V (500-825V)
Rated Capacity	10/20/30/40/50kvar	30/50/75/100/150kvar	30/50/75/100kvar	150/175/200kvar
Phase System	3P3W/3P4W/single phase			
Main Frequency	50/60Hz±5%			
Circuit Topology	Three-level			
Multiple Compensation Modes	Reactive power compensation, three-phase load imbalance compensation			
Filter Range	Filtering range 2 to 25th odd harmonics, 100% of rated capacity			
Harmonic Reduction Rate	≥97.5% of rated capacity			
Filtering Performance	Typically, THDi ≤ 5% for rated loads			
Neutral Line Filtering Capability	3 times the rated filtering current in case of 4-wire equipment			
Three-Phase Load Balancing Effect	≤ 5% to mitigate negative and zero sequence currents			
Switching/Control Frequency	25.6kHz			
Initial Response Time	≤50us			
Total Response Time	≤5ms			
System Active Loss	≤2.5 per cent			
Output Current Limit	Automatically limited to 100% output of rated capacity			
Control Algorithm	FFT, Adaptive Control Algorithm , Fast Fourier & Instant Reactive Power Algorithms			
Controller	DSP+FPGA			
Protection	Hardware protection, software protection			
Control Connections	Electrical Connections			
Human Machine Interface	4.3-inch / 7-inch / 10-inch touch TFT LCD HMI			
Noise	<60db (<45db at low speed operation)			
Installation Method	Module embedded (rack), wall-mounted, floor-mounted			
Protection Level	IP20~IP54			
Cooling Method	Speed Control Intelligent Air-cooled Cooling PWM Fan			
Colour	RAL 7035 Industrial Grey/Black			
Ambient Temperature	-20~55℃			
Relative Humidity	95% max, no condensation			
Installation Height Above Sea Level	Rated capacity at altitude ≤2000m, appropriate load shedding at altitude >2000m			
Qualification	CE, IEC61000, Type Test Report, ISO9001:2015			
Conformity	IEEE 519, ERG5/4			
Communication Protocol	Adopts Modbus RTU remote communication protocol and TCP/IP protocol; Two channel RS485 and CAN bus, support mobile APP operation, support Ethernet			

Hyrbid Power Factor Correction

Cost Effectiveness

- Low Cost
- High Performance
- Ultra-compact SVG modules
- Fastest switching frequency 25.6kHz
- Lowest Power Consumption ≤ 2.5 %
- Leading Thermal Technology

Advanced Performance

- Harmonic Control
- Three-phase load balancing
- Low noise

Technical Parameter

Rated Voltage	400V(296~465V)
Rated Capacity	50kvar~900kvar
Main Frequency	50/60Hz±5%
Circuit Topology	Three-Level
Multi-Compensation Mode	Harmonic control, reactive power, three-phase load imbalance compensation
Filtering Range	2nd to 51st odd harmonics (by selective or full compensation)
Harmonic Reduction Rate	≥ 97%
Filtering Performance	Typically, THDi ≤ 5% at rated loads
Target Power Factor	System PF > 0.98 after compensation (at rated capacity)
Three-Phase Load Balancing Effect	≤ 5% to mitigate negative and zero sequence currents
Neutral Line Filtering Capability	3 times the rated filtered current for 4-wire devices
SVG Switching/control frequency	25.6kHz
SVG Response Time	≤5ms
Capacitor Control Interface	16 ways
Capacitor switching	Thyristor, contactor
Capacitor Response Time	≤1s
System Active Loss	≤2.5 per cent
Output Current Limit	Automatically limited to 100% output of rated capacity
Control Algorithm	FFT, Adaptive Control Algorithm, Fast Fourier (FFT) and Reactive Power Algorithm
Controller	DSP+FPGA
Protection	Hardware protection, software protection
Control Connections	Electrical Connections
Human Machine Interface	4.3-inch / 7-inch / 10-inch touch TFT LCD HMI
Noise	<60db (<45db at low speed operation)
Installation Method	Embedded (rack), wall-mounted, floor-mounted
Protection Level	IP43 max
Cooling Method	Speed controlled intelligent air-cooled cooling PWM fan
Colour	RAL 7035 Industrial Grey
Ambient Temperature	-20~55℃
Relative Humidity	95% max, no condensation
Installation Height	Rated capacity at altitude ≤2000m, appropriate load shedding at altitude >2000m
Qualification	CE,IEC61000, Type test report, ISO9001:2015
Standard Compliance	IEEE 519, ERG5/4
Communication Protocol	Adopts Modbus RTU remote communication protocol and TCP/IP protocol; Two channel RS485 and CAN bus, support mobile APP operation, support Ethernet

Smart Power Factor Correction

Cost Effectiveness

- Cost-Effective
- Ultra-compact SPC modules
- Fastest switching frequency 25.6kHz
- Lowest Power Consumption ≤2.5%
- Leading heat dissipation technology

Advanced Performance

- Harmonic Control
- Three-phase load balancing
- Low noise
- Outdoor installation

Technical Parameter

Rated Voltage	220V (155-259V)	400V (296-465V)	480V (346-516V)
Rated Current	30-100kvar/15-150A	30-100kvar/15-150A	50-150A
Main Frequency	50/60Hz±5%		
Circuit Topology	Three-level		
Compensation Modes	Harmonic/reactive power/three-phase load imbalance compensation		
Filter Range	2 to 51 odd harmonics (selective or fully compensated)		
Harmonic Reduction Rate	Filtering range 2 to 25th harmonic, 100% of rated capacity (selectively or fully)		
Filtering Performance	≥97%		
Target Power Factor	Adjustable range from -1.0 to + 1.0		
Three-Phase Load Balancing	≤5% to mitigate negative and zero sequence currents		
Linear Filtering Capability	3 times rated filter current (in case of 4-wire equipment)		
Switching/Control Frequency	25.6kHz		
Initial Response Time	≤50us		
Total Response Time	≤5ms		
System Effective Loss	≤2.5%		
Output Current Control	Automatically limited to 100% output of rated capacity		
Control Algorithm	FFT, Adaptive Control Algorithm, Fast Fourier & Instant Reactive Power Algorithms		
Controller	DSP+FPGA		
Protection	Hardware protection, software protection		
Control Connections	Electrical Connections		
Human Machine Interface	4.3-inch/7-inch/10-inch touchscreen TFT LCD HMI		
Noise	<60db (<45db at low speed operation)		
Installation method	Module embedded (rack), wall-mounted, floor-mounted		
Protection level	IP42		
Cooling method	Speed control intelligent air-cooled PWM fan		
Colour	RAL 7035 Industrial Grey/Black		
Ambient Temperature	-20~55°C		
Relative Humidity	95% max, no condensation		
Altitude	Rated capacity at altitude ≤2000m, reduced capacity at altitude >2000m		
Certification	CE, IEC61000, Type Test Report, ISO9001:2015		
Standards Compliance	IEEE 519, ERG5/4		
Communication Protocol	Adopts Modbus RTU remote communication protocol and TCP/IP protocol; Two channel RS485 and CAN bus, support mobile APP operation, support Ethernet		

Mini Static Var Generator 2U

Miniature SVG

- Compact SVG module, small size
- Flexible installation method, applicable to various occasions
- Real-time sampling of grid current through current transformer

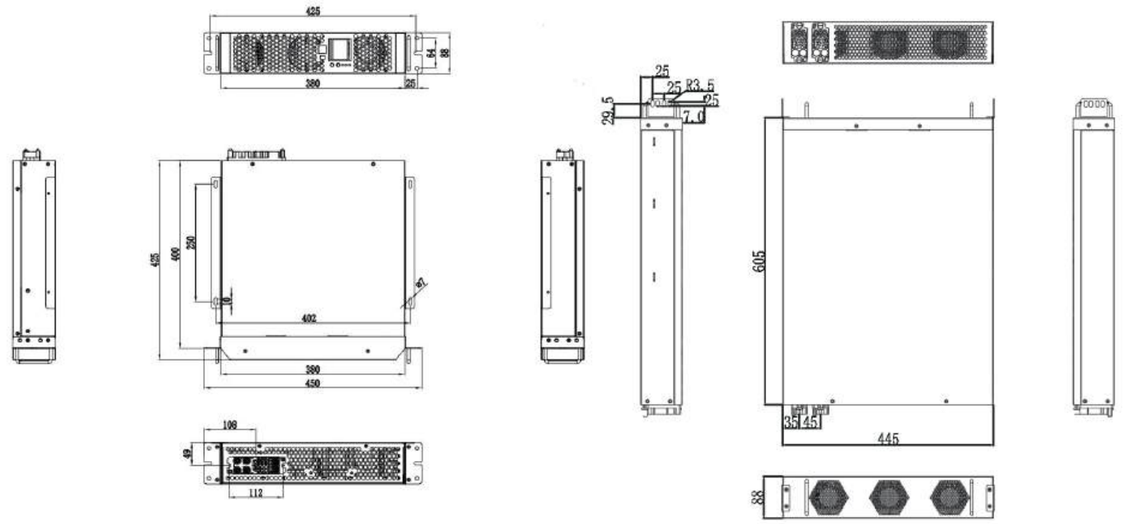
Power Precision

- Separation of harmonic component, reactive component, unbalanced current
- Controlling the size, frequency and phase of the output current of the device
- Offset the current in the grid to achieve the purpose of compensation

Technical Parameter

Operating Voltage	AC 400V±15%
Working Frequency	50Hz±5Hz
Device Capacity	10kvar、20kvar、30kvar、 50kvar
Response Time	≤5ms
Stand-Alone Efficiency	≥97%
Main Circuit Structure	3P4W
Ambient Temperature	-20℃ ~ 55℃
Relative Humidity	95% max, no condensation
Altitude	Altitude below 1500 metres
Multiple Compensation Modes	Reactive power, harmonic, three-phase unbalance compensation & Switching etc.
System power factor	Compensation of inductive/capacitive reactive power, pf ≥0.99 after compensation
Three-Phase Imbalance	Three-phase active current imbalance of the system after compensation ≤ 5%.
Filtering Range	Simultaneously filter out harmonics of 2-13 times, harmonic filtering rate ≥95%.
Response Speed	Fast response speed, high controllability, auto current limiting, no overloading
Multiple Protection Functions	Over-current/voltage/temperature, phase sequence error, lack of phase, etc.
Communication Protocol	Configure RS485 standard communication interface to achieve information exchange with other units, also configured with wired/wireless communication

Product Shape and Installation Dimensions



10KV Static Var Generator

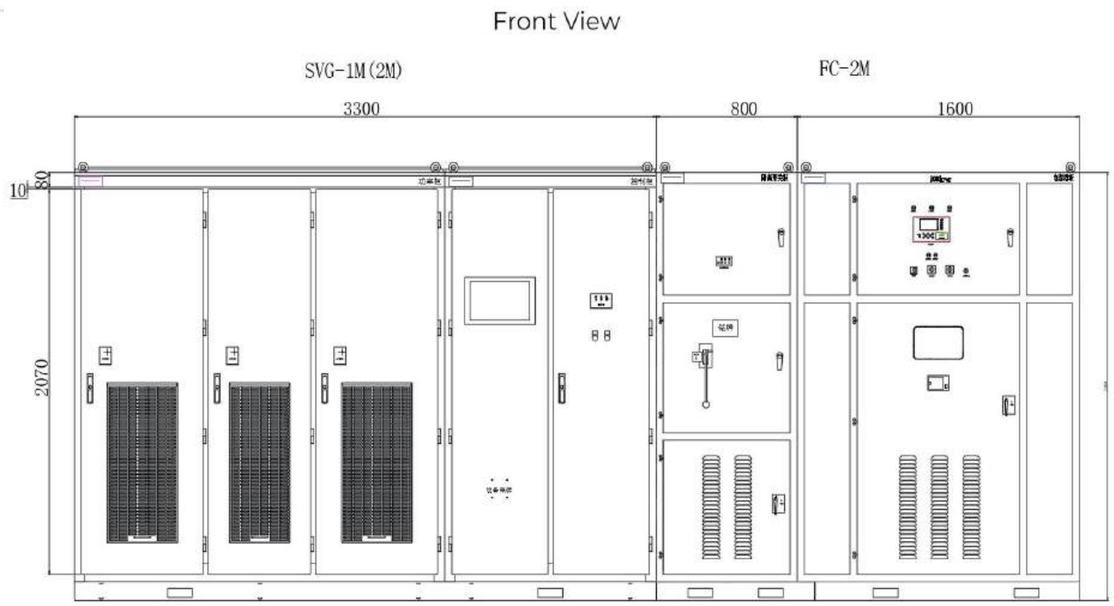
Medium Voltage Harmonic Compensation

- Fast response: response time ≤ 10ms
- Negative sequence suppression, balanced system: to ensure that the three-phase current flowing into the power grid is balanced
- complete protection, worry-free use: found that the device over-current, over-voltage or drive signal abnormalities, the rapid implementation of the protection
- harmonic management, to ensure safety: the total harmonic current compensation rate of ≥ 70%, a single compensation rate of ≥ 80% The number of harmonic filtering can be set from 2 to 25 times.

Technical Parameter

Rated voltage	6kV、10kV
Operating Voltage Range	≤120%
Response Time	≤ 10ms
Harmonic Characteristics	≤ 2%
Operation Mode	Reactive power, harmonic compensation, reactive power, harmonic priority
Protection Functions	Over-current/short-circuit/grounding/over/under-V/over/low Temp etc.
Control Physical Quantity	Reactive power, system voltage, target power factor, harmonics
Control Mode	Unified control, SVG control FC switching; SVG failure exit, No affect on F running
Power Factor Control	Within the whole machine capacity, pf value > 0.98, target pf control error ≤ 3%.
Harmonic Compensation	Harmonic compensation ≥ 70%, single compensation ≥ 80%; harmonic filter 2~25
Place of Use	Indoor, no explosive or corrosive gas
Ambient Temperature	-5~45 °C
Relative Humidity	Maximum 95%, no condensation
Altitude	Altitude below 1000 metres (customised for above 1000 metres)
Reactive Power Compensation	Within the capacity range, reactive power can be output in both directions & dynamically adjusted steplessly; max permissible deviation state ≤ 2%

Cabinet Layout



Capacitor/Reactor Series

Harmonic Suppression Reactive Power Compensation Components

(YT-CAPD Capacitors)
(YT-CKSJ/CKDJ Reactors)

Integrated Power Capacitor Compensation Device

(YT-CAPZL Series Intelligent Dynamic Harmonic Suppression Capacitor)

Low-Voltage Reactive Power Integrated Measurement and Control Instrument

(Model: YT-PQM)

Intelligent Integrated Power Capacitor Compensation Device

(YT-CAPZ Series Intelligent Capacitor)

Low-Voltage Reactive Power Integrated Measurement

(Model：YT-PQM)

Harmonic Suppression Reactive Power Compensation Components

Product Features

1. Control Function

(1) Automatic and Manual Control
(2) Automatic switching based on controlled physical quantities (power factor, reactive power, distribution current and voltage)
(3) Cut capacitors of the same capacity by cyclic cutting principle; cut capacitors of different capacities based on reactive power deficit selection
(4) Predict reactive power and voltage changes before capacitor casting; avoid casting if reverse operation is expected to prevent casting oscillation

2. Setting Function

(1) CT ratio setting (2) Delay time setting
(3) Power factor setting (4) Protection value setting

3. Measurement Function

(1) Measure distribution voltage, current, power factor, active and reactive power
(2) Measure total harmonic distortion rate and 3-15th harmonic content rate of voltage and current.
(3) Optionally measure in-cabinet compensation reactive power current.

4. Communication Function

(1) Show intelligent capacitor operation status and road number
(2) RS485 remote communication & data storage

5. Protection Function

(1) Provide over/under-voltage and voltage loss protection
(2) Offer oscillation switching protection

Main Technical Parameters

1. Working Environment

(1) Ambient Temerature: -25℃ ~ 55℃
(2) Relative Humidity: 40℃, 20% ~ 90%
(3) Atmospheric Pressure: 79.5kpa ~ 106.0kpa
(4) Altitude: ≤2000m
(5) Environment: no flammable and explosive media, no conductive dust and corrosive gases

2. Power Supply

(1) Working Voltage: AC 50HZ, 400V±20%
(2) Current Sampling：AC 0 ~ 5A

3. Measurement Accuracy

(1) Voltage: 0.5 level
(2) Current: 0.5 level
(3) Reactive Power: 1.0 level
(4) Active Power: 1.0 level
(5) Power Factor: ±0.005

4. Outline and Installation Dimensions

(1) External Dimensions (W x H x D): 128mm×128mm×99mm
(2) Installation Dimensions（W x H): 113mm×113mm

Accessory Products

Intelligent Harmonic Suppression Capacitor

Intelligent Dynamic Harmonic Suppression Capacitor

Communication Type Intelligent Composite Switch

Parameter Table (Cylindrical Capacitor)

1. Three Phase 480V Module

Capacitor Model	Reactor Model	At 400V		Note
		Output Cap (kVAr)	Max Current (A)	
YT- CAPD-480-15-3-A	YT-CKSJ-480-1.05-7%	11.2	18	For Specific Dimensions Please Consult Us
YT- CAPD-480-20-3-A	YT-CKSJ-480-1.4-7%	15.0	24	
YT- CAPD-480-25-3-A	YT-CKSJ-480-1.75-7%	18.7	30	
YT- CAPD-480-30-3-A	YT-CKSJ-480-2.1-7%	22.4	36	
YT- CAPD-480-40-3-A	YT-CKSJ-480-2.8-7%	29.9	48	
YT- CAPD-480-50-3-A	YT-CKSJ-480-3.5-7%	37.3	60	

2. Split Phase 280V Module

Capacitor Model	Reactor Model	At 400V		Note
		Output Cap (kVAr)	Max Current (A)	
YT-CAPD-250-10-3YN-A	YT-CKDJ-280-0.7-7%	10.9	18	For Specific Dimensions Please Consult Us
YT-CAPD-250-15-3YN-A	YT-CKDJ-280-1.05-7%	14.5	24	
YT-CAPD-250-20-3YN-A	YT-CKDJ-280-1.4-7%	18.1	30	
YT-CAPD-250-25-3YN-A	YT-CKDJ-280-1.75-7%	21.8	36	
YT-CAPD-250-30-3YN-A	YT-CKDJ-280-2.1-7%	29.0	48	

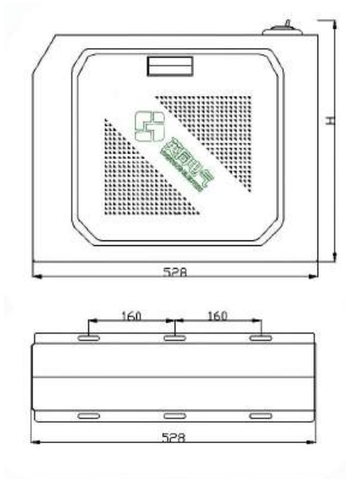
Intelligent Dynamic Harmonic Suppression Capacitor

Product Characteristics

1. Itelligent dynamic harmonic suppression capacitors have excellent performance and can be flexibly applied to reactive power occasions with rapid changes, such as welding machines, air hammers, injection molding machines, punch presses, traveling cranes, etc., providing instantaneous reactive power compensation to the load. It improves the power factor, meets national and industry assessment standards, and can effectively suppress grid harmonics to ensure grid power quality.

2. In addition to the characteristics of the intelligent harmonic capacitors, it also has the advantage of dynamic compensation. Its action time is ≤ 20ms, achieving transient tracking compensation. However, the operation of high-power thyristor switches and filter reactors generates a lot of heat. Therefore, in addition to the product itself having a discharge and air-cooled unit, capacitor banks also require higher ventilation and heat dissipation to avoid excessive product temperature rise, resulting in reduced reliability and affecting the service life.

External Dimensions



Specifications

YT – CAPZL – □□□ – □□ – □ – G

- Complementary
- Series reactor reactance
- Rated capacity of capacitors (kVAr)
- Capacitor rated voltage (V)
- Compensation Model
- Enterprise Abbreviation

Model	H(mm)	
	P7	P14
YT- CAPZL-450-10-7%-G	450	500
YT- CAPZL-450-15-7%-G	410	470
YT- CAPZL-450-20-7%-G	410	470
YT- CAPZL-450-25-7%-G	410	470
YT- CAPZL-450-30-7%-G	450	500
YT- CAPZL-450-40-7%-G	410	470

Technical Parameters

1. Power Conditions

(1) Rated Working Voltage: AC400V
(2) Voltage Deviation: Rated Voltage ±20%
(3) Operating Frequency: 50Hz

2. Environment Conditions

(1) Ambient Temperature: -25 ~ 55℃
(2) Relative Humidity: 40℃, 20 ~ 90%
(3) Altitude: ≤4500m

3. Electrical Safety Index

Electrical clearance, creepage distance, insulation strength, safety protection, short-circuit strength, and protection of sampling and control circuits comply with national power industry standards. They meet the requirements of the corresponding provisions in DL/842-2015 "Technical Conditions for the Use of Low-Voltage Shunt Capacitor Devices" and GB/T22582-2008 "Low-Voltage Power Capacitor Power Factor Compensation Device"

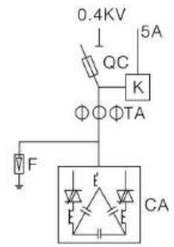
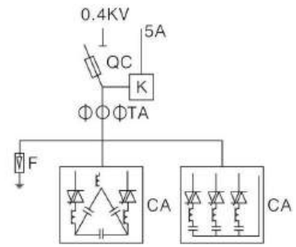
4. Reactive power control parameters

(1) Throw Cutting Interval: ≤20ms
(2) Reactive Power Capacity: single ≤40kvar (three-phase)
≤20kvar (split-phase)
(3) Online: ≤42 units (used with YT-CKY35)

5. Reliability Parameters

(1) Electrical switching life: ≥1 million times
(2) Control accuracy: 100%
(3) Capacitor capacity cutting decay rate: ≤ 0.1%/10,000 times

Design Brief

<table>
<tr><td rowspan="2">Work / Detail</td><td>Three Phase Compensation</td><td>Hybrid Compensation</td></tr>
<tr><td>Primary Wiring Diagram</td><td> 
</td><td> 
</td></tr>
<tr><td>Capacity (kVAr)</td><td>Compensation Capacity：400kVAr</td><td>Compensation Capacity: 300kVAr
Three Phase Compensation Capacity: 240kVAr
Hybrid Compensation Capacity: 60kVAr</td></tr>
</table>

Equipment in Cabinet	Equipment	Model	No.	Equipment	Model	No.
	Knife Fuse	800A	1	Knife Fuze	630A	1
	Ammeter	42L6-A 800/5	3	Ammeter	42L6-A 600/5	3
	Current Transformer	LMZJ1-0.66 800/5	3	Current Transformer	LMZJ1-0.66 600/5	3
	Lightning Arrester	Y1.5W-0.28/1.3 500V	3	Lightning Arrester	Y1.5W-0.28/1.3 500V	3
	Dynamic Capacitor	YT- CAPZL-450-40-7%-G	10	Dynamic Capacitor	YT- CAPZL-450-40-7%-G	6
	LV - Measurement	YT-PQM-C32ZG	1	Dynamic Capacitor	YT- CAPZL-250-20-7%-G	3
				LV - Measurement	YT-PQM-C32ZG	1

Note: Split-phase compensation capacity is configured at 20% of the total compensation capacity

Three-phase compensation is based on 400kVAr, and hybrid on 300kVAr. Other capacities can be achieved by changing the number of modules and parameters of electrical components. Consider the design of main and auxiliary capacitor banks when the number of modules is large.

Intelligent Integrated Power Capacitor Compensation Device

Product Characteristics

1. The intelligent integrated power capacitor compensation device (smart capacitor) is composed of an intelligent unit, switch, protection unit, and specific types of low-voltage capacitors to form a complete intelligent compensation unit. It replaces the traditional automatic reactive power compensation device composed of various decentralized components.

2. The product can be used alone or networked. It can do three-phase or three-phase and split-phase hybrid compensation. Intelligent capacitors integrate advanced technologies, change the structure of existing equipment, improve reliability and lifespan, and have multiple advantages.

External Dimensions

Specifications

YT – CAPZ – □□□–□□– G / F

- Subsidy
- Complementary
- Capacitor Rated Capacity(kVAr)
- Capacitor Rated Voltage (V)
- Smart Capacitor
- Enterprise Abbreviation

Model	H(mm)
YT- CAPZ-450-50-G	350
YT- CAPZ-450-40-G	310
YT- CAPZ-450-30-G	310
YT- CAPZ-450-25-G	310
YT- CAPZ-450-20-G	270
YT- CAPZ-450-15-G	225
YT- CAPZ-450-10-G	225
YT- CAPZ-450-30-F	310
YT- CAPZ-450-20-F	270
YT- CAPZ-450-10-F	225
YT- CAPZ-450-5-F	225

Technical Parameter

1. Power Conditions

(1) Rated Operating Voltage: AC400V±20%.
(2) Voltage Waveform: sinusoidal, and the total distortion rate is not more than 5%
(3) Operating frequency: 50Hz

2. Synchronous Zero Throw Switch Indicators

(1) Zero-throw-cutting offset: ≤2.5°
(2) Zero-throw inrush current: ≤2.5 times rated current
(3) Response time: 0-60S;

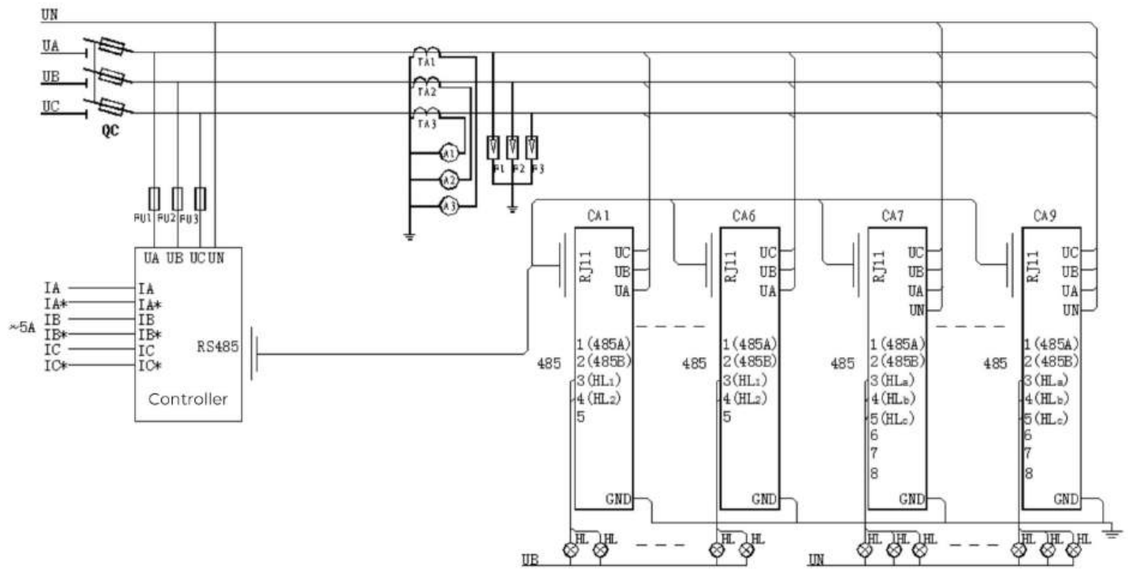
3. Protection function

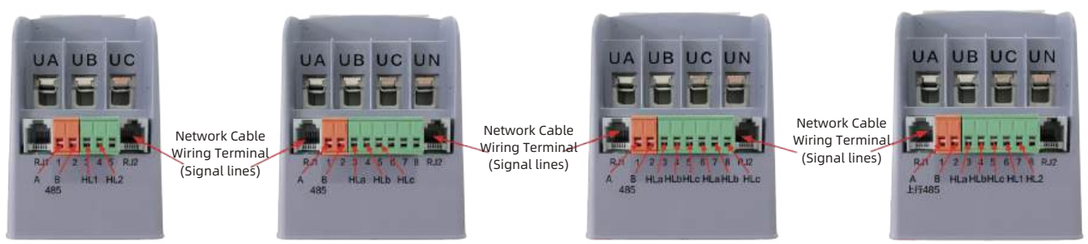
(1) Over-Temperature Protection
(2) Over-Voltage and Under-Voltage Protection
(3) Phase Loss Protection

4. Electrical Safety Index

Electrical clearance, creepage distance, insulation strength, safety protection, short-circuit strength, and protection of sampling and control circuits comply with national power industry standards. They meet the requirements of the corresponding provisions in DL/842-2015 "Technical Conditions for the Use of Low-Voltage Shunt Capacitor Devices" and GB/T22582-2008 "Low-Voltage Power Capacitor Power Factor Compensation Device"

Design Brief





400V Low Voltage Switchgear

Environment Condition

No.	Condition		Unit	Requirement
1	Ambient Air Temperature	Maximum Temperature	℃	+40
		Minimum Temperature		-5
		Maximum Daily Temperature Difference	K	25
		Hottest Monthly Mean Temperature	℃	30
		Maximum Annual Average Temperature	℃	20
2	Elevation		m	≤2000
3	Solar Radiation Intensity		W/cm²	0.1
4	Fouling Level			III（户内）
5	Humidity	Average Daily Relative Humidity	%	≤95
		Monthly Relative Humidity Average		≤90
6	Max wind speed maintained for 10min at 10m above ground level		m/s	35
7	Due to the amplitude of the common mode voltage induced in the auxiliary and control loops in the main circuit		kV	≤1.6

Technical Requirements

1. Rated insulation voltage: 690V
2. Rated working voltage: 400V
3. Rated frequency: 50Hz
4. Working frequency withstand voltage: 220V
5. Switch insulation medium: air
6. Protection level: IP4X for cabinet body, IP3XD for vent, IP3X for cabinet top

Electrical Clearance and Creepage Distance

Equipment Name		Min Clearance (mm)	Min Creepage Distance (mm)
Low-voltage switchgear, busbars and feeders	Main Circuit (Inc. Main Switch & Breaker)	14.0 Correspond Ui=12kV	16 Correspond Ui=1000V
	Moulded Case Breakers	8.0 Correspond Ui=8kV	12.5 Correspond Ui=800V
	Other Auxiliary Circuits	1.5	4.0
Note: Measurement uncertainty for linear dimensions 0.05 mm (when less than or equal to 25 mm) 0.25%(when greater than 25 mm)			

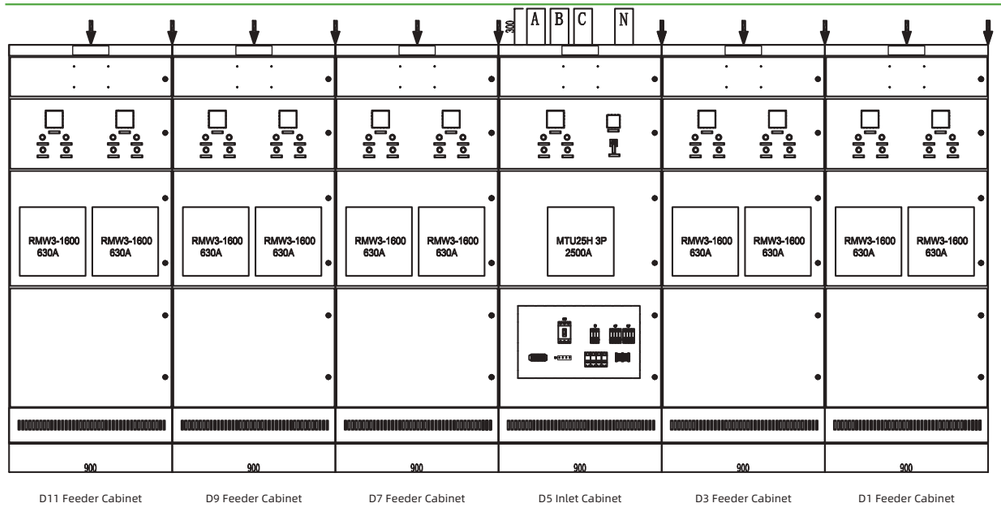
Rated Current and Rated Short-Time Withstand Current

Transformer Rated Capacity (kVA)	Hor. Busbar Rated Current（A）	Hor. Busbar Withstand Current（kA/1s）	Vert. Busbar Rated Current（A）	Vert. Busbar Withstand Current（kA/1s）
800、1000、1250	2500	≥65	1600	≥50

Switchgear External Dimensions

Cabinet	Length（mm）	Depth（mm）	Height（mm）
Inlet Cabinet	900	800	2200
Busbar Cabinet	900	800	2200
Feeder Cabinet	900	800	2200

Cabinet Arangement Diagram



Total Quality Management

High Reliability

- Component Selection Redundancy
- Intelligent Air Cooling System
- Branded Electronic Components
- Advanced Production Technology

Pro Corporate Culture

- Lean Strategic Deployment
- Value Stream Analysis
- Staff Improvement System
- Standard Operating Procedures
- Abnormal Andon Aystem

Full Process Inspection Traceability

- Automatic Test Equipment
- PCBA In-Circuit Test
- PCBA Functional Circuit Test
- Inspection And Traceability System For All Critical Components
- 24-Hour High Temperature Aging Test For All Modules
- Lean Manufacturing Cells
- Surface Mount Technology
- Welding Of PCBA Components
- Advanced Product Quality Planning
- Manufacturing Execution System














Qualifications and Honors

Invention Patent Certificate

Product Test Report

Computer Software Copyright Registration

ISO Certificate

Innovative Enterprise

High-Tech Enterprise

Little Giant Enterprise

Specialized New Enterprise

High-Tech Project

High-Tech Achievement

CE Certificate

CQC Certificate

3C Certificate

Client Satisfaction Always Comes First

1 Comprehensive Product Training
Help master product usage with detailed Manuals and Videos

2 Online Technical Support
Quick and timely technical support to help solve problems

3 Free Project Consultation
Global experience can help successfully complete entire project

4 Solid Product Quality
Advanced production process provide reliable product quality

5 Reliable After-Sales Service
Fast and professional after-sales team provides timely technical support. If the product malfunctions, free parts replacement will be provided within the warranty period up to a new module for free

Our Commitment to ESG

Environment
Social
Governance

- Improving Energy Efficiency
- Energy Saving & Facility Improvements
- Asset Life Extensions
- Preventive Maintenance
- Energy Storage Systems & Controls
- Low GWP Molecules
- Personal Protection
- Safety & Security