

# Huatech



## SwiTEK

Digital, intelligent low-voltage switchgear

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## Intelligent power distribution



### Energy efficiency Management

- Energy planning, auditing, energy benchmarking;
- Energy Efficiency Improvement Energy Report;
- Bill customization, in-depth analysis of energy consumption to optimize energy saving.



### Power quality analysis and management

- Power quality monitoring analysis;
- Harmonic analysis system diagnosis;
- Real-time monitoring of power grid;
- Disturbance analysis judgment.



### Electrical qualification management system

- Multi-dimensional query and asset reporting;
- Mobile terminal APP and website;
- Cabinet door QR code quick access;
- Electrical asset configuration information is displayed;
- Aging evaluation and analysis of circuit breakers.



### Pre-operation and maintenance management system

- Quick troubleshooting and recovery guidance;
- Selective analysis of system protection
- Precise preventive maintenance guidance and planning;
- Real-time monitoring of operating temperature;
- The protection setting is optimized on demand.
- People, things, things, related intelligent inspection.



### **Active operation and maintenance**

Through the early warning, prevention and prediction of power system fault information, operation and maintenance can prevent problems before they happen, and improve the overall operation and maintenance initiative.



### **Delicacy management**

Through the archiving of asset information, the evaluation of asset status, the standardization of operation and maintenance workflow, and the management of energy use efficiency, the overall efficiency of the operation system is comprehensively improved.



### **Unlimited value added can help clients make the right investment decisions and maximize the value of their business**

- Upgradeable smart products to keep power distribution facilities up-to-date;
- Acquire expert knowledge and experience to help enterprises manage efficiently;
- Help you obtain professional certifications and increase the value of your buildings.

## SwiTEK can be used in various industries



### Industrial environment

- Oil and gas extraction, both onshore and offshore
- Petrochemicals/Coal chemicals
- Metal mining
- Steel
- Cement/Glass
- Semiconductor/Optoelectronics
- Automobile making
- Papermaking
- Food and beverage
- Pharmacy
- Shipping
- Water treatment

### Power and infrastructure

- power station
- rail traffic
- Airport
- DC(data centre)
- Hospital
- Commercial building
- Residence community



### ■ Safe and reliable all-round

- A full range of low-voltage switchgear solutions to meet the application needs of customers in different industries;
- A full range of services to extend the life cycle of equipment and shorten the field transformation time.

### ■ Safe and reliable low-voltage equipment

- Anti-arc design and complete type test to ensure the safety of operators;
- Effectively prevent temperature rise, overvoltage and seismic, to ensure the continuous operation of the equipment;
- Maintenance-free busbar and reliable electrical and mechanical components effectively extend the service life of the switchgear.

### ■ Digital intelligent solutions

- Digital and intelligent solutions to help customers reduce operating costs;
- Intelligent temperature measurement technology, real-time monitoring of key component temperature, reduce the risk of power failure;
- A variety of monitoring and diagnostic data is available to facilitate customer maintenance planning and data analysis.

### ■ Smart electricity solutions

- Set intelligent, digital, network in one, prevention monitoring, system insulation aging prediction analysis;
- Monitor and manage the residual current of the distribution circuit, wire temperature and other fire risk parameters;
- The field communication is GPRS wireless communication mode, which solves the problem of difficult field wiring.

### Quality certification

A full range of application solutions and services

SwiTEK products meet many foreign and domestic standards such as IEC/EN61439-2, GB/T7251.8, GB/T7251.12, etc.

They have passed the authoritative form tests of well-known laboratories and have been certified by TUV, CE and CQC organizations.



### Main type test items

- Resistance to corrosion;
- Thermal stability of enclosure;
- Resistance of insulating material to heat;
- Resistance to ultraviolet (UV) radiation;
- Mechanical impact test;
- Degree of protection of enclosures;
- Clearance and creepage distance.

\* SwiTEK is not only limited to the above test items, it can do corresponding verification tests according to the customized requirements of industry customers.

Scheme integrity

Multiple solution series	Modular system	Functional design
SD type: Fixed partition switch cabinet; SA type: Dual power switch cabinet; SX type: Drawer switch cabinet; SQ type: Capacitor cabinet; SM type: Motor protection cabinet; SS type: Frequency converter cabinet.	Standardized Components; Modular drawer; Standard cabinet; Standard process; Standard Manufacturing.	Optimized size; Reasonable arrangement; Small footprint; Convenient maintenance and inspection; Convenient function prefabrication upgrade function innovation.

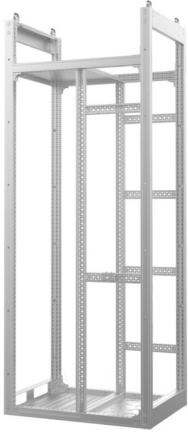
Function innovation

Shaped skeleton - SiK profile	High profile strength
The high-strength corner joint structure meets the requirements of national green manufacturing strategy.	SiK profile has 12% higher torsional strength than C profile. SiK profiles have 48% higher tensile strength than C profiles. The bending strength of SiK profiles is 44% higher than that of C profiles.
Drawer	Corner joint
Double bending, steel riveting, positioning bayonet; Base plate "T" hole, components more convenient installation.	High strength bolt and positioning sleeve connection, easy to install, greatly improve the strength of the frame.
Easy installation	Multiple bending process
Sliding insulator installation is flexible, reliable and convenient.	8 fold bending rear door process, with high strength and reliability.



## Technical data and functional unit

Parameters		Main data	
Electric data	Rated insulation voltage (Ui)		1000V
	Rated operating voltage (Ue)		Up to 690VAC
	Rated frequency (F)		50/60 Hz
	Rated impulse voltage(Uimp)		12 kV
	Rated voltage of secondary loop		230 V AC max
	Overvoltage class		IV
	Class of pollution		3
	Rated current of main bus		6300A
	Rated short-time withstand current of main bus(Icw/1s)		Up to 100 kA rms
	Main rated peak withstand current (Ipk)		Up to 220 kA
	Rated current of distribution bus		Up to 2000 A
	Rated short-time withstand current of distribution bus(Icw/1s)		Up to 50 kA rms
	Distribution rated peak withstand current (Ipk)		Up to 105 kA
	Structured data	Size	Height
Width			600,800,1000,1200mm
Depth			800, 1000, 1200 mm
Cabinet material		Skeleton	Aluminized zinc
		Internal compartment next door and component mounting plate	Aluminum coated zinc/Hot dip zinc/non-metal
		Mounting beam	Aluminum coated zinc/hot dip zinc
		Case bright grey	RAL 7035
		enclosure protection class(IP)	To IP30-IP41
Connection mode		Internal separation form	Form 2b / 3b / 4a / 4b
		Cable access	Top/bottom
		Mode of connection	Front/back
		Maintenance mode	Front maintenance/post maintenance
Satisfying criteria			IEC/EN61439-2
			GB/T7251.12、GB/T7251.8
Lab report		CCC	CQCC
		Type tests	National authority test station
Install			Indoor/outdoor room
		EMC	Class 2



SwiTEK frame structure  
special-shaped skeleton



SwiTEK high strength  
skeleton design



SiK hinged closed profile

### Cabinet

SwiTEK low pressure withdrawable switchgear, the shell can be provided according to the requirements of different shell protection levels, IP30-IP41. The cabinet shell is coated with epoxy resin powder, the standard color is RAL7035, and the ventilation baffle is dark gray RAL7016. All the non-live parts of the metal structure are reliably grounded, and there are obvious grounding signs to ensure the safety of the operator.

### Skeleton

The cabinet frame of SwiTEK low pressure withdrawable switchgear is formed by the special-shaped skeleton of imported aluminum-zinc plate formed by one draw and connected by self-tapping locking screws. Cabinet parts are maintenance-free, and the entire switch cabinet has no solder joints, which can be maintenance-free for 30 years.

### There are 2 height sizes

- 2200mm For a switch cabinet In or less than 4000A;
- 2350mm For a switch cabinet that is less than 4000A but less than 6300A;

### There are 3 width sizes

- 400/600mm Used for feeder cabinets;
- 800/1000mm for busbar and cable entry cabinets (2500A-4000A);

### There are 4 depth sizes

- 600mm Cables are routed from the bottom of the cabinet;
- 800mm cables are used for inlet and outlet cables at the bottom of the cabinet;
- 1000mm cables are routed from the upper and rear parts of the cabinet;
- 1200mm is used to outlet cables from the upper and rear parts of the cabinet.



SwiTEK Chest of drawers

### Compartment composition

SwiTEK switchgear consists of four different compartments, which are:

- Bus compartment
- Component compartment
- Outlet cable compartment
- Accessory compartment

Partitions are used to isolate each area.

The main busbar and distribution busbar are arranged in the busbar room.

Switching components such as circuit breakers, contactors, frequency converters, capacitors, etc. are installed in the component chamber.

Inlet and outlet cables, connecting cables between functional units and accessories can be placed in the cable room.

### Functional unit

The functional unit adopts modular design, the height of the unit chamber is a multiple of E (1E=25mm), and the effective installation height is 72E. The functional unit room can be in the form of a fixed partition structure or a drawer structure, which can be divided into separate cabinets or mixed installation.

Each functional unit is installed in a separate compartment with a mechanical door lock, and all live conductor parts are separately isolated using insulating materials. There is a mechanical interlock in the cabinet to ensure that the door cannot be opened when the switch is closed.

### Fixed partition design

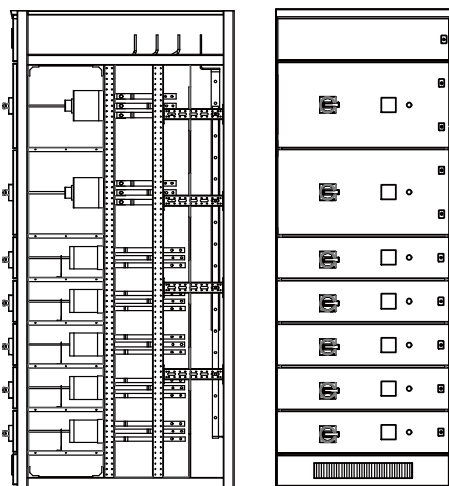
The switch cabinet is divided into functional units, and the circuit breaker is fixed and installed in the plug-in type or withdrawal type. The input and outlet lines of the unit are connected through the circuit breaker body and the base, so as to ensure the safety and reliability of on-site replacement and maintenance.

- Fixed partition unit for drawer type air breaker. The circuit breaker can be directly connected to the main bus line installation, for incoming line, bus and high current feeder. The height of the chamber is a multiple of 8E and can be determined according to the size of the rated capacity.

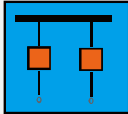

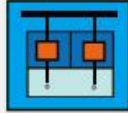
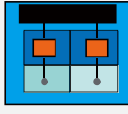
- Fixed partition unit for plug-in or drawer plastics-case breakers for feeding, lighting and motor protection (up to 630A). The unit chamber is installed in a 600mm wide space and can be divided into three heights: 8E, 16E and 24E.

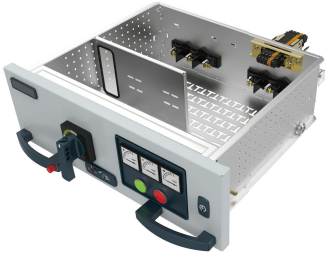
Each modular unit adopts a separate door, the electrical scheme is flexible, the combination is convenient, the contact is reliable and the protection level is high

- The current carrying capacity of the distribution bus can be greater than the upper limit of the drawer cabinet.

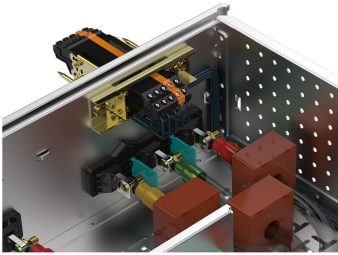


## Frame and cabinet structure introduction

Function	Separation form	Rated current	Structure separation type
Incoming cabinet	Form 1	630A~6300A	 Form 1
Busbar connection cabinet	Form 3a	Enter cables to 6300A and the busbar to 4000A	
Feeder cabinet	Form 4b	Feeder to 2000A	 Form 2
Incoming cables and busbar cabinets	Form 1		 3b
Feeder and busbar cabinet	Form 1		 4b



SwiTEK High quality low pressure drawer



Highly reliable plug process drawer



8E/4 drawers



8E/2 drawers

### Drawer design

Drawer unit is composed of drawers and installation compartment, drawer unit standard loop design has 8E/4, 8E/2, 8E, 16E and 24E five specifications. The 8E/4 or 8E/2 drawers can be installed horizontally in a 600mm wide unit compartment with a height of 8E. 8E, 16E and 24E individual drawers require 600mm wide compartments. The secondary plug-in adopts modular design, the plug-in can be used up to 16 to 32 lines, if necessary, the secondary plug-in can be tested. Fully able to meet the requirements of intelligent control.

### Drawer scheme

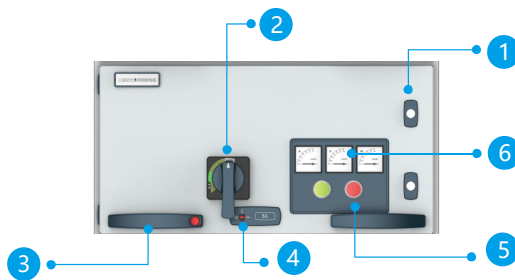
- Equipped with isolation switch fuse group;
- Equipped with plastic case circuit breaker;
- Motor protector with fuse;
- Motor protector with moulded case circuit breaker;
- Motor protector with motor control and protection device;

### Drawer specification

- 8E/4、8E/2、8E、16E和24E

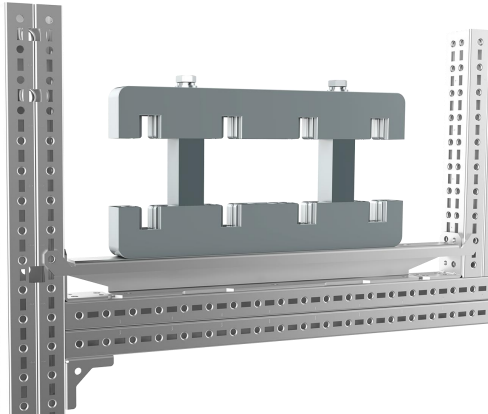
### Drawer interface

1. Drawer lock;
2. Main switch switching handle;
3. Drawer handle;
4. Drawer position indicator window;
5. Switch status light;
6. Meter.



Drawer interface layout

### Bus system



The busbar frame support is fixed with multi-point support

#### ■ Main bus-bar

- SwiTEK switch cabinet bus layout can be placed on the top of the cabinet, rated current up to 6300A.
- The convenience of installation, maintenance and later expansion is fully considered while meeting the best current carrying capacity of the bus.

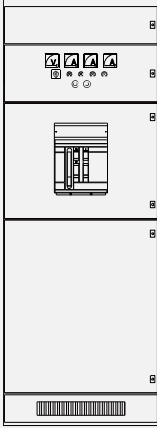
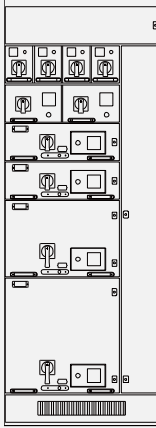
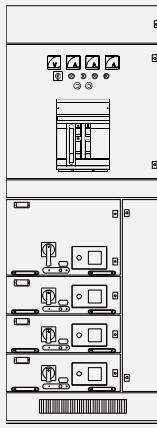
#### ■ Vertical bus

- Enhanced dynamic stability, rated current up to 2000A.
- The vertical bus bar is protected against electric shock to ensure operator safety.

#### ■ Protective conductor and neutral conductor

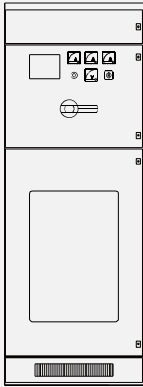
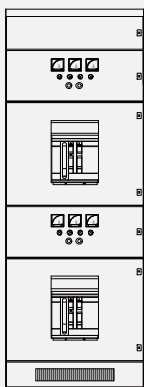
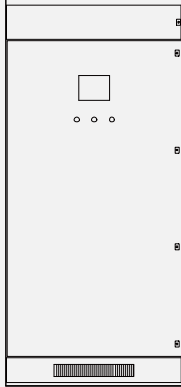
- The main protection ground cable and neutral wire (PE+N) or protective neutral wire (PEN) are installed horizontally at the bottom of the cabinet and run through the entire system. If N rows are required in a solution, they can also be installed on the top of the cabinet. The PE+N or PEN branches are vertically installed in the cable compartment of each power supply cabinet.
- PE+N and PEN bars are provided with module holes for easy cable connection.

For power distribution, power factor compensation and motor protection

Cabinet type	SD	SX	
Function			
	Distribution cabinet	Chest of drawers	Mixed drawer cabinet
Distribution bus			
Rated current/rated capacity	3200A and below	2100A and below	
Rated peak withstand current	63,105,176kA	63、105kA	
Rated short-time withstand current	30、50、80kA	30、50kA	
Output			
Electromotor	-	630A and below	
Distribution	2500A and below	2100A and below	2100A and below
Mechanical characteristics			
Total height	2200mm*		
Effective height	1800mm		
Breadth	600、800、1000、200mm	600、800、1000、1200mm	
Depth	600、800、1000mm		
Functional unit type	FFF	WWW	WWW
Separation form	1/2b/3b/4b	3b/4b	3a/3b/4b

\* Please contact the Huatech Marketing Department for special cabinet height selection.

## Introduction of the scheme

Cabinet type	SQ	SA	SS
Function			
	Capacitor box	Dual power cabinet	Variable frequency soft cabinet lifting
Distribution bus			
Rated current/rated capacity	400kvar and below	4000A and below	3200A and below
Rated peak withstand current	30kA	63、105、176kA	
Rated short time current	15kA	30、50、80kA ms/1s	
Output			
Electromotor	-	-	2500kW及以下
Distribution	-	4000A and below	-
Mechanical characteristics			
Total height	2200mm*		
Effective height	1800mm		
Breadth	600、800、1000mm	800、1000、1200mm	600、800、1000、1200mm
Depth	600、800、1000mm		
Functional unit type	FFF		
Separation form	1		

\* Please contact the Huatech Marketing Department for special cabinet height selection.



### SwiTEK-SD cabinet

#### Inlet, busbar, feeder scheme

- Fixed partition structure;
- Protection requirements for high-power incoming, feeder, busbar; and dual power conversion;
- Up to 3 frame circuit breakers can be installed.

#### Structure

- Metal frame: Bent metal plate
- Skeleton structure: SiK profile structure design
- Spraying: high temperature polymerization of epoxy resin powder.

#### Connect

- post-connection;
- Top or bottom inlet and outlet lines.

#### Switch element

- Configure WeTEK series frame circuit breaker;
- Three or four poles.



SwiTEK-SD cabinet



WeTEK series air circuit breakers

## SwiTEK-SX cabinet

### Feeder scheme

- The drawer cabinet conforms to the user's habit, the operation is simple and practical;
- Drawer modulus is more flexible: 8E/4, 8E/2, 8E, 16E, 24E;
- Cabinet of drawers can be mixed PCC,MCC solution;
- Use the classic double chuck to avoid wear distribution bus;
- Vertical bus load up to 2100A;
- The SX drawer mix cabinet can be equipped with air circuit breakers up to 2500A.

### Construction

- Metal frame: bent metal plate;
- Skeleton structure: SiK profile structure design;
- Spraying: high temperature polymerization of epoxy resin powder.

### Connect

- Post-connection;
- Top or bottom inlet and outlet lines.

### Switch element

- Equipped with MeTEK series plastic-case circuit breaker;
- Three or four poles.



8E/4 drawer



MeTEK series plastic-case circuit breakers

### SwiTEK-SQ cabinet

#### Capacitance compensation cabinet

- Provide customers with a variety of cost-effective reactive power compensation schemes under different harmonic pollution environments, and provide three-phase co-compensating capacitors and three-phase compensating capacitors for three-phase balanced and unbalanced loads respectively;
- VarTEK series of traditional low-voltage compensation products, higher product performance, more suitable for harsh application environments, more voltage levels, especially suitable for industrial reactive power compensation.

#### Construction

- Metal frame: bent metal plate;
- Skeleton structure: SiK profile structure design;
- Spraying: high temperature polymerization of epoxy resin powder.

#### Connect

- Post-connection;
- Top or bottom inlet and outlet lines.

#### Switch element

- VarTEK series capacitors are configured.

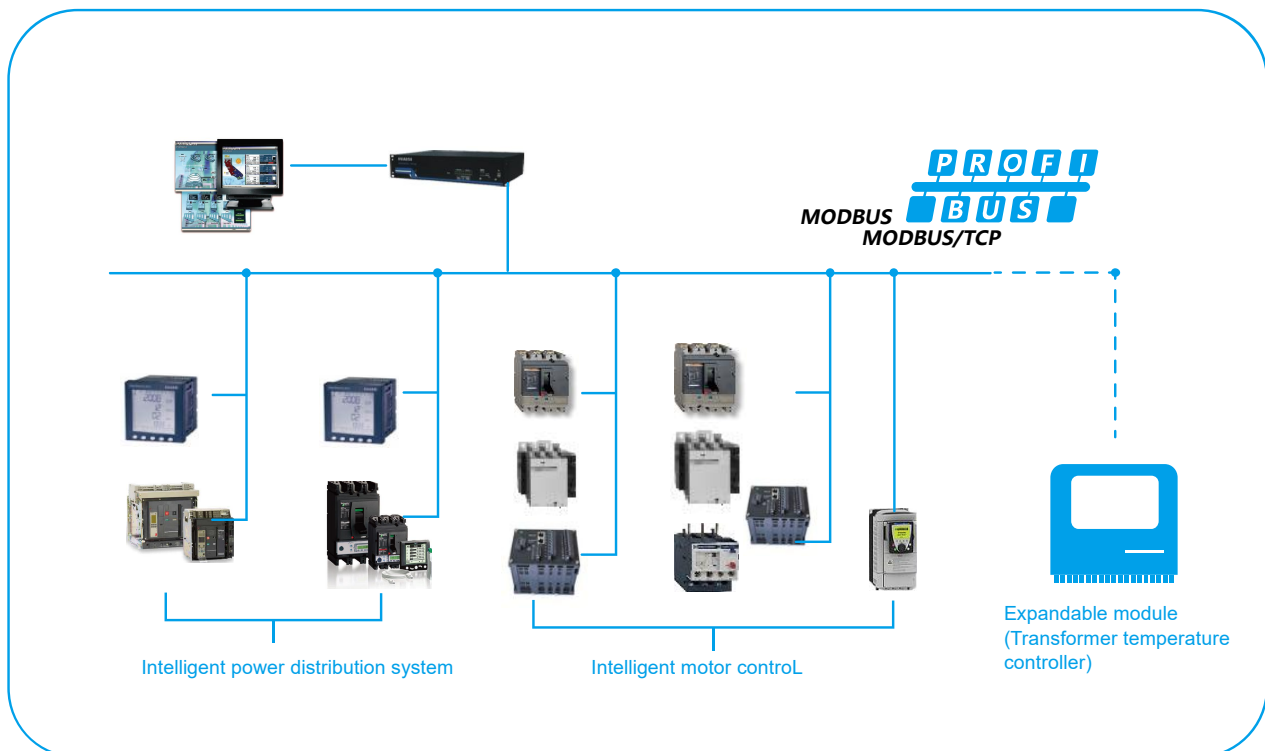


SwiTEK capacitor compensation cabinet

### Intelligent power distribution and motor control management system

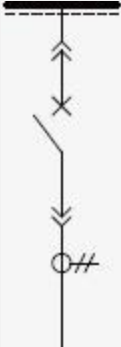

Based on common TCP/IP Ethernet technology and Web technology, SwiTEK intelligent motor and Feeder management System (iMPCS) has a transparent and open network architecture, providing the most complete intelligent low-voltage solution for power distribution and motor control center. The AP130 intelligent motor control unit does not require a gateway and supports common industrial bus protocols such as Profibus, modbus, ethernet, etc., so that the AP130 can be directly integrated into HMI and electrical SCADA. SwiTEK's custom-made Grid SCADA monitoring software captures motor dynamics over the network, enabling preventive maintenance, process monitoring and advanced diagnostics for each motor and feeder loop, and provides a basis for decision-making on system energy saving solutions.

In addition, the open network architecture of the Grid SCADA monitoring software makes it compatible with third-party products, as long as the product meets the open conditions for information exchange in terms of communication.

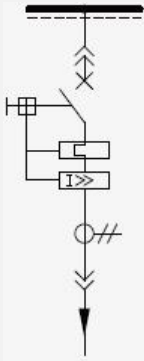


# Electric scheme

## A recommended system solution

Scheme number	SD-01			SD-02		
Use	Incoming cabinet, outgoing cabinet, and liaison cabine					
Primary scheme						
Pole	3P、4P	3P/4P	3P/4P	3P/4P	3P/4P	3P/4P
Unit height 1E=25mm	32E	32E	72E	72E	72E	72E
Rated current In	1250A	2500A	3200A	4000A	5000A	6300A
Switch type	WeTEK65B/ N04-16 WeTEK97B/N/H08- 16	WeTEK65B/N25 WeTEK97B/N/ H25	WeTEK67N/S32 WeTEK97B/N/ H32	WeTEK67N/S40 WeTEK97B/N/ H40	WeTEK99N/H50	WeTEK99N/H63
CT	The number of mutual inductances can be installed according to user needs					
Minimum cabinet width	600mm/ 800mm	600mm/800mm	800mm/1000mm	1000mm	1000mm/ 1200mm	1200mm
Total installed circuit breakers	2	2	1	1	1	1
Wiring method						
Note	<p>1. Switch types are recommended products, if there are special requirements, you can consult Huatech engineers.</p> <p>2. The above solution can be used in the incoming cabinet, outgoing cabinet, and contact cabinet. Generally, only one circuit breaker is installed when the contact cabinet is used.</p>					

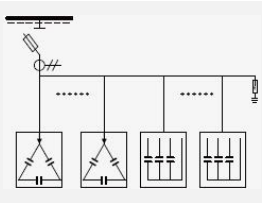
A recommended system solution

Scheme number	SX-01				
Use	Pure capacitance compensation scheme				
Primary scheme					
Pole	3P	3P	3P、4P	3P、4P	3P、4P
Unit height 1E=25mm	8E/4	8E/2	8E	16E	24E
Rated current In	32A	64A	250A	400A	630A
Switch type	CPTEK	MeTEK1C/N	MeTEK1C/N MeTEK2C/N	MeTEK3C/N	MeTEK3C/N
CT	1	1	3	3	3
Cabinet width * Cabinet depth	600/800/1000mm*1000mm、 1000mm*800/600mm		800mm*600/800mm*		
Wiring method	When the width of the cabinet is 600mm, the rear cable can be connected up and down. When the cabinet is 1000mm wide or 800mm wide, cables can be routed from one side and connected from top to bottom. * Indicates not recommended size.				
Note	<ol style="list-style-type: none"> <li>Switch types are recommended products, if you have special requirements, you can consult Huadian engineers.</li> <li>When the rated current exceeds 630A, the drawer solution is not recommended.</li> </ol>				

## A recommended system solution

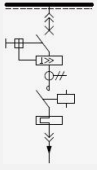
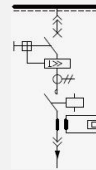
Scheme number	SQ-01						
Use	Pure capacitance compensation scheme						
Primary scheme							
Network voltage	400V						
Capacity	90KVAR	120KVAR	150KVAR	180KVAR	210KVAR	240KVAR	300KVAR
Unit height 1E=25mm	72E	72E	72E	72E	72E	72E	72E
Total reactive rated current	132A	174A	216A	258A	301A	344A	430A
Disconnector	QSA250(NH1-200A)	QSA250(NH1-250A)	QSA400(NH2-315A)	QSA400(NH2-400A)	QSA630(NH3-500A)	QSA630(NH3-500A)	QSA630(NH3-630A)
Intelligent capacitor	VarTEKZDG-450-30 2 VarTEKZDF-250-15 2	VarTEKZDG-450-40 2 VarTEKZDF-250-20 2	VarTEKZDG-450-30 3 VarTEKZDF-250-20 2	VarTEKZDG-450-40 3 VarTEKZDF-250-20 3	VarTEKZDG-450-40 3 VarTEKZDF-250-20 3	VarTEKZDG-450-40 4 VarTEKZDF-250-20 4	VarTEKZDG-450-40 5 VarTEKZDF-250-20 5
CT	3	3	3	3	3	3	3
Automatic compensation controller	AP230F-32G/F	AP230F-32G/F	AP230F-32G/F	AP230F-32G/F	AP230F-32G/F	AP230F-32G/F	AP230F-32G/F
Cabinet width * Cabinet depth	600mm*1000mm	600mm*1000mm	600mm*1000mm	600mm*1000mm	800mm*1000mm	800mm*1000mm	1000mm*1000mm
The solutions listed in the table are single-cabinet solutions. If the compensation capacity exceeds 300KVAR, contact engineers. The arrester can choose zinc oxide or surge protection.							
Network voltage	400V						
Capacity	360KVAR	420KVAR		480KVAR		600KVAR	
Unit height 1E=25mm	72E	72E	72E	72E	72E	72E	72E
Total reactive rated current	430A	344A	258A	344A	344A	430A	430A
Disconnector	QSA800(NH3-800A)	QSA630(NH3-500A)		QSA400(NH2-400A)	QSA630(NH3-500A)	QSA630(NH3-500A)	QSA630(NH3-630A)
Disconnector	VarTEKZDG-450-40 6	VarTEKZDG-450-40 4	VarTEKZDG-450-40 3	VarTEKZDG-450-40 4	VarTEKZDG-450-40 4	VarTEKZDG-450-40 5	VarTEKZDG-450-40 5
Intelligent capacitor	VarTEKZDF-250-20 6	VarTEKZDF-250-20 4	VarTEKZDF-250-20 3	VarTEKZDF-250-20 4	VarTEKZDF-250-20 4	VarTEKZDF-250-20 5	VarTEKZDF-250-20 5
CT	3	3	3	3	3	3	3
Automatic compensation controller	AP230F-32G/F	AP230F-32G/F		AP230F-32G/F		AP230F-32G/F	
Cabinet width * Cabinet depth	1200mm*1000mm	800mm*1000mm	600mm*1000mm	800mm*1000mm	800mm*1000mm	1000mm*1000mm	1000mm*1000mm
		Main cabinet 240KVAR	Auxiliary cabinet 180KVAR	Main cabinet 240KVAR	Auxiliary cabinet 300KVAR	Main cabinet 300KVAR	Auxiliary cabinet 300KVAR
* The solutions listed in the table include the main and auxiliary cabinets. If the compensation capacity exceeds 300KVAR, contact engineers. The arrester can choose zinc oxide or surge protection.							

## A recommended system solution

Scheme number	SQ-02													
Use	Tuned capacitance compensation scheme													
Primary scheme														
Network voltage	400V													
Capacity	90KVAR	120KVAR	150KVAR	180KVAR	210KVAR	240KVAR	300KVAR							
Unit height 1E=25mm	72E	72E	72E	72E	72E	72E	72E	72E						
Total reactive rated current	132A	174A	216A	258A	301A	344A	430A							
Disconnecter	QSA250(NH1-200A)	QSA250(NH1-250A)	QSA400(NH2-315A)	QSA400(NH2-400A)	QSA630(NH3-500A)	QSA630(NH3-500A)	QSA630(NH3-630A)	QSA630(NH3-630A)						
Intelligent capacitor	VarTEKSG-480-30-7	2	VarTEKSG-480-40-7	2	VarTEKSG-480-30-7	3	VarTEKSG-480-40-7	3	VarTEKSG-480-40-7	4	VarTEKSG-480-40-7	5		
	VarTEKSF-280-15-7	2	VarTEKSF-280-20-7	2	VarTEKSG-480-20-7	1	VarTEKSF-280-20-7	3	VarTEKSG-480-30-7	1	VarTEKSF-280-20-7	4	VarTEKSF-280-20-7	5
CT	3	3	3	3	3	3	3	3						
Automatic compensation controller	AP230F-32G/F	AP230F-32G/F	AP230F-32G/F	AP230F-32G/F	AP230F-32G/F	AP230F-32G/F	AP230F-32G/F	AP230F-32G/F						
Cabinet width * Cabinet depth	600mm*1000mm	600mm*1000mm	800mm*1000mm	800mm*1000mm	800mm*1000mm	800mm*1000mm	800mm*1000mm	1000mm*1000mm						
Network voltage	400V													
Capacity	360KVAR	420KVAR		480KVAR		600KVAR								
Unit height 1E=25mm	72E	72E	72E	72E	72E	72E	72E	72E						
Total reactive rated current	430A	344A	258A	344A	344A	430A	430A							
Disconnecter	QSA800(NH3-800A)	QSA630(NH3-500A)	QSA400(NH2-400A)	QSA630(NH3-500A)	QSA630(NH3-500A)	QSA630(NH3-500A)	QSA630(NH3-630A)	QSA630(NH3-630A)						
Intelligent capacitor	VarTEKSG-480-40-7	6	VarTEKSG-480-40-7	4	VarTEKSG-480-40-7	3	VarTEKSG-480-40-7	4	VarTEKSG-480-40-7	4	VarTEKSG-480-40-7	5	VarTEKSG-480-40-7	5
	VarTEKSF-280-20-7	6	VarTEKSF-280-20-7	4	VarTEKSF-280-20-7	3	VarTEKSF-280-20-7	4	VarTEKSF-280-20-7	4	VarTEKSF-280-20-7	5	VarTEKSF-280-20-7	5
CT	3	3	3	3	3	3	3	3						
Automatic compensation controller	AP230F-32G/F	AP230F-32G/F		AP230F-32G/F		AP230F-32G/F								
Cabinet width * Cabinet depth	1200mm*1000mm	800mm*1000mm	800mm*1000mm	800mm*1000mm	800mm*1000mm	800mm*1000mm	1000mm*1000mm	1000mm*1000mm						
		Main cabinet 240KVAR	Auxiliary cabinet 180KVAR	Main cabinet 240KVAR	Main cabinet 300KVAR	Auxiliary cabinet 300KVAR	Main cabinet 300KVAR							
* The solutions listed in the table include the main and auxiliary cabinets. If the compensation capacity exceeds 300KVAR, contact engineers. The arrester can choose zinc oxide or surge protection.														

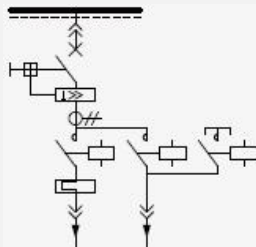
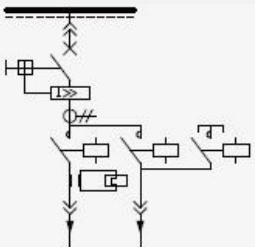


## A recommended system solution

Scheme number		SM-01							
Use		Motor control - direct start							
Primary scheme									
P(KW)	I(A)380V	Unit height 1E=25mm	Circuit breaker type	Release type	In(A)	Contactor type number	Thermal relay type	Current setting A	Note
0.06	0.22	8E/4	CPTEK-1.6M		0.22A	OTEK-0910	JR28-25/D102	0.16---0.25	
0.09	0.35	8E/4	CPTEK-1.6M		0.35A	OTEK-0910	JR28-25/D103	0.25---0.4	
0.12	0.42	8E/4	CPTEK-1.6M		0.42A	OTEK-0910	JR28-25/D104	0.4---0.63	
0.18	0.7	8E/4	CPTEK-1.6M		0.7A	OTEK-0910	JR28-25/D105	0.63---1	
0.37	1.2	8E/4	CPTEK-1.6M		1.2A	OTEK-0910	JR28-25/D106	1---1.6	
0.55	1.6	8E/4	CPTEK-1.6M		1.6A	OTEK-0910	JR28-25/D106	1---1.6	
0.75	2	8E/4	CPTEK-2.5M		2A	OTEK-0910	JR28-25/D107	1.6---2.5	
1.1	2.2	8E/4	CPTEK-2.5M		2.2A	OTEK-0910	JR28-25/D108	2.5---4	
1.5	2.8	8E/4	CPTEK-4M		2.8A	OTEK-0910	JR28-25/D108	2.5---4	
2.2	5.3	8E/4	CPTEK-6.3M		5.3A	OTEK-0910	JR28-25/D110	4---6	
3	7	8E/4	CPTEK-9M		7A	OTEK-0910	JR28-25/D114	7---10	
4	9	8E/2	CPTEK-9M		9A	OTEK-0910	JR28-25/D114	7---10	
5.5	12	8E/2	CPTEK-12M		12A	OTEK-1210	JR28-25/D116	9---13	
7.5	16	8E/2	CPTEK-16M		16A	OTEK-1810	JR28-25/D121	12---18	
9	18.1	8E/2	CPTEK-25M		18.1A	OTEK-1810	JR28-25/D122	17---25	
11	23	8E/2	CPTEK-25M		23A	OTEK-2510	JR28-25/D122	17---25	
15	30	8E/2	CPTEK-32M		30A	OTEK-3210	JR28-36/D253	23---32	
18.5	37	8E/2	MeTEK1C/N	M In=50A		OTEK-4011	JR28-36/D255	30---40	
22	44	8E/2	MeTEK1C/N	M In=50A		OTEK-5011	JR28-36/D255	30---40	
30	59	8E/2	MeTEK1C/N	M In=80A		OTEK-6511	JR28-93/D359	48---65	
37	72	8E	MeTEK1C/N	M In=80A		OTEK-8011	JR28-200/F567	60---100	
45	85	8E	MeTEK1C/N	M In=100A		OTEK-9511	JR28-200/F567	60---100	
55	105	8E	MeTEK1C/N	M In=125A		OTEK-150	JR28-25/D110		
75	140	8E	MeTEK1C/N	M In=160A		OTEK-150	JR28-25/D110		
90	170	16E	MeTEK2C/N	M In=180A		OTEK-185	JR28-25/D110		
110	210	16E	MeTEK2C/N	M In=225A		OTEK-265	JR28-25/D110		
132	250	16E	MeTEK3C/N	M In=315A		OTEK-330	JR28-25/D110	4---6	Secondary current 5A
160	300	16E	MeTEK3C/N	M In=315A		OTEK-330	JR28-25/D110		
200	380	24E	MeTEK3C/N	M In=400A		OTEK-400	JR28-25/D110		
220	420	24E	MeTEK3C/N	M In=500A		OTEK-500	JR28-25/D110		
250	480	24E	MeTEK3C/N	M In=500A		OTEK-500	JR28-25/D110		

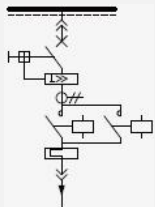
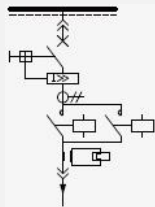
\* Note: In the scheme, the motor Ijs is based on Un=380V, cosφ=0.85, η=0.95, P(motor poles)=4.

A recommended system solution

Scheme number		SM-02								
Use		Motor control - Star triangle start								
Primary scheme										
P(KW)	I(A)380V	Unit height 1E=25mm	Circuit breaker type	Release type	Main contactor type number	Contactor type number $\Delta$ r	Contactor type number $\Delta$	Thermal relay type	Current setting A	Note
18.5	37	8E	MeTEK1C/N	M In=50A	OTEK-4011	OTEK-4011	OTEK-2510	JR28-36/D255	30---40	
22	44	8E	MeTEK1C/N	M In=50A	OTEK-5011	OTEK-5011	OTEK-3210	JR28-36/D255	30---40	
30	59	8E	MeTEK1C/N	M In=80A	OTEK-6511	OTEK-6511	OTEK-4011	JR28-93/D359	48---65	
37	72	8E	MeTEK1C/N	M In=80A	OTEK-6511	OTEK-6511	OTEK-4011	JR28-200/F567	60---100	
45	85	16E	MeTEK1C/N	M In=100A	OTEK-8011	OTEK-8011	OTEK-4011	JR28-200/F567	60---100	
55	105	16E	MeTEK1C/N	M In=125A	OTEK-115	OTEK-115	OTEK-6511	JR28-200/F569	90---150	
75	140	24E	MeTEK1C/N	M In=160A	OTEK-150	OTEK-150	OTEK-8011	JR28-25/D110	4---6	Second ary current 5A
90	170	24E	MeTEK2C/N	M In=180A	OTEK-185	OTEK-185	OTEK-9511			
110	210	24E	MeTEK2C/N	M In=225A	OTEK-265	OTEK-265	OTEK-150			
132	250	24E	MeTEK3C/N	M In=315A	OTEK-330	OTEK-330	OTEK-185			

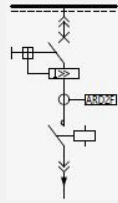
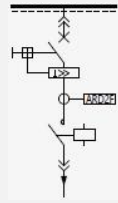
\* Note: In the scheme, the motor Ijs is based on Un=380V, cosφ=0.85, η=0.95, P(motor poles)=4.

## A recommended system solution

Scheme number		SM-03							
Use		Motor control - reverse start							
Primary scheme									
P(KW)	I(A)380V	Unit height 1E=25mm	Circuit breaker type	Release type	In(A)	Contactor type number	Thermal relay type	Current setting A	Note
0.37	1.2	8E/2	CPTEK-1.6M		1.2A	OTEK-0910	JR28-25/D106	1---1.6	
0.55	1.6	8E/2	CPTEK-1.6M		1.6A	OTEK-0910	JR28-25/D106	1---1.6	
0.75	2	8E/2	CPTEK-2.5M		2A	OTEK-0910	JR28-25/D107	1.6---2.5	
1.1	2.2	8E/2	CPTEK-2.5M		2.2A	OTEK-0910	JR28-25/D108	2.5---4	
1.5	2.8	8E/2	CPTEK-4M		2.8A	OTEK-0910	JR28-25/D108	2.5---4	
2.2	4.7	8E/2	CPTEK-6.3M		4.7A	OTEK-0910	JR28-25/D110	4---6	
3	7	8E/2	CPTEK-9M		7A	OTEK-0910	JR28-25/D114	7---10	
4	9	8E/2	CPTEK-9M		9A	OTEK-0910	JR28-25/D114	7---10	
5.5	12	8E/2	CPTEK-12M		12A	OTEK-1210	JR28-25/D116	9---13	
7.5	16	8E/2	CPTEK-16M		16A	OTEK-1810	JR28-25/D121	12---18	
9	18.1	8E/2	CPTEK-25M		18.1A	OTEK-1810	JR28-25/D122	17---25	
11	23	8E/2	CPTEK-25M		23A	OTEK-2510	JR28-25/D122	17---25	
15	30	8E/2	CPTEK-32M		30A	OTEK-3210	JR28-36/D253	23---32	
18.5	37	8E	MeTEK1C/N	M In=50A		OTEK-4011	JR28-36/D255	30---40	
22	44	8E	MeTEK1C/N	M In=50A		OTEK-5011	JR28-36/D255	30---40	
30	59	8E	MeTEK1C/N	M In=80A		OTEK-6511	JR28-93/D359	48---65	
37	72	8E	MeTEK1C/N	M In=80A		OTEK-8011	JR28-200/F567	60---100	
45	85	8E	MeTEK1C/N	M In=100A		OTEK-9511	JR28-200/F567	60---100	
55	105	8E	MeTEK1C/N	M In=125A		OTEK-115	JR28-200/F569	90---150	
75	140	8E	MeTEK1C/N	M In=160A		OTEK-115	JR28-200/F569	90---150	
90	170	8E	MeTEK1C/N	M In=180A		OTEK-150	JR28-25/D110	4---6	Secondary current 5A
110	210	16E	MeTEK2C/N	M In=225A		OTEK-185	JR28-25/D110		
132	250	16E	MeTEK2C/N	M In=315A		OTEK-265	JR28-25/D110		
160	300	16E	MeTEK3C/N	M In=315A		OTEK-330	JR28-25/D110		
		16E	MeTEK3C/N	M In=315A		OTEK-330	JR28-25/D110		

\* Note: In the scheme, the motor Ijs is based on Un=380V, cosφ=0.85, η=0.95, P(motor poles)=4.

## A recommended system solution

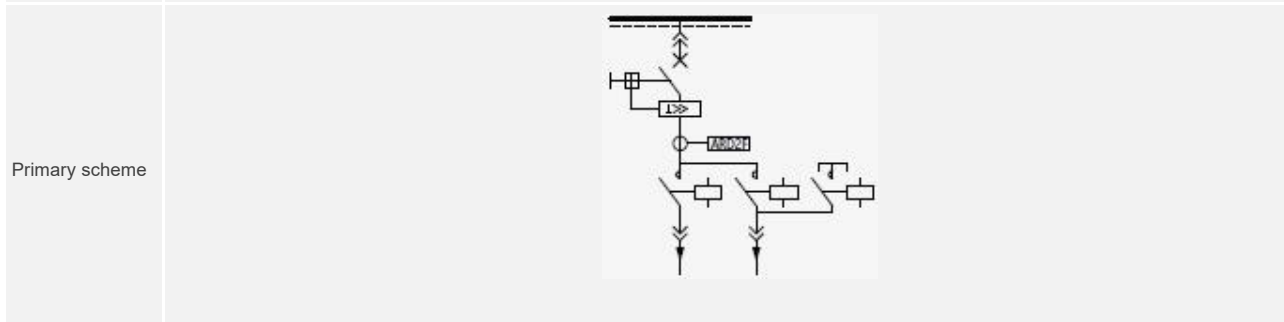
Scheme number		SM-04							
Use		Motor Control - Direct start with motor controller							
Primary scheme									
P(KW)	I(A)380V	Unit height 1E=25mm	Circuit breaker type	Release type	Contactor type number	Motor protection type	Current setting A	Note	
0.37	1.2	8E/2	MeTEK1C/N	M In=10A	OTEK-0910	ARD2F-1.6	0.4---1.6		
0.55	1.6	8E/2	MeTEK1C/N	M In=10A	OTEK-0910	ARD2F-1.6	0.4---1.6		
0.75	2	8E/2	MeTEK1C/N	M In=10A	OTEK-0910	ARD2F-6.3	1.6---6.3		
1.1	2.2	8E/2	MeTEK1C/N	M In=10A	OTEK-0910	ARD2F-6.3	1.6---6.3		
1.5	2.8	8E/2	MeTEK1C/N	M In=10A	OTEK-0910	ARD2F-6.3	1.6---6.3		
2.2	5.3	8E/2	MeTEK1C/N	M In=10A	OTEK-0910	ARD2F-6.3	1.6---6.3		
3	7	8E/2	MeTEK1C/N	M In=16A	OTEK-0910	ARD2F-25	6.3---25		
4	9	8E/2	MeTEK1C/N	M In=16A	OTEK-0910	ARD2F-25	6.3---25		
5.5	12	8E/2	MeTEK1C/N	M In=16A	OTEK-1210	ARD2F-25	6.3---25		
7.5	16	8E/2	MeTEK1C/N	M In=25A	OTEK-1810	ARD2F-25	6.3---25		
9	18.1	8E/2	MeTEK1C/N	M In=25A	OTEK-1810	ARD2F-25	6.3---25		
11	23	8E/2	MeTEK1C/N	M In=25A	OTEK-2510	ARD2F-25	6.3---25		
15	30	8E	MeTEK1C/N	M In=40A	OTEK-3210	ARD2F-100	25---100		
18.5	37	8E	MeTEK1C/N	M In=50A	OTEK-4011	ARD2F-100	25---100		
22	44	8E	MeTEK1C/N	M In=50A	OTEK-5011	ARD2F-100	25---100		
30	59	8E	MeTEK1C/N	M In=80A	OTEK-6511	ARD2F-100	25---100		
37	72	8E	MeTEK1C/N	M In=80A	OTEK-8011	ARD2F-100	25---100		
45	85	8E	MeTEK1C/N	M In=100A	OTEK-9511	ARD2F-100	25---100		
55	105	8E	MeTEK1C/N	M In=125A	OTEK-115	ARD2F-250	63---250		
75	140	8E	MeTEK1C/N	M In=160A	OTEK-150	ARD2F-250	63---250		
90	170	16E	MeTEK2C/N	M In=180A	OTEK-185	ARD2F-250	63---250		
110	210	16E	MeTEK2C/N	M In=225A	OTEK-265	ARD2F-250	63---250		
132	250	16E	MeTEK3C/N	M In=315A	OTEK-330	ARD2F-250	63---250		
160	300	16E	MeTEK3C/N	M In=315A	OTEK-330	ARD2F-800	250---800		
200	380	24E	MeTEK3C/N	M In=400A	OTEK-400	ARD2F-800	250---800		
220	420	24E	MeTEK3C/N	M In=500A	OTEK-500	ARD2F-800	250---800		
250	480	24E	MeTEK3C/N	M In=500A	OTEK-500	ARD2F-800	250---800		

\* Note: In the scheme, the motor Ijs is based on Un=380V, cosφ=0.85, η=0.95, P(motor poles)=4.

## A recommended system solution

### Scheme number **SM-05**

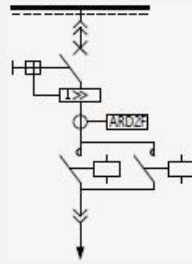
Use: Motor Control - Positive star triangle start with motor controller



P(KW)	I(A)380V	Unit height 1E=25mm	Circuit breaker type	Release type	Main contactor type numbe	Contactor type number <sub>λ</sub>	Contactor type number <sub>Δ</sub>	Motor protection type	Current setting A	Note
18.5	37	8E	MeTEK1C/N	M In=50A	OTEK-4011	OTEK-4011	OTEK-2510	ARD2F-100	25---100	
22	44	8E	MeTEK1C/N	M In=50A	OTEK-5011	OTEK-5011	OTEK-3210	ARD2F-100	25---100	
30	59	8E	MeTEK1C/N	M In=80A	OTEK-6511	OTEK-6511	OTEK-4011	ARD2F-100	25---100	
37	72	8E	MeTEK1C/N	M In=80A	OTEK-6511	OTEK-6511	OTEK-4011	ARD2F-100	25---100	
45	85	16E	MeTEK1C/N	M In=100A	OTEK-8011	OTEK-8011	OTEK-4011	ARD2F-100	25---100	
55	105	16E	MeTEK1C/N	M In=125A	OTEK-115	OTEK-115	OTEK-6511	ARD2F-250	63---250	
75	140	16E	MeTEK1C/N	M In=160A	OTEK-150	OTEK-150	OTEK-8011	ARD2F-250	63---250	
90	170	16E	MeTEK2C/N	M In=180A	OTEK-185	OTEK-185	OTEK-9511	ARD2F-250	63---250	
110	210	24E	MeTEK2C/N	M In=225A	OTEK-265	OTEK-265	OTEK-150	ARD2F-250	63---250	
132	250	24E	MeTEK3C/N	M In=315A	OTEK-330	OTEK-330	OTEK-185	ARD2F-250	63---250	

\* Note: In the scheme, the motor Ijs is based on Un=380V, cosφ=0.85, η=0.95, P(motor poles)=4.

## A recommended system solution

Scheme number		SM-06						
Use		Motor Control - Positive and negative belt motor controller						
Primary scheme								
P(KW)	I(A)380V	Unit height 1E=25mm	Circuit breaker type	Release type	Contactor type numbe	Motor protection type	Current setting A	Note
0.37	1.2	8E/2	MeTEK1C/N	M In=10A	OTEK-0910	ARD2F-1.6	0.4---1.6	
0.55	1.6	8E/2	MeTEK1C/N	M In=10A	OTEK-0910	ARD2F-1.6	0.4---1.6	
0.75	2	8E/2	MeTEK1C/N	M In=10A	OTEK-0910	ARD2F-6.3	1.6---6.3	
1.1	2.2	8E/2	MeTEK1C/N	M In=10A	OTEK-0910	ARD2F-6.3	1.6---6.3	
1.5	2.8	8E/2	MeTEK1C/N	M In=10A	OTEK-0910	ARD2F-6.3	1.6---6.3	
2.2	5.3	8E/2	MeTEK1C/N	M In=10A	OTEK-0910	ARD2F-6.3	1.6---6.3	
3	7	8E/2	MeTEK1C/N	M In=16A	OTEK-0910	ARD2F-25	6.3---25	
4	9	8E/2	MeTEK1C/N	M In=16A	OTEK-0910	ARD2F-25	6.3---25	
5.5	12	8E/2	MeTEK1C/N	M In=16A	OTEK-1210	ARD2F-25	6.3---25	
7.5	16	8E/2	MeTEK1C/N	M In=25A	OTEK-1810	ARD2F-25	6.3---25	
9	18.1	8E/2	MeTEK1C/N	M In=25A	OTEK-1810	ARD2F-25	6.3---25	
11	23	8E/2	MeTEK1C/N	M In=25A	OTEK-2510	ARD2F-25	6.3---25	
15	30	8E	MeTEK1C/N	M In=40A	OTEK-3210	ARD2F-100	25---100	
18.5	37	8E	MeTEK1C/N	M In=50A	OTEK-4011	ARD2F-100	25---100	
22	44	8E	MeTEK1C/N	M In=50A	OTEK-5011	ARD2F-100	25---100	
30	59	8E	MeTEK1C/N	M In=80A	OTEK-6511	ARD2F-100	25---100	
37	72	8E	MeTEK1C/N	M In=80A	OTEK-8011	ARD2F-100	25---100	
45	85	16E	MeTEK1C/N	M In=100A	OTEK-9511	ARD2F-100	25---100	
55	105	16E	MeTEK1C/N	M In=160A	OTEK-115	ARD2F-250	63---250	
75	140	16E	MeTEK1C/N	M In=160A	OTEK-150	ARD2F-250	63---250	
90	170	16E	MeTEK2C/N	M In=225A	OTEK-185	ARD2F-250	63---250	
110	210	24E	MeTEK2C/N	M In=225A	OTEK-265	ARD2F-250	63---250	
132	250	24E	MeTEK3C/N	M In=315A	OTEK-330	ARD2F-250	63---250	
160	300	24E	MeTEK3C/N	M In=315A	OTEK-330	ARD2F-800	250---800	

\* Note: In the scheme, the motor Ijs is based on Un=380V, cosφ=0.85, η=0.95, P(motor poles)=4.

## WeTEK series air circuit breaker



WeTEK series air circuit breaker

WeTEK series air circuit breakers are circuit breakers with electronic trip system, both fixed with meter, and drawer design. Designed and tested at AC380/415V, 440V and 500/690V, mainly used in drawout switchgear, but also in fixed construction. WeTEK9/6 series circuit breakers can provide rated current from 200A to 6300A. All circuit breakers are 100% rated and are assembled and tested in passed factories to comply with IEC and BS standards. WeTEK Series Circuit breakers use thermosetting composite resin material as its rugged housing, this material is high strength, but also has excellent dielectric properties and arc marking resistance.

### Selection list

WeTEK	97	B	3C	V	16	CW
↓	↓	↓	↓	↓	↓	↓
1	2	3	4	5	6	7

- Rated current up to 6300A, rated breaking current 100kA;
- Fixed and drawer mounted;
- Small size, save installation space;
- Provide a complete range of accessories;
- Comprehensive and innovative electronic trip unit ETU;

#### 1. Product model

Frame circuit breaker

#### 2. Frame size

97=800-4000A 99=4000-6300A

61=200-1600A 65=400-2500A

67=2000-4000A

#### 3. Breaking ability

9 Series B= Basic 66kA N= Standard 85kA H= High score 100kA

6 Series B= Basic 55kA N= Standard 66kA S= High score 85kA

#### 4. Pole

9 Series 3C=3pole 4C=4 pole 6 Series 3=3 pole 4=4 pole

#### 5. Trip unit

9 Series V=Standard - Current type U=Universal - Power

phenotype 6 Series D、F=digital tube A、E、P=liquid crystal

#### 6. Rated current

WeTEK97: 08=800A 10=1000A 12=1250A 16=1600A 20=2000A 25=2500A  
32=3200A 40=4000A

WeTEKA99: 40=4000A 50=5000A 63=6300A

WeTEK61: 02=200A 04=400A 06=630A 08=800A 10=1000A 12=1250A  
16=1600A

WeTEK65: 04=400A 06=630A 08=800A 10=1000A 12=1250A 16=1600A  
20=2000A 25=2500A

WeTEK67: 20=2000A 25=2500A 32=3200A 40=4000

#### 7. Standard configuration

9Series CW=Complete drawer type body CF=complete fixed body

6Series FH=fixed horizontal wiring WH=drawer type horizontal wiring

### MeTEK Series circuit breaker



MeTEK series plastic-case circuit breaker

#### Selection list

MeTEK	2	B	4 -	AX	200
↓	↓	↓	↓	↓	↓
1	2	3	4	5	6

#### 1. Product model

Moulded case circuit breaker

#### 2. Frame size

1=16-125A 2=100~250A

3=225-400A 4=400~630A 5=630~800A

#### 3. Breaking ability

B=25kA C=36kA N=50kA E=55kA F=65kA H=70kA

#### 4. Poles

3=3poles; 4=4poles

#### 5. Trip unit

AX= Thermomagnetic distribution protection

M= Single magnetic motor protection

EX= Electronic protection

#### 6. Rated current

16A~800A

The MeTEK Series circuit breaker is a high performance, versatile and easy to use circuit breaker:

- With a variety of protection functions: distribution protection, motor protection;
- Breaking capacity 25kA to 70kA, rated current range 16A to 800A, meeting most application requirements;
- The release device not only has an electronic type with complex functions, but also a conventional hermomagnetic type to meet different needs;
- A variety of different accessories to meet customers' multiple application needs;
- Operating short-circuit breaking current  $I_{cs}=100%$  limiting short-circuit breaking current  $I_{cu}$ ;



## LiTEK series miniature circuit breaker



LiTEK series miniature circuit breaker

- White shell, simple and elegant;
- Environmental protection, low energy consumption, RoHS compliance;
- Full specification silver contact, reliable life;
- Wide area adaptation, working temperature -35°C~70°C;
- Digital research and development, accurate protection;
- Automated manufacturing, high product consistency.

### Selection list

LiTEK5	E	-	63	N /	2	C	25
↓	↓	↓	↓	↓	↓	↓	↓
1	2	3	4	5	6	7	

#### 1. Product model

Miniature circuit breaker

#### 2. Product type

B=Circuit breaker (omitted) E= electronic residual current operated circuit breaker;  
N=1PN circuit breaker NE=1PN Electronic residual current operating circuit breaker.

#### 3. Product shell frame

40=40A; 63=63A

#### 4. Breaking ability

N=6kA; H=10kA

#### 5. Pole

1=1P 2=2P 3=3P 4=4P

#### 6. Trip curve

B=B curve C=C curve D=D curve

#### 7. Rated current

1A~63A

### HTEK series dual power automatic switch



HTEK series dual power automatic switch

#### Selection list

HTEK	-	100	/	4	-	HQE-	100A
↓		↓		↓		↓	↓
1		2		3		4	5

- It is suitable for automatic conversion with backup power or generator when common power supply fails to ensure continuous and reliable operation of important loads;
- Selective conversion between two power sources can be performed according to the needs of the load;
- Manual/electric/automatic conversion;
- Rated working frequency 50/60Hz, rated working voltage AC400V below, rated working current 25-6000A;
- With undervoltage, overvoltage: off equal monitoring function;
- Especially suitable for fire, hospitals, military equipment, airports, subway radio and television, telecommunications hubs, shopping malls, chemical, metallurgical and high-rise buildings and other important places that do not allow power failure.

#### 1. Product model

Dual power automatic transfer switch

#### 2. Bracket grade current

100=25~100A 250=100~250A 800=315~800A

3150=800~3150A 6000=4000~6000A

#### 3. Poles

2=2 poles 3=3 poles 4=4 poles

#### 4. Switch type

T= (Body type) Manual Transfer Switch (TSE)

Z= (Basic) Integrated Automatic Switch (ATSE)

HQE= (Intelligent) Split Automatic Transfer Switch (ATSE)

#### 5. Rated current

25A~6000A

CPTEK series control and protection switchgear



CPTEK series control and protection switchgear

- Integrated control and protection functions on a single electrical component;
- Strong current limiting breaking ability, to achieve type 2 short circuit coordination protection;
- Complete intelligent protection functions to ensure safe operation of the load;
- Less wiring, less space, easy installation, use and maintenance, high reliability;
- Simple model, convenient selection.

Selection list

CPTEK	-16	M -	21	2	F
↓	↓	↓	↓	↓	↓
1	2	3	4	5	6

1. Product model

Control and protection switch

2. Rated current

1A~125A

3. Trip device code

M= thermomagnetic and E= electronic

T= communication and Z= intelligence

4. Number of auxiliary contacts

21=2 Normally on 1 Normally off 2 Alarm

32=3 Normally on 2 Normally off 2 Alarm

33=3 Normally on 3 Normally off 2 Alarm

42=4 Normally on 2 Normally off 2 Alarm

44=4 Normal on 4 Normal off 2 Alarm

53=5 Normally on 3 Normally off 2 Alarm

5. Coil voltage

2=220V 3=380V

6. Derivative mode

None = Standard type F= Fire type

G= Isolated type R= Reversible type

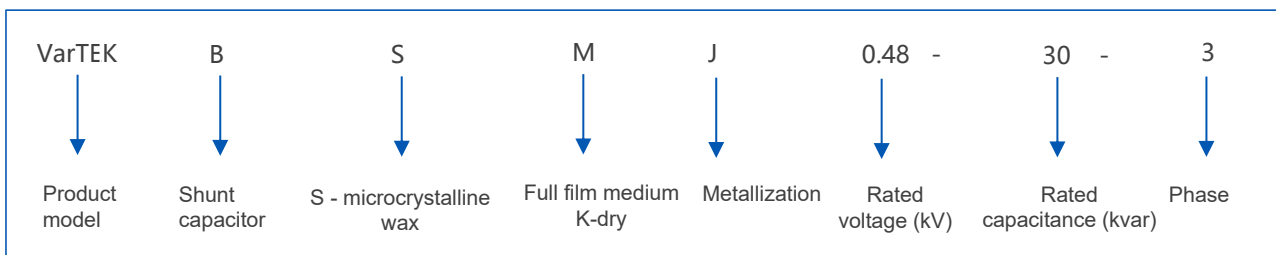
VarTEK series capacitors



VarTEK-B cylindrical capacitor

- Cylindrical capacitors are mainly used to improve the power factor of power frequency power systems;
- Improve the quality of power supply and improve the reliability of power consumption;
- The shell is made of round aluminum, good heat dissipation; The shell is more environmentally friendly without painting;
- Easy installation, small occupation area, saving empty;
- Self-healing: good self-healing, breakdown can quickly and automatically restore insulation performance;
- Permissible deviation: no more than -2~+3% of the rated value;
- Low loss: loss Angle tangent value ( $\text{tg}\delta$ ) is not more than 0.001 (@ power frequency rated voltage, 20°C);
- Overpressure capacity: long-term operation at 1.1  $U_n$ ;
- Overcurrent capacity: long-term operation at 1.3  $I_n$ ;
- Voltage resistance: 2.15  $U_n$  is applied pole to pole, 2s does not break down;
- The pole applies 3.5kV ac to the shell, 10s does not break down;
- Protection mechanism: internal pressure protection device;
- Implementation standards: GB/T12747 "Self-healing low-voltage shunt Capacitor" and IEC60831.

VarTEK-B cylindrical capacitor model description



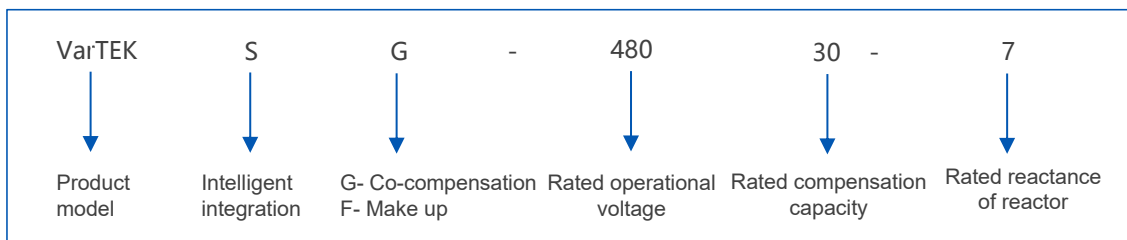
## VarTEK-S Intelligent integrated capacitor



VarTEK-S Intelligent integrated capacitor

- Low voltage intelligent harmonic suppression power capacitor compensation device is a new generation of harmonic reactive power compensation equipment for 0.4kV, 50Hz low voltage power distribution, which is highly efficient and energy-saving, reduces line loss, and improves power factor and power quality. It is composed of intelligent measurement and control unit, thyristor compound switching circuit, line protection unit, reactor and low-voltage power capacitor.
- Instead of the conventional automatic reactive power compensation device composed of fuses, composite switches or mechanical contactors, thermal relays, low-voltage power capacitors, indicators and other parts connected by wires in the cabinet and on the cabinet surface. The traditional reactive power compensation device has changed the large and bulky structure mode, so that the new generation of low-voltage reactive power compensation equipment has better compensation effect, smaller volume, lower power consumption, cheaper price, more cost savings, more flexible use, more convenient maintenance, longer service life, higher reliability, to adapt to the higher requirements of modern power grid reactive power compensation.

VarTEK-S intelligent capacitor model description



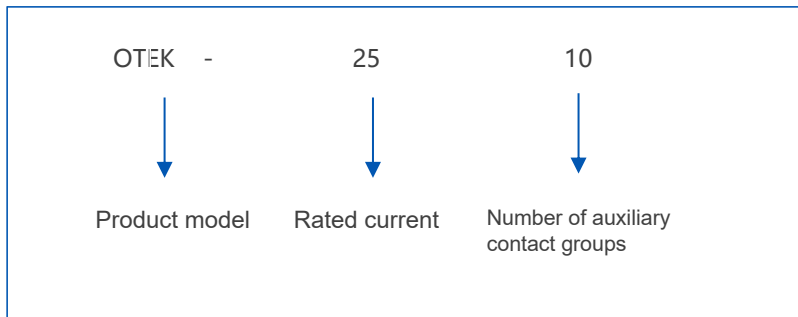
OTEK series AC contactors



OTEK series AC contactors

- Direct acting core and double break contacts ensure high electromechanical life;
- Small size, low power consumption and green;
- The coil can be equipped with surge voltage suppression module;
- A mechanical interlock module can be installed to form a reliable reversible contactor;
- Can be mounted with screws or standard rail;
- Modular structure a full range of versatile functional accessories.

OTEK series AC contactors



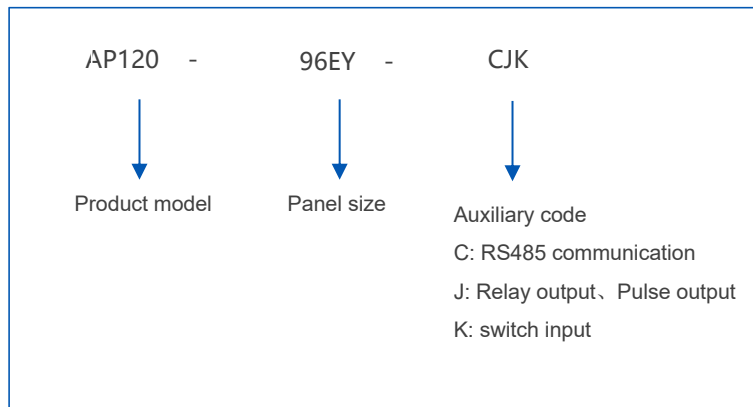
AP120 series multifunction power meter



AP120 series multi-function instrument

- Full power parameter measurement, two-way power measurement, four-quadrant reactive power measurement and harmonic analysis;
- With communication and electrical pulse output interface;
- Optional Switching input, relay output and analog output functions;
- Can access the power monitoring system, energy management system, remote data monitoring;
- Beautiful appearance and compact structure.

AP120 multi-function instrument model description



### Working environment condition

- Suitable for indoor installation of electrical equipment;
- The protection level of the switchgear under normal working conditions can reach IP41;
- Ambient temperature under normal operating conditions;
- Short-term maximum temperature +40°C;
- 24-hour maximum average temperature +35°C;
- Minimum temperature -5°C;
- The normal working climate is in accordance with GB/T 7251.8, GB/T 7251.12, IEC/EN61439-2, VDE 0660 Part 500. The relative humidity of the surrounding environment is 50% at 40°C.
- The conditions of the indoor installation site of the switch cabinet shall meet the requirements of the corresponding standards. In-process property In the case of condensation, ventilation or heating will be adopted in the switch cabinet to prevent condensation;
- If the switchgear is installed more than 2000 meters above sea level, the equipment should be operated in a reduced capacity accordingly;

### Special operating environment design

- Tropical;
- Earthquake area;
- Air defense shelters;
- Ship.





Mandatory certification of product conformity self-declaration

Notes

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## CONTACT US

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