

# YIDEK® PRODUCT BROCHURE

## PRODUCT INCLUDES



### POWER FACTOR CORRECTION & REACTIVE POWER COMPENSATION

- Traditional capacitor banks
- Intelligent integrated capacitors
- Static Var Generators (SVG)

### HARMONIC FILTERING & POWER QUALITY MANAGEMENT

- Active Power Filters (APF)
- Detuned filter cabinets (with reactors)
- Line/Input Output Reactors

### HIGH VOLTAGE SOLUTIONS

- High-voltage smart capacitor banks
- High-voltage SVG



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Conventional Capacitive Compensation:  
Power Capacitor  
Electric Reactor; Line Reactor  
Switch  
Power Factor Controller



□ 8 ~ □ 10

Intelligent Capacitor  
Anti-Harmonic Intelligent Capacitor



□ 11 ~ □ 12

Static Var Generator(SVG)  
Active Power Filter(APF)



□ 13 ~ □ 14

High-Voltage Smart Capacitor Bank  
High Voltage Static Var Generator(HV SVG)



# POWER CAPACITOR

It is suitable for forming tuning filter capacitors and harmonic filters to correct power factor and filter harmonics.

AC series YD-G capacitors are dedicated to improving the density of thermally responsive packages. The dielectric material is filled in a vacuum environment, and its high reliability, low cost, and simplified installation reflect the advantages of a cylindrical aluminum case. YD-G capacitors can withstand high surge currents caused by switching operations, and are suitable for forming tuned filter capacitor banks and harmonic filters, etc., to meet application requirements in power factor adjustment and harmonic filtering.

## PRODUCT FEATURES

ELECTRIC	MACHINERY&MAINTAINING	SAFETY	ENVIRONMENT
Service life(≥180,000 hours)	Installation cost low	Self healing	Dry-type design
Withstand high surge current(300IR)	Easily install&connection	High protective terminal	No oil leakage
Non corona discharge	Low weight	Proven technology	
	No maintaining	Discharge resistance	



## TECHNICAL PARAMETER

According to IEC60831, EN60831, UL810, GB 12747

Over-Voltage	Vmax	Ue+10% Can last up to 8 hours every day.
		Ue+15% Can last up to 30 minutes every day.
		Ue+20% Can last up to 5 minutes every day.
		Ue+30% Can last up to 1 minute every day.
Over-Current	I <sub>max</sub>	1.8 I <sub>e</sub>
Surge Current	I <sub>S</sub>	300 I <sub>e</sub>
Loss		
Dielectric		< 0.2 W/kvar Total < 0.45 W/kvar
Rated Frequency	F	50/60 Hz
Capacity Deviation		-5% / +10%
Withstand Volt(Terminals)	VTT	2.15 VR1, AC, 10s
Withstand Volt(Terminal&Case)	VTC	Ue≤660V, 3000VAC, 10s; Ue>660V, 6000VAC, 10s
Average Service Life		Up to 180,000h(TEMP degree-40/C); Up to 130,000h(TEMP degree-40/D)
Environment Temperature		-40/D, max TEMP 55°C; max daily average TEMP 45°C; max annual TEMP 35°C; min -40°C
Cooling		Natural cooling&Fan cooling
Humidity		≤95%
Altitude		≤2000 meters
Installation&Grounding		Bolted
Safety		Dry-type Technology, self healing, max fault current 10,000A, satisfy UL810
Discharge module		Built-in discharge resistance
Dielectric Material		Polypropylene Film
Protective Case		Stamping aluminum cans
Sealed Package		IP20, indoor; equipping with special case can be used outdoor

\*Subject to actual supply goods.

## ORDER SPECIFICATION

Please choose suitable capacitors according to reactive power compensation solution.

Pay more attention to following parameters: rated voltage, rated capacity, three-phase or single phase...

Three-Phase Capacitor(Rated Voltage 480V AC 50Hz)

MODEL	Rated Voltage	Rated Capacity	Rated Current	Rated Capacitance
BK MJ 480S05	480 V	5kvar	6.0 A	3×23.0 μF
BK MJ 480S10	480 V	10kvar	12.0 A	3×46.1 μF
BK MJ 480S15	480 V	15kvar	18.0 A	3×69.1 μF
BK MJ 480S20	480 V	20kvar	24.1 A	3×92.1 μF
BK MJ 480S25	480 V	25kvar	30.1 A	3×115.1 μF
BK MJ 480S30	480 V	30kvar	36.1 A	3×138.2 μF
BK MJ 480S40	480 V	40kvar	48.1 A	3×184.2 μF

\*Can work with 7% electric reactor.

Three-Phase Capacitor(Rated Voltage 525V AC 50Hz)

MODEL	Rated Voltage	Rated Capacity	Rated Current	Rated Capacitance
BK MJ 525S05	525 V	5kvar	5.5 A	3×19.2 μF
BK MJ 525S10	525 V	10kvar	11.0 A	3×38.5 μF
BK MJ 525S15	525 V	15kvar	16.5 A	3×57.7 μF
BK MJ 525S20	525 V	20kvar	22.0 A	3×77.0 μF
BK MJ 525S25	525 V	25kvar	27.5 A	3×96.2 μF
BK MJ 525S30	525 V	30kvar	33.0 A	3×115.5 μF
BK MJ 525S40	525 V	40kvar	44.0 A	3×154.0 μF

\*Can work with 14% electric reactor.

Single-Phase Capacitor(Rated Voltage 280V AC 50Hz)

MODEL	Rated Voltage	Rated Capacity	Rated Current	Rated Capacitance
BK MJ 280F05	280 V	5kvar	17.9 A	203 μF
BK MJ 280F10	280 V	10kvar	35.7 A	406 μF
BK MJ 280F15	280 V	15kvar	53.6 A	609 μF
BK MJ 280F15	280 V	20kvar	71.4 A	812 μF

\*Can work with 7% electric reactor.

Single-Phase Capacitor(Rated Voltage 300V AC 50Hz)

MODEL	Rated Voltage	Rated Capacity	Rated Current	Rated Capacitance
BK MJ 300F05	300 V	5kvar	16.7 A	177 μF
BK MJ 300F10	300 V	10kvar	33.3 A	354 μF
BK MJ 300F15	300 V	15kvar	50.0 A	531 μF
BK MJ 300F20	300 V	20kvar	66.7 A	707 μF

\*Can work with 14% electric reactor.

TIPS: Please ask YIDEK for more capacitor models.

# ELECTRIC REACTOR

Reduce capacitor surge and limit influence of harmonic on capacitors and power system

In modern industry, a large number of power electronic equipment is used, and its non-linear harmonic current will influence loads in the power system.

Power factor correction devices or power capacitors forms a resonant circuit with the transformer in parallel. According to experience, natural resonance frequency of this resonance circuit is usually between 250Hz and 500Hz, and the corresponding harmonic frequency is usually 5th and 7th harmonics.

This resonance phenomenon can be avoided by connecting reactors in series in front of reactive compensation capacitors. By adjusting resonance frequency of compensation branch, branch frequency will be lower than the lowest harmonic frequency of electric power system.

## PRODUCT APPLICATION

- \*Avoid system resonance
- \*Filter system harmonics
- \*Reduce system harmonic distortion
- \*Reduce power loss

## PRODUCT FEATURES

- \*High harmonic filter ability
- \*High linearity, Avoid magnetic saturation
- \*Temperature protection
- \*Low loss
- \*Low noise
- \*Easy installation
- \*Long service life

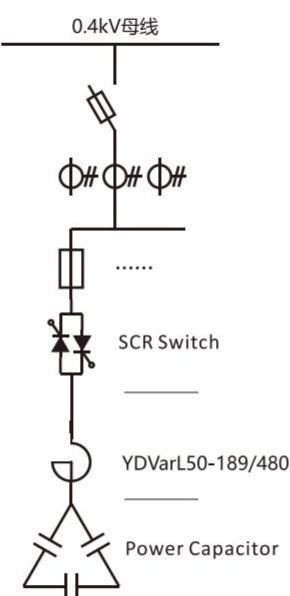


## TECHNICAL PARAMETER

Harmonic filter electric reactor, according to EN61558, VDE0532, EN60289, GB/T10229

Harmonic	V3 = 0.5% VR Load power factor=100% V5 = 6.0% VR Load power factor=100% V7 = 5.0% VR Load power factor=100% V11 = 3.5% VR Load power factor=100% V13 = 3.0% VR Load power factor=100%
Virtual Current	$I_{rms} = \sqrt{( I_1 ^2 +  I_3 ^2 + \dots +  I_n ^2)}$
Fundamental Current	$I_1 = 1.06 IR$
TEMP Protection	Mini switch, normal close connect position.
Frequency	50Hz or 60Hz
Voltage	400, 440, 480, 525V
Output Power	5~100kvar
Tuning Coefficient	7%, 14%
Cooling Mode	Natural cooling
Working TEMP	40°C
Protection Degree	I
Sealed Package	IP00

\*Subject to actual supply goods.



## ORDER SPECIFICATION

Please choose suitable reactors according to reactive power compensation solution.

Pay more attention to following parameters: rated voltage, rated capacity, three-phase or single phase, matched capacitor technical parameters...

Three-Phase Electric Reactor (System voltage 400V, reactance 7%)

MODEL	REACTANCE	TUNING FREQUENCY	INDUCTANCE	MATCHED CAPACITOR
YDVarL15-189/480	7%	189Hz	3.4225 mH	15kvar 480V/50Hz
YDVarL20-189/480	7%	189Hz	2.5669 mH	20kvar 480V/50Hz
YDVarL25-189/480	7%	189Hz	2.0535 mH	25kvar 480V/50Hz
YDVarL30-189/480	7%	189Hz	1.7112 mH	30kvar 480V/50Hz
YDVarL40-189/480	7%	189Hz	1.2834 mH	40kvar 480V/50Hz
YDVarL50-189/480	7%	189Hz	1.0267 mH	50kvar 480V/50Hz
YDVarL60-189/480	7%	189Hz	0.8556 mH	60kvar 480V/50Hz

\*Reactance rate 7%, resist 5th order and more than 5th order harmonics.

Three-Phase Electric Reactor (System voltage 400V, reactance 14%)

MODEL	REACTANCE	TUNING FREQUENCY	INDUCTANCE	MATCHED CAPACITOR
YDVarL15-134/525	14%	134Hz	8.1885 mH	15kvar 525V/50Hz
YDVarL20-134/525	14%	134Hz	6.1414 mH	20kvar 525V/50Hz
YDVarL25-134/525	14%	134Hz	4.9131 mH	25kvar 525V/50Hz
YDVarL30-134/525	14%	134Hz	4.0943 mH	30kvar 525V/50Hz
YDVarL40-134/525	14%	134Hz	3.0707 mH	40kvar 525V/50Hz
YDVarL50-134/525	14%	134Hz	2.4566 mH	50kvar 525V/50Hz
YDVarL60-134/525	14%	134Hz	2.0471 mH	60kvar 525V/50Hz

\*Reactance rate 14%, resist 3rd order and more than 3rd order harmonics.

Single-Phase Electric Reactor (System voltage 400/ $\sqrt{3}$  V)

MODEL	REACTANCE	TUNING FREQUENCY	INDUCTANCE	MATCHED CAPACITOR
YDVarL5-189/280	7%	189Hz	3.4938 mH	5kvar 280V/50Hz
YDVarL10-189/280	7%	189Hz	1.7469 mH	10kvar 280V/50Hz
YDVarL15-189/280	7%	189Hz	1.1646 mH	15kvar 280V/50Hz
YDVarL20-189/280	7%	189Hz	0.8734 mH	20kvar 280V/50Hz
YDVarL5-134/300	14%	134Hz	4.0107 mH	5kvar 300V/50Hz
YDVarL10-134/300	14%	134Hz	2.0054 mH	10kvar 300V/50Hz
YDVarL15-134/300	14%	134Hz	1.3369 mH	15kvar 300V/50Hz
YDVarL20-134/300	14%	134Hz	1.0027 mH	20kvar 300V/50Hz

\*According to harmonics situation, select suitable reactance rate electric reactor.

TIPS: Please ask YIDEK for more capacitor models.

# LINE REACTOR

Reduce capacitor surge and limit influence of harmonic on capacitors and power system

Line reactors are designed for installation at the input and output sides of Variable Frequency Drives (VFDs), connected in series. In low-voltage power grids with a significant number of harmonic sources such as rectifiers and converters, the generated high-order harmonics can severely jeopardize the safe operation of main transformers and other electrical equipment. When connected to the VFD, the reactor can effectively absorb grid harmonics, reduce leakage current caused by input harmonics, lower motor noise and eddy current losses, perform smoothing and filtering functions, reduce the transient voltage dv/dt, and extend motor lifespan.

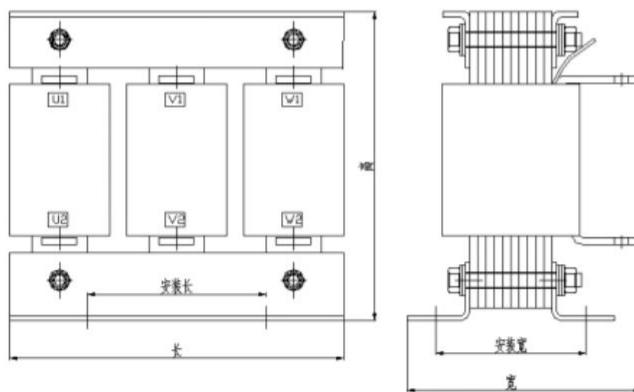
## OPERATING CONDITIONS

**Altitude:** Not exceeding 1000m above sea level.  
**Ambient Temperature:** -40°C ~ +40°C.  
**Relative Humidity:** Not greater than 90%.  
**Maximum Wind Speed:** 35m/s.  
**Seismic Intensity:** Not exceeding 8 on the Richter scale.  
**Installation Site:** Indoor.



## TECHNICAL PARAMETERS

Parameter	Specification
System Voltage (kV)	0.4 ~ 1
Rated Frequency (Hz)	50
Number of Phases	Three-phase
Terminal Markings	A--X, B--Y, C--Z
Rated Power (kW)	(To be specified per order)
Rated Current (A)	(To be specified per order)
Enclosure Type	Indoor
Cooling Method	AN (Air Natural)
Thermal Class	Class F



# SWITCH

:Switch Capacitor Contactor;Composite Switch;Dynamic Switch

Use switch control reactive power compensation branch, providing safe and stable switching solution for compensation.



**YDFK**  
Composite  
Switch



**CJ19**  
Switch  
Capacitor  
Contactor



**YD-TSCL**  
LV  
Dynamic  
Switch

## PRODUCT FEATURES

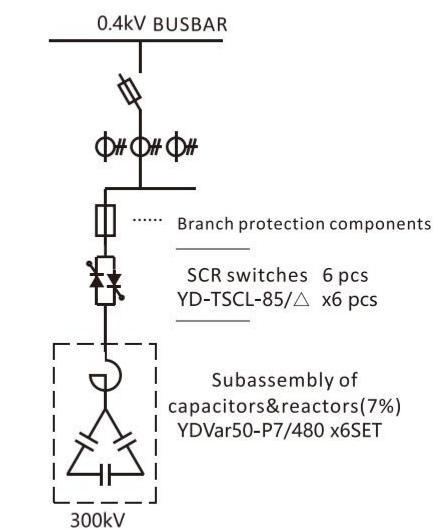
- \*Easily install
- \*Intelligent control technology
- \*Response time<20ms
- \*Permanent self-control
- \*Show operating/fault situation

## TECHNICAL PARAMETER

- \*Voltage: 400V or 690V
- \*Output power: 2~50 kVAR
- \*Trigger Signal: 10~24V DC, inner isolation
- \*Switching time: <20ms
- \*Control mode: zero-off position control capacitors, non surge

## ORDER SPECIFICATION

MODEL	MAX CAPACITY	RATED VOLT	CONTROL MODE
YD-TSCL-45/△	25kvar	400V	3-Phase Com
YD-TSCL-60/△	30kvar	400V	3-Phase Com
YD-TSCL-85/△	40kvar	400V	3-Phase Com
YD-TSCL-85/△	50kvar	400V	3-Phase Com
YD-TSCL-45/Y	10kvarx3	400V	3-Phase Com
YD-TSCL-45/Y	15kvarx3	400V	3-Phase Com
YD-TSCL-45/Y	20kvarx3	400V	3-Phase Com
YD-TSCG-60/△	40kvar	690V	3-Phase Com
YD-TSCG-100/△	50kvar	690V	3-Phase Com
YD-TSCG-100/△	60kvar	690V	3-Phase Com



TIPS: Please ask YIDEK for more models.

## REACTIVE POWER COMPENSATION CONTROLLER (POWER FACTOR CONTROLLER)

Provide solution for automatic switching of reactive power compensation system.

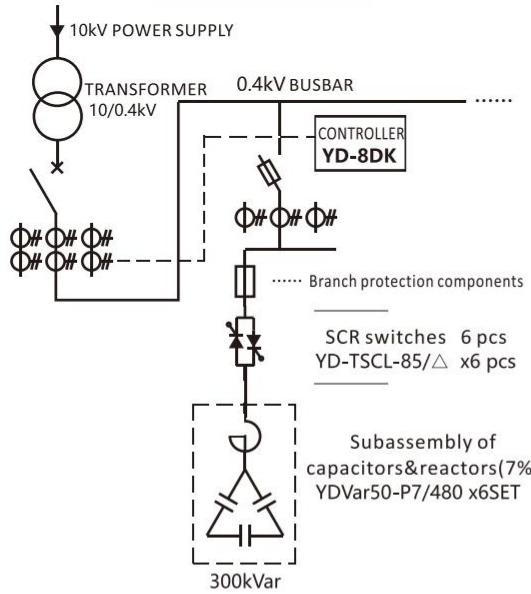
Reactive power compensation controller monitors actual power factor and reactive power vacancy, and controls on/off of capacitors (compensation branch) to correct power factor to a required value. It has three-phase compensation and three-phase mixed compensation control modes, perfect monitoring, control and protection functions, ensuring reliability and stability of compensation system.



Brain of Compensation System

### PRODUCT FEATURES

DISPLAY	EXTENDED FUNCTION	OUTPUT	ALARM OUTPUT	Communication
LCD display Diagram&Word Intelligent control self-optimizing control Button start Auto initialization Record data callback Alarm output	System volt Active&Reactive power Frequency THDu&THDi Real-time power factor Power factor aim Reactive vacancy Temperature	3-Phase compensation Split compensation Dynamic PF control (SCR control signal)	Under-Compensation Over-Compensation Under-Current Over-Current Over-Temperature Harmonic Out-of-Limit Self-checking fault	RS485 Terminal Modbus Protocol



### TECHNICAL PARAMETER

- \*Rated work voltage: 230/400V
- \*Rated frequency: 50/60Hz
- \*Power dissipation: <3VA
- \*Environment TEMP: -20°C~60°C
- \*Altitude: ≤2500 meters
- \*IP degree: IP30, panel IP40
- \*Standard: JBT9663
- \*Display: LCD display with image
- \*Control output: relay or SCR
- \*Alarm/Signal output: 1 delay output
- \*Communication: RS485, Modbus Protocol

### ORDER SPECIFICATION

MODEL	SPECIFICATION
YD-8DKLS-12	Dynamic, DC12V control, 12 circuits, 3-phase compensation
YD-8DKLF-12	Dynamic, DC12V control, 12 circuits, mixed compensation
YD-8DKG	Dynamic, DC12V control, 12 circuits, 660V 3-phase compensation

TIPS: Please ask YIDEK for more models.

## INTELLIGENT POWER CAPACITOR

Intelligent&Integrated solution for reactive power compensation

The reactive power compensation system based on YD series capacitors provides users with an intelligent and integrated solution to correct system power factor, improve efficiency of electricity use, and reduce cost of electricity costs. The intelligent reactive power compensation system is more convenient to use, easier to maintain and more informative.

YD series capacitor adopts integrated design, integrated assembly, and integrated testing, making the integrity of each component better.

Single intelligent capacitor has power capacitor, electric reactor(anti-harmonic type), switching on/off switch, protection components, control module and human-machine interface.

YD series capacitors can be used individually or in parallel. It is connected to a power factor controller through communication mode to form a complete reactive power compensation system. If an intelligent capacitor is abnormal, it will automatically exit the system and give an alarm. This design will not affect operation of other intelligent capacitors in the system and ensure continued operation of reactive power compensation system.

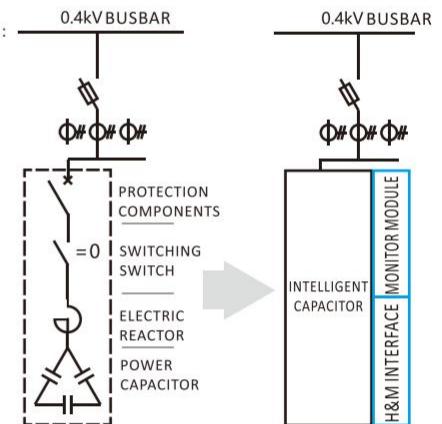
### PRODUCT FEATURES

MODULAR	HIGH QUALITY	SWITCH MODULE	PROTECT DESIGN	H&M INTERFACE
Compact structure, easy wiring, convenient maintain, individually or in parallel using, easy extend total capacity	Self-Healing type low voltage power capacitor	Intelligent capacitor built-in on/off switch. Zore-off technology No surge No over-voltage Quick response time	Power-off protection Short circuit protection Phase-lack protection Over-TEMP protection THDu protection Over-volt protection Under-volt protection Under-cur protection Ensure stable and safe operation of capacitor	Display operating parameters. Display situation of capacitor, switch and communication. Convenient for selection of switching different working modes.

### CAPACITOR COMPONENTS

Capacitor adopts integrated design, consisting of following parts:

- \*Power Capacitor
- \*Reactor
- \*On/Off Switch
- \*Protection Components
- \*Monitor Module
- \*Human-Machine Interface



### PRODUCT APPLICATION

\*Integrated reactive compensation of distribution system

\*Local power factor correction of motors

\*Save energy system

\*Construction, traffic, factory, government, medical and other industries

## TECHNICAL PARAMETERS

SPECIFICATION	3-Phase Com	35+35,30+30,30+20, 20+20, 10+10
	Split Com	20+20,20+10, 10+10, 5+5
	3-Phase+Split	20+20,20+10, 10+10, 5+5
POWER SUPPLY	Rated Volt	AC230V or AC400V
	Allow Deviation	±20%
	Volt Waveform	Anti-Harmonic support THDu≤10% Ordinary Type ≤3%
SAFETY PROTECTION	ON/OFF Switch	Adopt sync switch or SCR switch
	Zero-Off Switching	Reduce current surge, length switch service life
	Protection Function	Over-TEMP, under-volt, under-cur, harmonic, under-volt and other protection functions
	Breaker	Breaking Capacity≤15KA
SAMPLING DEVIATION	Voltage	≤0.5%
	Current	≤1.0%
	Time	±0.01s
	Power Factor	≤1.5%
REACTIVE COMPENSATION PARAMETER	Reactive Error	≤10% of capacitor capacity minimum
	Switching Interval	Dynamic ≤10ms Static 5-180ms
	On-Line Number	≤30 Pcs
SERIAL REACTOR	Reactance Selection	5th and more mainly, 7%; 3rd and more mainly, 14%
	Isolation	H Degree
	Phase Error	L≤±3%
	Standard	VDE 0570 IEC 96/104/CD
	Isolation Degree	3KV
	TEMP Degree	CLASS C 220°C
DRY-TYPE POWER CAPACITOR	Filler	New type epoxy resin, no leakage, no pollution, anti-explosion, anti-flaming
	Standard	GB 12747
	TEMP Range	-40°C~60°C
	Allow Contin O-V	8 hours/day, >110% of rated voltage
	Allow Contin O-L	>150%~200%
	Capacity Error	-5%~+10%
	Discharge Loss	< 0.4W/kvar
	Discharge Time	After 3 minutes of switching capacitor off, residual voltage will be less than 50V
ON/OFF SWITCH PARAMETER	Switching Surge	≤1.8 le
	Allow Switching Time	2,000,000 times switch on/off
	Switch Power Loss	< 1W

\*Subject to actual supply goods.

REACTIVE POWER COMPENSATION CONTROLLER  
(MATCH WITH INTELLIGENT CAPACITOR)

Matching with YD series intelligent capacitors, form a reactive compensation system by mode of communication.

This controller and capacitor are used together to form a complete intelligent reactive power compensation system. The controller adopts a 32-bit ARM chip design, comprehensively considering voltage, current, power factor and reactive power. It adopts the latest reactive power trend judgment algorithm, which is especially suitable for occasions with large power factor variation.

## PRODUCT FEATURES

- \*The controller exchanges data with intelligent capacitors through communication mode, and automatically controls intelligent capacitors.
- \*Manual control of intelligent capacitors can be selected through the human-machine interface.
- \*A single reactive power compensation controller can control 30 sets of three-phase compensation intelligent capacitors or 20 sets of three-phase compensation intelligent capacitors and 10 sets of split compensation intelligent capacitors.
- \*The reactive power compensation controller can monitor electrical parameters and harmonic distortion rates in real time.
- \*Has over-voltage protection, under-voltage protection, over-current protection, over-temperature protection, phase lack protection, voltage harmonic protection, etc. When parameters are beyond set values, controller quickly switched off the capacitor bank that has been switched on, and blocks the output to ensure the safe operation of the reactive power compensation system.
- \*Current, voltage, power factor, reactive power, etc. are comprehensively calculated, and voltage hysteresis participates in the control judgment to make the compensation more accurate and prevent switching oscillation.

## TECHNICAL PARAMETERS

## Measurement Accuracy

Voltage	±0.5%
Current	±1%
Power Factor	±1.5%
Reactive Power	±2%
Temperature	±1°C

## Power Supply

Rated Volt	400V±20% Can be customized
Power Loss	≤3W

## Communication Mode

Control	RS485 Communication, work with intelligent capacitor
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## Environment Condition

Relative Humidity	20%~90% No Condensation
Environment TEMP	-25°C~70°C
Altitude	≤2000m
Others	Installation place not allow explosive media. Surrounding medium should not contain gases and conductive media that corrode metals or damage insulation. It is not allowed to be filled with water vapor and severe molds appear. Installation place shall have facilities to protect against rain, snow, wind, sand and ash.

## ORDER SPECIFICATION

This kind power factor controller only can be used with YD series intelligent capacitors

MODEL	SPECIFICATION
YD-9CKZ	≤30 sets of three-phase intelligent capacitors
YD-9CKH	≤10 sets of split intelligent capacitors, Total number ≤30 sets

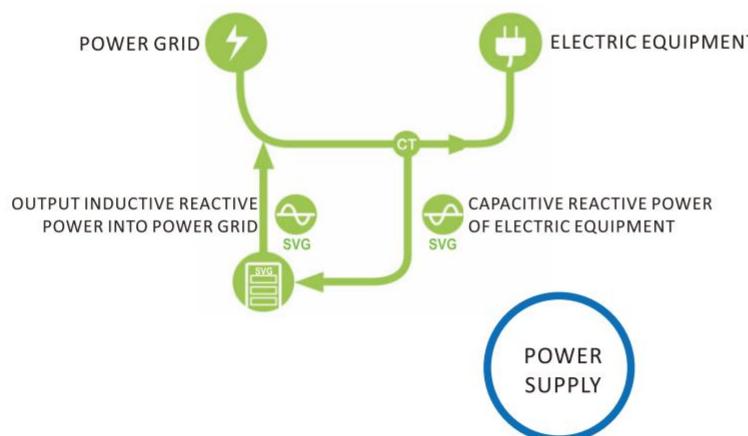
TIPS: Please ask YIDEK for more controller models.



\*Subject to actual supply goods.

# STATIC VAR GENERATOR(SVG)

Adopts power electronic technology, providing solution for power factor correction.



## TECHNICAL PARAMETER

Static var generator can support rack-mounted and wall-mounted.	
CAPACITY	10, 20, 25, 30, 35, 50, 75, 100, 125(kVAR)
INPUT	
VOLTAGE	400V/690V -20%~+15%
FREQUENCY	50/60Hz -10%~+10%
CT	1~100 times of equipment rated current
FUNCTION	
REACTIVE POWER	Adjust power factor between -1.0 to +1.0
3-PHASE UNBALANCE	Up to 100%
FILTER HARMONIC	13th and less order harmonics, filter rate>70%, optional
PARAMETER	
RESPONSE TIME	<10ms
POWER LOSS	<2.5%
COOLING MODE	Intelligent air cooling
NOISE	<60dB
SAMPLING/CONTROL	200kHz
EQUIVALENT	80kHz
CURRENT LOOP	6.4kHz
PROTECTION	Over-volt, under-volt, over-TEMP, over-cur, etc.
CT POSITION	Load side/Power supply side
LC CIRCUIT NUMBER	No limit
MONITOR/DATA	
COMMUNICATION	RS485, Internet
MODE	Modbus protocol
ALARM	Can record up to 500 alarm event
MONITOR	Individual/Integrated
ENVIRONMENT	
TEMPERATURE	-10°C ~ +45°C
ALTITUDE	<1500m, -1%/+100m
RELATIVE HUMIDITY	<99%
IP DEGREE	IP20, Higher IP degree can be customized

\*Subject to actual supply goods.

# ACTIVE POWER FILTER(APF)

Basing on application of power electronic technique, APF is the best solution for filtering harmonics.

YDK-APF is suitable for multiapplication occasions. We can design the most suitable installation solution for industrial occasions, distribution rooms, machine rooms etc. Because of flexible installation and convenient operation, our active power filters bring huge conveniences for solution design, on-site installation and after-sale maintaining.



## TECHNICAL PARAMETERS

SPECIFICATION	MODULE SPECIFICATION	10, 20, 30, 50, 75, 100, 150
	MAX PARALLEL NUMBER	12 (Rack-Mounted Type and Wall-Mounted Type); 8 (Mini Type)
INPUT	OPERATING VOLTAGE	400V/690V (-20%~+15%)
	OPERATING FREQUENCY	50Hz (-10%~+10%)
	CURRENT TRANSFORMER	1~100 times the rating value
FUNCTION	HARMONIC COMPENSATING	2nd~50th Harmonic
	HARMONIC FILTERING RATE	> 97%
	REACTIVE POWER COMPENSATION	-1~+1
	THREE-PHASE IMBALANCE ADJUST	100%
COMMUNICATION PROTOCOL	COMMUNICATION MODE	Modbus Protocol, TCP/IP OPTIONAL
	COMMUNICATION PORT	RS485, Internet Port
	HOST SOFTWARE	All parameters can be set by host.
	FAULT ALARM	Up to 500 alarm information can be recorded.
	MONITOR	Support independent monitoring/centralized monitoring.
	RESPONSE TIME	< 10ms
	POWER CONSUMPTION	< 2.5%
	HEAT DISSIPATION MODE	Intelligent air cooling.
	NOISE	< 60dB
TECHNICAL DATA	SAMPLING/CONTROL FREQUENCY	200kHz
	EQUIVALENT SWITCH FREQUENCY	80kHz
	CURRENT LOOP CUT OFF FREQUENCY	6.4kHz
	PROTECTION FUNCTION	Over-volt, under-volt, over-current, short-circuit and other more than 20 protections.
	CT INSTALLATION POSITION	Load Side/Transformer Side
	NUMBER OF PARALLEL CAPACITOR	No limit.
ENVIRONMENT REQUIREMENT	OPERATING TEMPERATURE	-10°C ~ +45°C
	ALTITUDE	< 1500M (Derating Ratio: 1%/100M)
	RELATIVE HUMIDITY	< 99%
	IP GRADE	IP20 (Higher IP Grade can be customized.)

\*Due to technology development and construction improvement, parameters may not match existing product.

# High-Voltage Smart Capacitor Bank

High-Voltage Reactive Power Compensation Complete Set (YDKTBBZ) provides solutions for high-voltage compensation. YDKTBBZ is suitable for **6~35kV** systems, providing solutions for power factor correction, improving voltage quality, and reducing line losses. YDKTBBZ **consists** of shunt capacitors, series reactors, zinc oxide arresters, discharge coils, vacuum contactors, disconnector switches, fuses, and power factor controller, and combined main and control circuits.

## ASSEMBLY COMPOSITION

**employ** single-star or double-star main wiring configurations.

**includes:** vacuum contactor, shunt capacitor, series reactor, discharge coil, zinc oxide arrester, expulsion fuse, etc.

Composed of an incoming line cabinet and grouped compensation cabinets.

## OPERATING ENVIRONMENT

- **Site Altitude:** < 1000 m
- **Ambient Temperature:** -40 ~ +45 °C
- **Relative Humidity:** < 85% (at 20±5 °C)
- **Inclination of installation surface:** ≤ 5 degrees
- Installation site shall be free from severe vibration, harmful gases/vapors, and conductive/explosive dust particles.
- Indoor installations require adequate ventilation.
- The switching device for this assembly utilizes high-quality vacuum circuit breakers or vacuum contactors.
- The upstream system should be equipped with over-voltage, under-voltage, over-current, and short-circuit relay protection.



## TECHNICAL CHARACTERISTICS

**Capacitance Tolerance:  $-3\% \sim +5\%$ .** Deviation between series segments  $< 1\%$ . Phase-to-phase deviation  $< 3\%$ .

**Operating Voltage:** Capable of continuous operation under 1.10  $U_n$  power-frequency steady-state voltage. Under this condition, the peak value including all harmonic components shall be  $\leq 1.2 \ U_n$ .

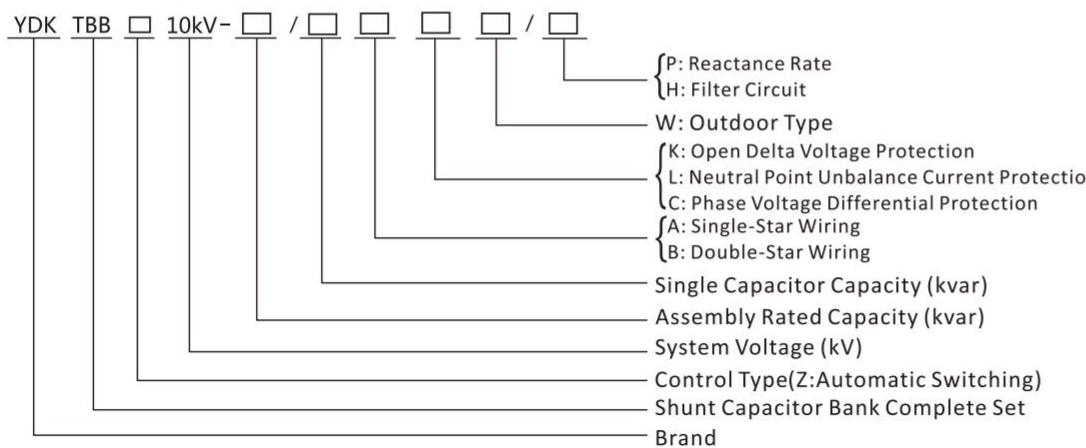
**Current Rating:** Permitted current up to **1.43** In.

**Capacitor Protection:** Utilizes both internal and external fuse protection

**Switching Logic:** Cyclic switching of capacitor banks (first-on, last-off sequence) with configurable switching delays.

**Vacuum Contactor:** Features frequent operation capability, fast bounce-free closing/opening, low re-ignition rate during interruption, reliable operation, minimal maintenance, and long service life.

## MODEL NUMBER



# High Voltage Static Var Generator

The **YDK-SVGH** High-Voltage SVG offers the optimal solution for dynamic reactive power compensation.

The YDK-SVGH Series High Voltage Static Var Generator is an IGBT-based SVG compensation system. The SVG represents the latest development direction in reactive power compensation technology for power systems. It can rapidly and continuously provide capacitive and inductive reactive power, enabling precise voltage and reactive power control to ensure stable, efficient, and high-quality operation of the power system.



## TECHNICAL PARAMETERS

<b>Specification</b>	3KV/6KV/10KV/35KV
Rated Capacity	±1Mvar ~ ±100Mvar
System Voltage	3kV, 6kV, 10kV, 35kV
Frequency	50Hz
<b>Functions</b>	
Reactive Power Compensation	Power factor correction, continuously adjustable from -1.0 to +1.0
Three-Phase Unbalance Compensation	100% unbalance fully adjustable
Harmonic Compensation	Up to the 13th order, filtering efficiency >70%
<b>Functions</b>	
Response Time	≤5ms
Power Loss	≤0.8%
Cooling Method	Intelligent Air Cooling / Water Cooling
Total Harmonic Current Distortion (THDi)	≤3%
Control Power Supply	380VAC, 220VAC, or 220VDC
Reactive Power Regulation Mode	Automatic, continuous, and smooth adjustment (Capacitive/Inductive)
Minimum Compensation Power	5kvar
Compensation Current Resolution	0.5A
<b>Monitoring &amp; Communication</b>	
Communication Interfaces	Ethernet, RS485, CAN, High-speed Fiber Optic
Communication Protocols	MODBUS_RTU, ProfIBUS, Power CDT91, IEC 61850-103/104, CANOPEN, User-defined
Parallel Operation	Supports multi-unit parallel operation and multi-busbar comprehensive compensation
<b>Environmental Requirements</b>	
Operating Temperature	-10°C ~ +40°C
Altitude	≤2000m (Special design required for >2000m)
Relative Humidity	Monthly average ≤90% (at 25°C), non-condensing
Ingress Protection (IP) Rating	IP40 (Indoor), IP44 (Outdoor)