

SASSIN

Power Sources





Company Profile

As one of the leading enterprises in the low voltage electrics field in China, Sassin International Electric Shanghai Co., Ltd is committed to offering professional solutions of low voltage electric and smart electricity for different fields customers from the countries and regions around the world, to satisfy worldwide customers' requirements on utilizing energy more safely and conveniently, help customers to constantly improve efficiency of production and energy, and reducing their impact on the environment.

Sassin focuses on the global market, driving the company development with technical R&D. Sassin is committed to researching and developing different low electric products to satisfy the different requirements from customers all over the world. With the trend of

intelligent electricity, Sassin has developed the smart electric devices and Smart Power Management System - SPMS to protect the safety of life and property, make the electricity management easily and remotely in any time at any place, and improve the power efficiency. In order to achieve the quick R&D, Sassin has set up the Test Center including a 10kA Short Circuit Breaking Laboratory, the Test Center has been certified by the CNAS (China National Accreditation Service for Conformity Assessment).

Quality is company's life. Sassin is always sparing no effort to promote the construction of quality management system and improve it. For this purpose, Sassin implemented the Total Quality Management System, and oriented by market and customers, to drive the employees and suppliers focusing on the continuous improvement of product quality. Sassin has been certified by the ISO9001 Quality Management System and ISO14001 Environment Management System.

Corporate Culture - Value System

Vision

Better Electric, Better Life.

Mission

Make electric safe, simple and efficient.

Value

Confidence, Faith, Credit.

Catalog classification

V 27.1 Super Series

- **Power Distribution Electrics:** Air Circuit Breakers / Moulded Case Circuit Breakers / Automatic Transfer Switches
- **Modular DIN Rail Devices:** MCB / Residual Current Devices / Surge Protective Devices / Switching Devices / Distribution Boxes
- **Industrial Control And Protection:** Contactors / Starters / Thermal Overload Relays / Motor Protection Circuit Breakers



V 27.2 Pro Series

- **Power Distribution Electrics:** Air Circuit Breakers / Moulded Case Circuit Breakers / Automatic Transfer Switches
- **Modular DIN Rail Devices:** MCB / Residual Current Devices / Surge Protective Devices / Switching Devices / Distribution Boxes
- **Industrial Control And Protection:** Contactors / Starters / Thermal Overload Relays / Motor Protection Circuit Breakers



V 27.3 Echo Series

- **Power Distribution Electrics:** Air Circuit Breakers / Moulded Case Circuit Breakers / Automatic Transfer Switches
- **Modular DIN Rail Devices:** MCB / Residual Current Devices / Surge Protective Devices / Switching Devices / Distribution Boxes
- **Industrial Control And Protection:** Contactors / Starters / Thermal Overload Relays / Motor Protection Circuit Breakers



V 27.4 Switches and Relays

- Load Break Switches
- Fuse Combination Switches
- Fuse Disconnecter Switches
- Low Voltage Fuses
- Rotary Change-over Cam Switches
- Pushbutton Switches
- Switches
- Relays



V 27.5 Power Sources

- Automatic Voltage Stabilizers
- Voltage Regulators
- Compensated Voltage Stabilizers
- Pure Sine Wave Inverters
- Back Up UPS
- Switching Power Supplies
- Control Transformers



V 27.6 Meters & Electrical Accessories

- Electronic Kilowatt Hour Meters
- Power Capacitors
- Analogue Panel Meters
- Digital Panel Meters
- Current Transformers
- Metal Boxes
- Terminal Blocks
- PC Plug Socket Couplings
- Electric Bell & Buzzers



Catalog USB Memory Stick

All products in these catalogs listed above are available in USB memory stick.



Catalog PDF

www.sassin.com

All catalogs can be downloaded as PDF files from SASSIN website.





Power Sources

Automatic voltage stabilizers

- P 1-3 SVC-N series
- P 4-5 PCH series
 - P 6 DVR series, digital display
 - P 7 LVR series, LCD display
 - P 8 SVC-D series, digital display
- P 9-10 SVC series, single phase, horizontal
- P 11-12 SVC series, single phase, vertical
- P 13-14 SVC series, three phase
 - P 15 Options of input plug & output socket
- P 16-17 DBW/SBW series compensated voltage stabilizers

- P 18 **TDGC2J/TSGC2J series voltage regulators**

Inverters

- P 19-20 SKN-M series pure sine wave inverters
- P 21 SKN-H series modified sine wave inverters

Back-up UPS

- P 22 PCN-V series
- P 23 PCS series

- P 24-29 **Switching power supplies**

- P 30 **JBK3 control transformers**

- P 31-32 **Index order code**

Automatic Voltage Stabilizers Series SVC-N

Applications and functions

- Continuously stabilize power supply where output voltage is unstable
- Protection for office equipment, household appliance
- Protection for industrial equipment, medical equipment
- Protection for communication system etc.



Air Conditioner



Laptop



TV



Washing Machine



Refrigerator



HI-FI

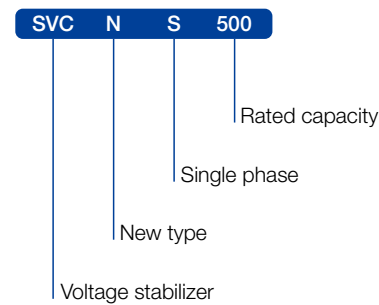


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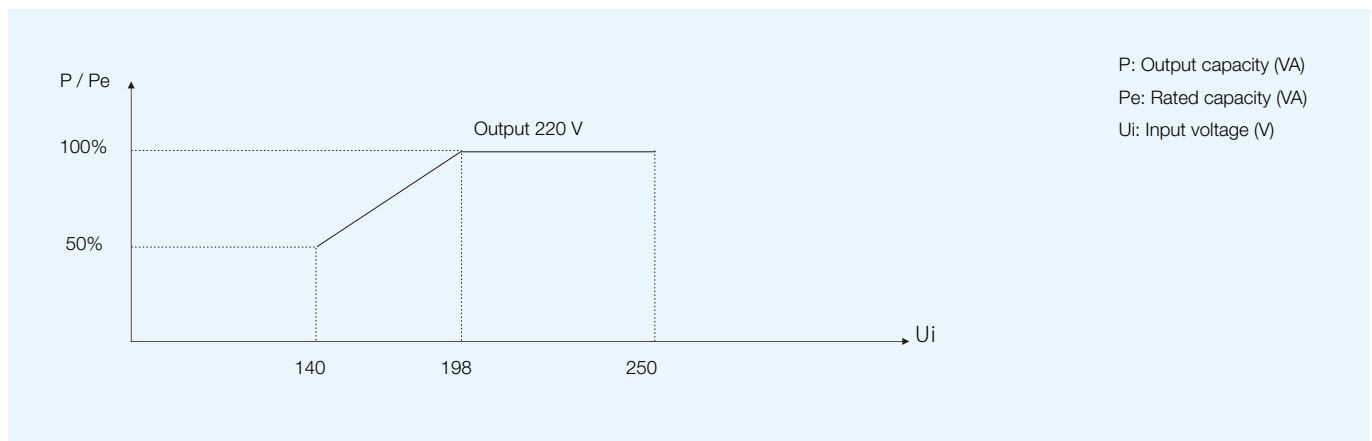
Features

- The updated version of traditional SVC model
- Stylish appearance
- Smaller size and lighter weight
- Higher efficiency
- Low noise
- Wider range of input voltage
- Automatic resume
- Abnormity warning
- Full protections
 - Under / Over voltage
 - Short circuit
 - Over load / heat
 - Long-time delay

Instruction of type code



Loading capacity diagram



Automatic Voltage Stabilizers

Series SVC-N

Technical specifications

Type		SVC-N-500	SVC-N-1000	SVC-N-1500	SVC-N-2000	SVC-N-3000	SVC-N-5000	SVC-N-8000	SVC-N-10000	
Input	Power capacity (VA)	500	1000	1500	2000	3000	5000	8000	10000	
	Voltage Range (V)	AC 150 ~ 250								
Output	Frequency (Hz)	50 / 60								
	Voltage Range (V)	AC 220 / 110				AC 220				
	Precision	± 3 %								
	Efficiency	≥ 95 %								
	Long-time delay	-	-	-	-	-	4 ± 1min	4 ± 1min	4 ± 1min	
Indicator Status	Normal working	Green: on								
	Overvoltage	Red: on								
	Undervoltage	Yellow: on								
Protection	Over-voltage Protection	246 V ± 4 V								
	Under-voltage Protection	184 ± 4 V								
	Overload Protection	YES								
	High Temperature Protection	-	-	-	-	-	YES (≥ 95 °C)			
	Short Circuit Protection	YES								
Cooling Environment	Fan	NO							YES	
	Operating temperature	-5 °C ~ 40 °C								
Insulation resistance	Humidity	≤ 90 %								
		> 5 MΩ								
Insulation class		Class E								
Electric strength		1500 V / 1 min								

Selection and ordering data


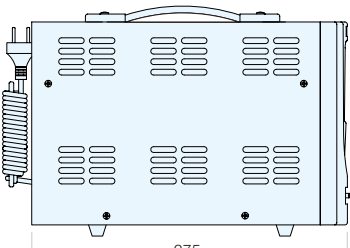
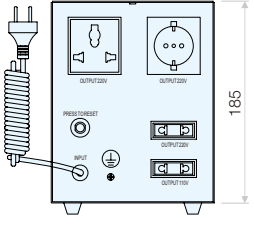

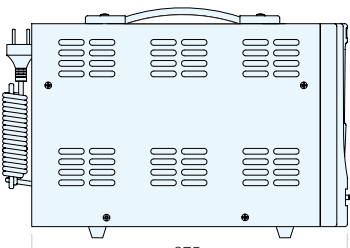
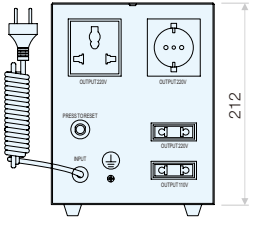

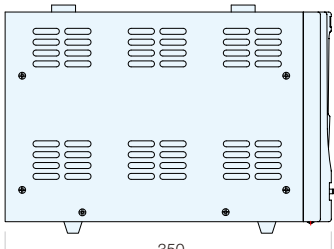
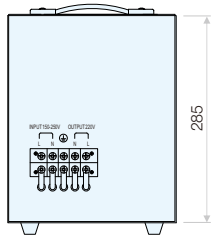

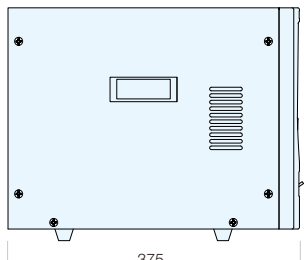
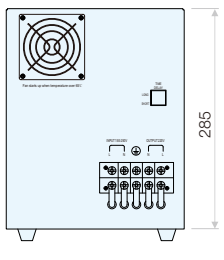

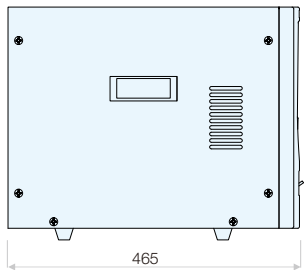
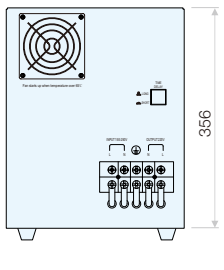
SVC-N

Phase	Type	Frequency (Hz)	Input voltage AC (V)	Output voltage AC (V)	Power capacity (VA)	Type code	Order code
Single	Servo-motor	50 / 60	150 ~ 250	220 / 110	500	SVC NS500	34815
					1000	SVC NS1000	34816
					1500	SVC NS1500	34817
				220	2000	SVC NS2000	34818
					3000	SVC NS3000	34819
					5000	SVC NS5000	34820
					8000	SVC NS8000	34821
					10000	SVC NS10000	34822

Please select the suitable plug and socket for SVC-N-500VA, SVC-N-1000VA and SVC-N-1500VA according to the list in Page 12.

Automatic Voltage Stabilizers Series SVC-N

Outline and installation dimensions

Model	Front View (mm)	Top View (mm)	Side View (mm)
SVC-N-500VA	 132	 275	 185
SVC-N-1000VA/1500VA	 132	 275	 212
SVC-N-2000VA/3000VA	 210	 350	 285
SVC-N-5000VA	 220	 375	 285
SVC-N-8000VA/10000VA	 235	 465	 356

Relay Type Voltage Stabilizers

Series PCH

Applications and functions

- Continuously stabilize power supply where output voltage is unstable
- Protection for office equipment, household appliance
- Protection for industrial equipment, medical equipment
- Protection for communication system

Features

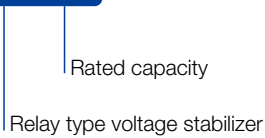
- Small size and light weight
- Wide range of input voltage
- Elegant appearance
- Reliable performance
- High efficiency



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Instruction of type code

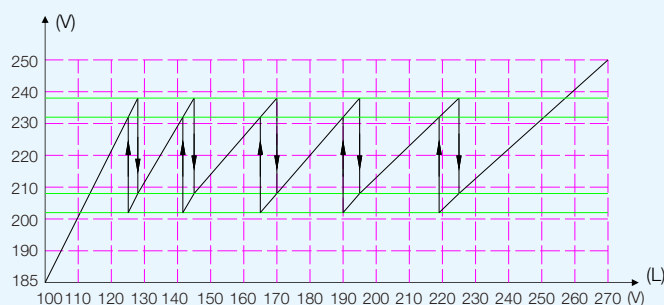
PCH 500



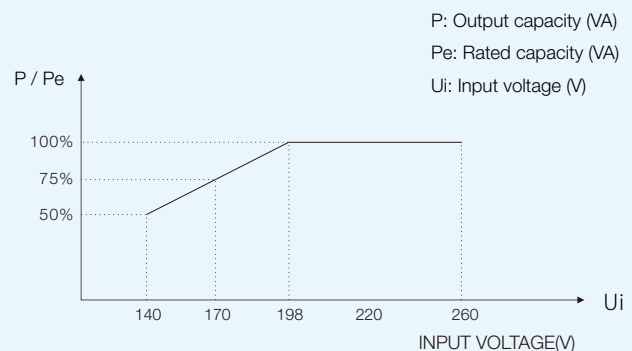
Technical specifications

Type		PCH-500	PCH-1000	PCH-1500	PCH-2000	PCH-3000	PCH-5000	PCH-8000	PCH-10000	
Input	Power capacity (VA)	500	1000	1500	2000	3000	5000	8000	10000	
	Voltage range (V)	140-260								
	Frequency (Hz)	50/60								
Output	Voltage range (V)	220								
	Precision	± 8 %								
Indicator Status	Efficiency	≥ 95 %								
	Phase	Single Phase								
	Working	Green: indicating the power ON/OFF								
Protection	Delaying	Yellow: ON during delay; OFF when delay finish								
	Unusual	Red: indicating protection of Over/Under-voltage; OFF when protection finish								
	Over-voltage protection	YES								
Environment	Under-voltage protection	YES								
	Overload protection	YES								
	High Temperature Protection	YES								
	Short circuit protection	YES								
	Cooling fan	Nature							Fan	
Physical	Operating temperature	-5 °C ~ 40 °C								
	Humidity	< 90 %								
Physical	Machine size (mm)	190x173x135	213x194x170	213x194x170	272x222x205	310x230x220	465x241x210	535x275x240	635x275x240	
	N.W. (Kgs)	4.5	7	8	12	15	26	28	39	

Input / output voltage diagram



Loading capability diagram



Relay Type Voltage Stabilizers Series PCH

Selection and ordering data

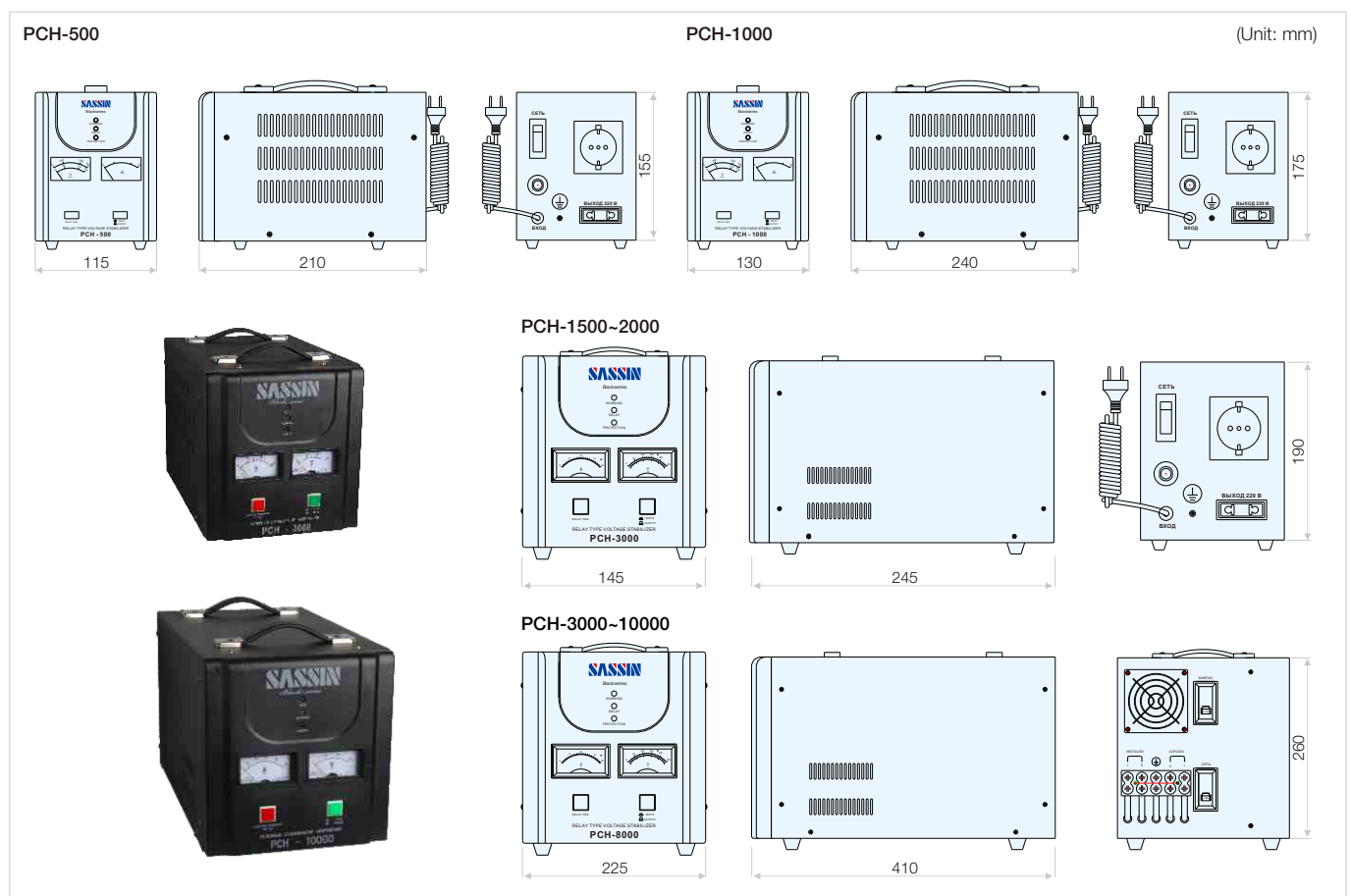
PCH single phase

Phase	Type	Frequency (Hz)	Input voltage AC (V)	Output voltage AC (V)	Rated capacity (VA)	Type code	Order code
Single	Relay	50 / 60	140 ~ 260	220 / 110	500	PCH S500	15802
					1000	PCH S1000	15803
					1500	PCH S1500	15804
					2000	PCH S2000	15805
					3000	PCH S3000	15806
					5000	PCH S5000	15807
					8000	PCH S8000	15808
					10000	PCH S10000	15809

Please select the suitable plug and socket for PCH-500, PCH-1000, PCH-1500 and PCH-2000 according to the list in Page 12.

Outline and installation dimensions

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Automatic Voltage Stabilizers

Series DVR Single Phase

Applications

- To automatically maintain a constant voltage level when power supply is not stable
- Ideal power supply for household appliances
- For precision instruments

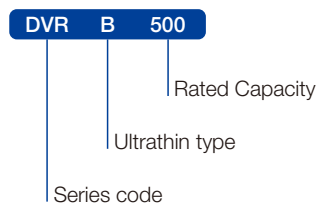
Features

- Luxury design with SCM controlled system
- Digital display working status at a glance
- Subminiature design (ultrathin type), space-saving
- Reliable performance with full protection
- With overload alarming function
- Quick response against voltage fluctuation



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Instruction of type code



Selection and ordering data

Model	Rated capacity (VA)	Type code	Order code
		DVR	500
	1000	DVR 1000	38182
	1500	DVR 1500	38183
	2000	DVR 2000	38184
	3000	DVR 3000	38185
DVR-B	500	DVR B500	36499
	1000	DVR B1000	36500
	1500	DVR B1500	36501
	2000	DVR B2000	36502
	3000	DVR B3000	36503

Technical specifications

Type	DVR-500	DVR-1000	DVR-1500	DVR-2000	DVR-3000
Power capacity (VA)	DVR-B-500 500	DVR-B-1000 1000	DVR-B-1500 1500	DVR-B-2000 2000	DVR-B-3000 3000
Technology	SCM based digital circuit + servo motor regulating				
Input	Voltage range (V) 150 ~ 250 Frequency (Hz) 50/60				
Output	Voltage (V) 220 Precision ± 3 % Efficiency ≥ 95 %				
Protection	Under-voltage (V) 184 ± 4 Over-voltage (V) 246 ± 4 Time delay (min) 5 ± 2 Over-heating (°C) 95 ± 5 Overload/short circuit As per the tripping characteristics of MCB				
Ambient	Temperature (°C) -10 ~ +40 Humidity ≤ 90 % Altitude (m) ≤ 2000				
Packaging	Measurement (mm) Gross weight (kg)				
Response time	≤ 1 s when input voltage fluctuation not more than 10 %				
Output waveform	No additional waveform distortion				
Noise	≤ 50 dB				
Insulation class	Class E				
Insulation resistance	> 5 MΩ				
Dielectric strength	1500 V/1 min				

Automatic Voltage Stabilizers

Series LVR Single Phase

Applications

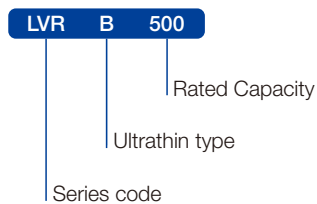
- To automatically maintain a constant voltage level when power supply is not stable
- Ideal power supply for household appliances
- For precision instruments

Features

- Luxury design with SCM controlled system
- LCD display working status at a glance
- Superhigh precision up to 1%
- Subminiature design (ultrathin type), space-saving
- Reliable performance with full protection
- With overload alarming function
- Quick response against voltage fluctuation



Instruction of type code



Selection and ordering data

Model	Rated capacity (VA)	Type code	
		Type code	Order code
LVR	500	LVR 500	38186
	1000	LVR 1000	38187
	1500	LVR 1500	38188
	2000	LVR 2000	38189
	3000	LVR 3000	38190
LVR-B	500	LVR B500	36504
	1000	LVR B1000	36505
	1500	LVR B1500	36506
	2000	LVR B2000	36507
	3000	LVR B3000	36508

Technical specifications

Type	LVR-500	LVR-1000	LVR-1500	LVR-2000	LVR-3000
	LVR-B-500	LVR-B-1000	LVR-B-1500	LVR-B-2000	LVR-B-3000
Power capacity (VA)	500	1000	1500	2000	3000
Technology	SCM based digital circuit + servo motor regulating				
Input	Voltage range (V)	70 ~ 130/150 ~ 250			
	Frequency (Hz)	50/60			
Output	Voltage (V)	110/220			
	Precision	220 V ± 1 %, ± 3 %, ± 5 % adjustable 110 V ± 1 %, ± 3 %, ± 5 % adjustable			
	Efficiency	≥ 95 %			
Protection	Under-voltage (V)	184 ± 4			
	Over-voltage (V)	246 ± 4			
	Time delay (min)	5 ± 2			
	Over-heating (°C)	95 ± 5			
Ambient	Overload/short circuit	As per the tripping characteristics of MCB			
	Temperature (°C)	-10 ~ +40			
	Humidity	≤ 90 %			
Packaging	Altitude (m)	≤ 2000			
	Measurement (mm)				
	Gross weight (kg)				
Response time	≤ 1 s when input voltage fluctuation not more than 10 %				
Output waveform	No additional waveform distortion				
Noise	≤ 50 dB				
Insulation class	Class E				
Insulation resistance	> 5 MΩ				
Dielectric strength	1500 V/1 min				

Automatic Voltage Stabilizers

Series SVC-D Digital Display

Applications and functions

- Continuously stabilizer power supply where output voltage is unstable
Protection for office equipment, household appliance
- Protection for industrial equipment, medical equipment
- Protection for communication system etc

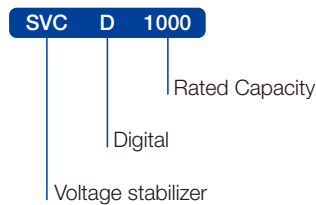
Features

- With digital display screen
- High efficiency power supply
- No wave distortion
- Reliable performance
- Work continually for long time
- Long time delay and under-voltage protection can be customized
- Connector accessory selectable



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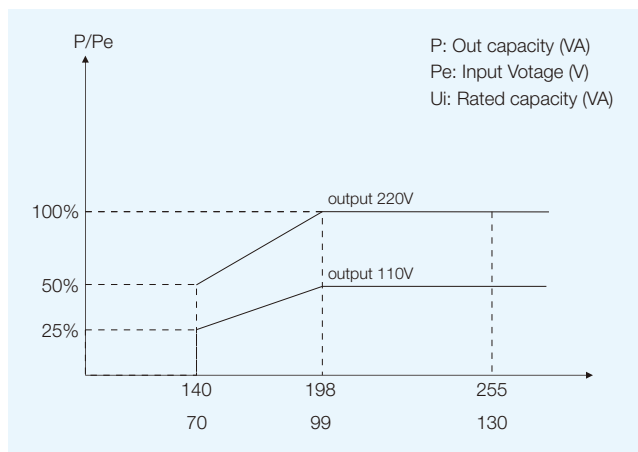
Instruction of type code



Technical specifications

Type		SVC-D-1000	SVC-D-1500	SVC-D-2000	SVC-D-3000	SVC-D-5000	SVC-D-8000	SVC-D-10000
Input	Power capacity (VA)	1000	1500	2000	3000	5000	8000	10000
	Rated voltage	AC 50 ~ 130 V AC 140 ~ 255 V						
Output	Frequency (Hz)	50/60						
	Rated voltage	AC 220 V/110 V						
	Precision	± 4 %						
Protection	Delay time (S)	5 S or 30 S						
	Over-voltage protection	246 V ± 4 V (Show "H")						
	Under-voltage protection	184 V 4 V (Show "L")						
Environment	High temperature protection	105 °C						
	Operating humidity	-5 ~ +40 °C						
	Temperature	≤ 90 % (At 25 °C)						
Physical	Machine size (mm)	160x212x195	160x212x195	215x190x260	215x220x290	280x220x310	365x270x330	365x270x330

Input voltage and output power



Model	Rated capacity (VA)	Type code	Order code
SVC-D	1000	SVC D1000	32616
	1500	SVC D1500	32617
	2000	SVC D2000	32618
	3000	SVC D3000	32619
	5000	SVC D5000	32620
	8000	SVC D8000	32621
	10000	SVC D10000	32622

Automatic Voltage Stabilizers Series SVC Single Phase Horizontal

Applications and functions

- Continuously stabilize power supply where output voltage is unstable
- Protection for office equipment, household appliance
- Protection for industrial equipment, medical equipment
- Protection for communication system etc.

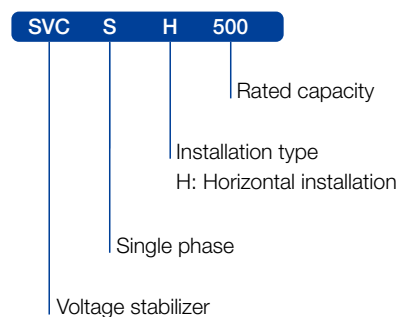
Features

- High efficiency power supply
- No wave distortion
- Reliable performance
- Work continually for long time
- Long-time delay and under-voltage protection can be customized
- Connector accessory selectable



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Instruction of type code



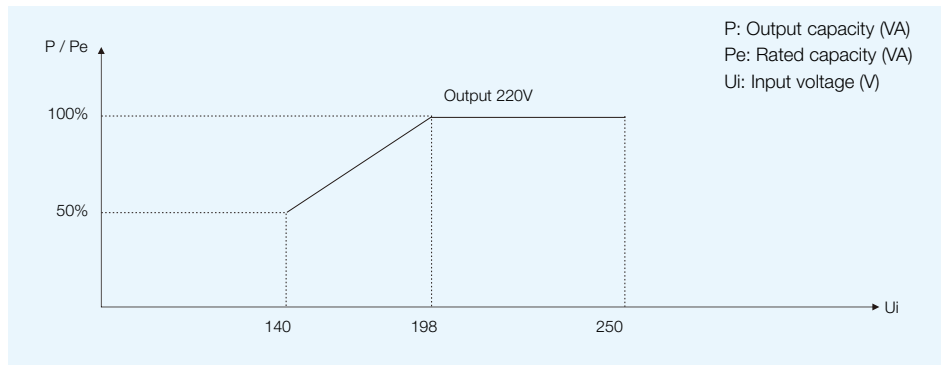
Technical specifications

Type		SVC-500	SVC-1000	SVC-1500	SVC-2000	SVC-3000	SVC-5000	SVC-8000	SVC-10000	
Input	Power capacity (VA)	500	1000	1500	2000	3000	5000	8000	10000	
	Voltage range (V)	140~250 / 70~130								
Output	Frequency (Hz)	50 / 60								
	Voltage range (V)	220 / 110								
	Precision	± 3 %								
	Efficiency	≥ 95 %								
Protection	Phase	Single phase								
	Over-voltage protection	YES								
	Under-voltage protection	YES								
	Overload protection	YES								
	High Temperature protection	YES								
	Short circuit protection	YES								
	Cooling fan	Nature							Fan	
Environment	Operating temperature	-5 °C ~ +40 °C								
	Humidity	≤ 90 %								
Physical	Machine size (mm)	190x173x135	213x194x170	213x194x170	272x222x205	310x230x220	465x241x210	535x275x240	535x275x240	
	N.W. (Kgs)	4.5	7	8	12	15	26	28	39	

Automatic Voltage Stabilizers

Series SVC Single Phase Horizontal

Input voltage and output power



Overload capability	Overload time (min)
20%	60
40%	30
60%	5

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Selection and ordering data

SVC Single Phase Horizontal

Phase	Type	Frequency (Hz)	Input voltage AC (V)	Output voltage AC (V)	Power capacity (VA)	Type code	Order code
Single	Servo-motor Horizontal	50 / 60	140 ~ 250 /70-130	220 / 110	500	SVC SH500	15818
					1000	SVC SH1000	15819
					1500	SVC SH1500	15820
					2000	SVC SH2000	15821
					3000	SVC SH3000	15822
					5000	SVC SH5000	15823
					8000	SVC SH8000	15824
10000	SVC SH10000	15825					

Please select the suitable plug and socket for SVC-500, SVC-1000 and SVC-1500 according to the list in Page 12.

Automatic Voltage Stabilizers Series SVC Single Phase Vertical

Applications and functions

- Continuously stabilizing power supply where output voltage is unstable
- 3G serving base station
- Industrial equipment
- Medical equipment
- Office equipment etc

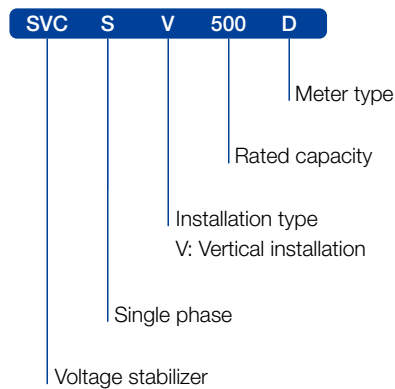
Features

- High efficiency power supply
- No wave distortion
- Reliable performance
- Working continually for long time
- Digital display type is available



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Instruction of type code



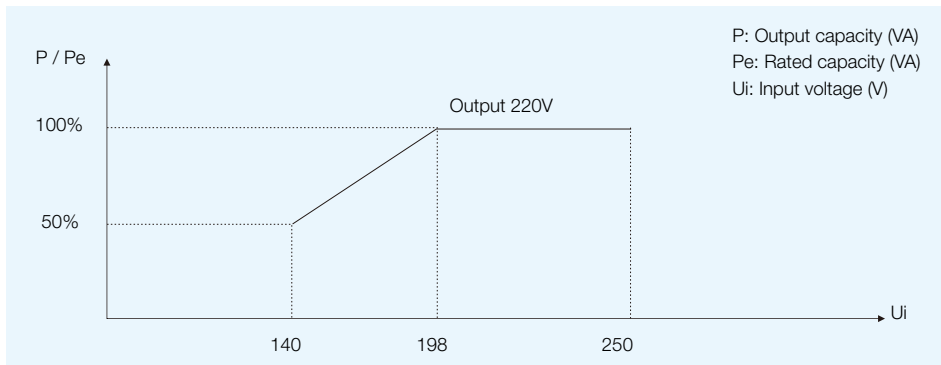
Technical specifications

Type		SVC-5000	SVC-8000	SVC-10000	SVC-15000	SVC-20000	SVC-30000
Input	Power capacity (VA)	5000	8000	10000	15000	20000	30000
	Voltage range (V)	150 ~ 250					
	Frequency (Hz)	50 / 60					
Output	Voltage range (V)	220					
	Precision	± 3 %					
	Efficiency	≥ 95 %					
Protection	Phase	Single phase					
	Over-voltage protection	■					
	Under-voltage protection	■					
	Overload protection	■					
	High temperature protection	■					
	Short circuit protection	■					
	Cooling fan	Nature					Fan
Environment	Operating temperature	-5 °C ~ +40 °C					
	Humidity	≤ 90 %					

Automatic Voltage Stabilizers

Series SVC Single Phase Vertical

Input voltage and output power



Overload capability	Overload time (min)
20%	60
40%	30
60%	5

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Selection and ordering data

SVC single phase vertical

Phase	Meter	Type	Frequency (Hz)	Input voltage AC (V)	Output voltage AC (V)	Power capacity (VA)	Type code	Order code
Single	Digital	Servo-motor Vertical	50 / 60	150 ~ 250	220	5000	SVC SV5000D	15826
						8000	SVC SV8000D	15827
						10000	SVC SV10000D	15828
Single	Pointer	Servo-motor Vertical	50 / 60	150 ~ 250	220	5000	SVC SV5000P	15829
						8000	SVC SV8000P	15830
						10000	SVC SV10000P	15831
				150 ~ 250	220	15000	SVC SV15000P	15832
						20000	SVC SV20000P	15833
						30000	SVC SV30000P	15834



SVC-5000, 8000, 10000
Vertical (Pointer Meter)



SVC-5000, 8000, 10000
Vertical (Digital meter)



SVC-15000, 20000, 30000
Vertical (Pointer meter)

SVC-15000, 20000, 30000
Vertical (Digital meter)

Automatic Voltage Stabilizers Series SVC Three Phase

Applications and functions

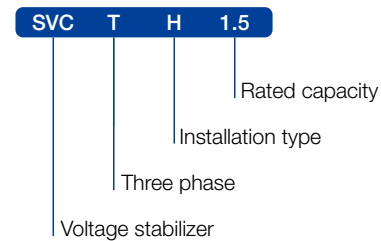
- Continuously stabilize power supply where output voltage is unstable
- Test equipment
- Lighting equipment
- Alarm and security system
- X-ray equipment
- Communication system
- Medical treatment & hygiene

Features

- Compact structure
- High efficiency power supply
- No wave distortion
- Reliable performance
- Work continually for long time



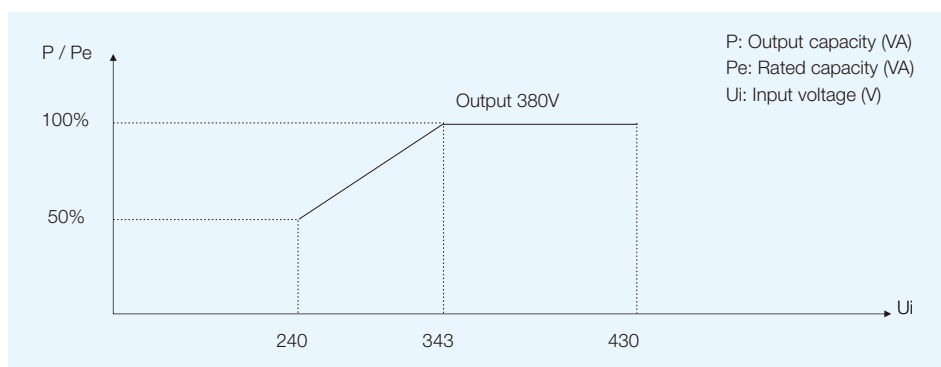
Instruction of type code



Technical specifications

Type		SVC-1.5K	SVC-3K	SVC-4.5K	SVC-6K	SVC-9K	SVC-15K	SVC-20K	SVC-30K	SVC-50K	SVC-60K	
Input	Voltage range (V)	280 ~ 430										
	Frequency (Hz)	50 / 60										
Output	Voltage range (V)	380										
	Precision	±3 %										
	Efficiency	≥ 95 %										
Protection	Phase	Three Phase										
	Over-voltage protection	■										
	Under-voltage protection	■										
	Overload protection	■										
	High temperature protection	■										
	Short circuit protection	■										
Insulation resistance		< 5 MΩ										
Environment	Operating temperature	-5 °C ~ +40 °C										
	Humidity	≤ 90 %										

Input voltage and output power



Overload capability	Overload time (min)
20%	60
40%	30
60%	5

Automatic Voltage Stabilizers

Series SVC Three Phase

Selection and ordering data

SVC Three Phase

Phase	Type	Frequency (Hz)	Input voltage AC (V)	Output voltage AC (V)	Power capacity (VA)	Type code	Order code
Three	Servo-motor Horizontal	50 / 60	280 ~ 430	380	1.5K	SVC TH1.5	15849
					3K	SVC TH3	15850
					4.5K	SVC TH4.5	15851
Three	Servo-motor Vertical	50 / 60	280 ~ 430	380	6K	SVC TV6	15852
					9K	SVC TV9	15853
					15K	SVC TV15	15854
					20K	SVC TV20	15855
		50 / 60	280 ~ 430	380	30K	SVC TV30	15856
					50K	SVC TV50	15857
					60K	SVC TV60	15858



SVC-3K



SVC-4.5K



SVC-6K



SVC-9K

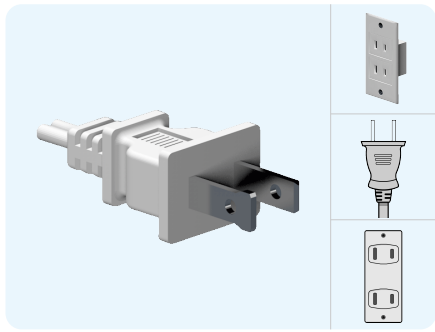


SVC-15K

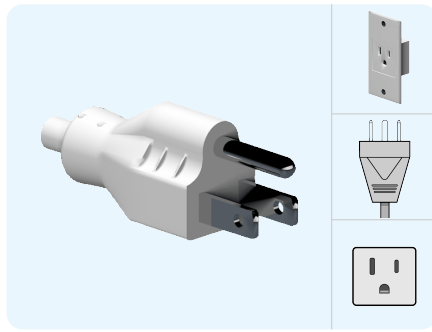


SVC-30K

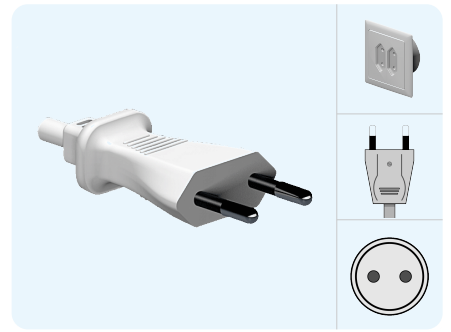
Options of input plug & output socket



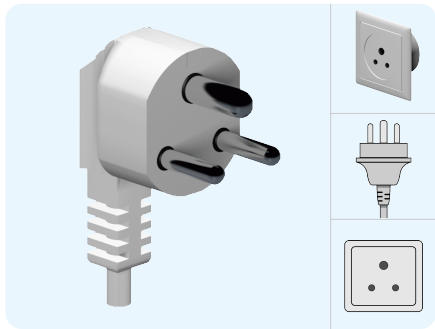
type A



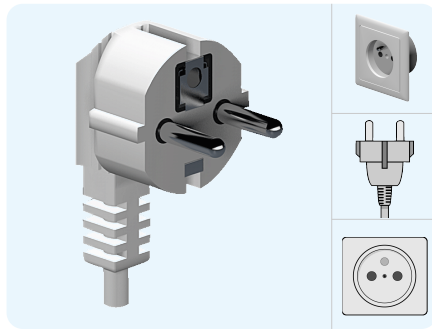
type B



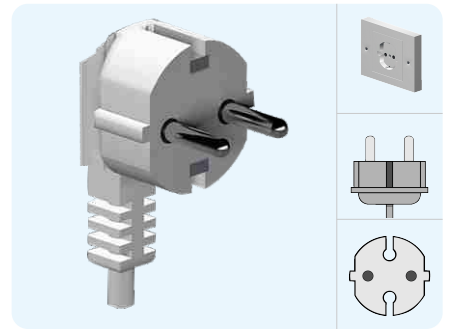
type C



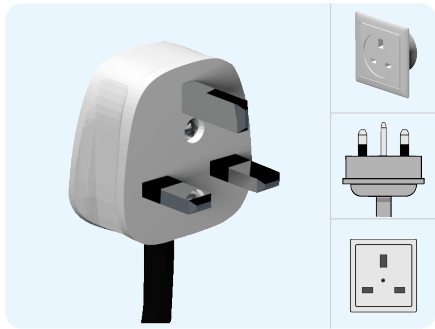
type D



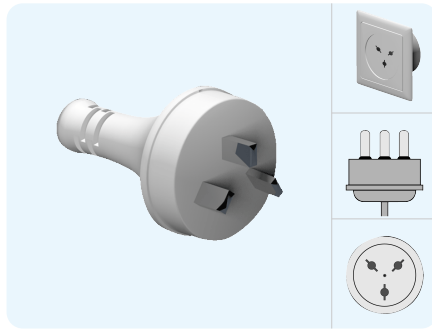
type E



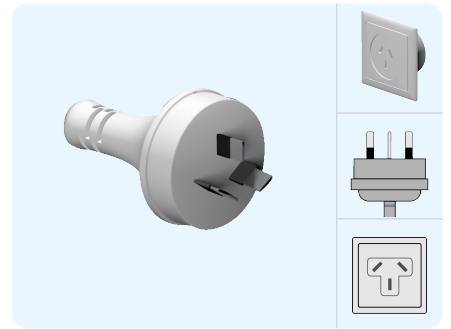
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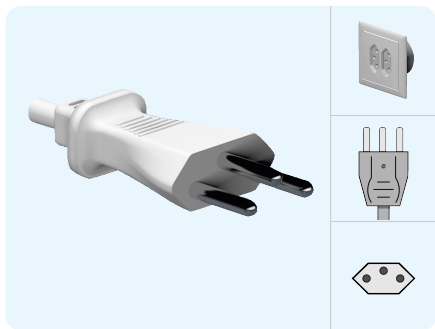
type G



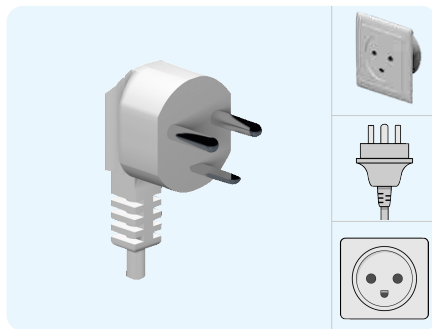
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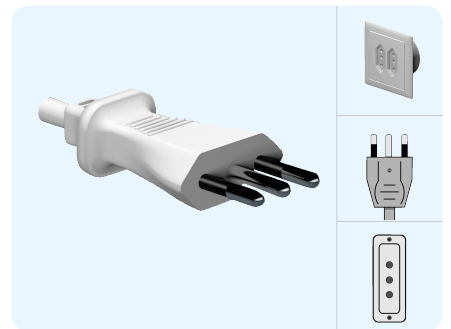
type I



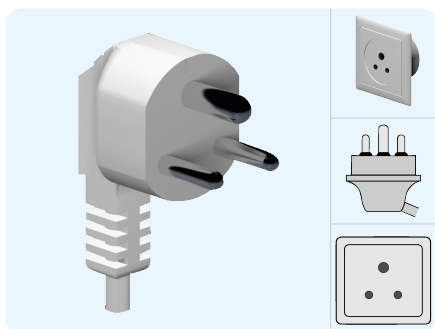
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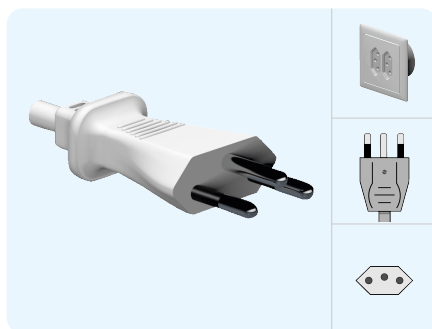
type K



type L



type M



type N

Compensated Voltage Stabilizers

Series DBW / SBW

Applications and functions

- Continuously stabilize power supply where output voltage is unstable
- Industrial production
- Scientific research
- Medical treatment & hygiene
- National defense
- Railway system

Features

- Small volume, light weight
- Large capacity
- High efficiency
- No wave distortion
- Stable voltage adjustment
- Reliable running
- Long working time
- Free transferring between manual control and automatic control
- Suitable for kinds of loads and bearing instantaneous overload
- Convenient installation



Technical specifications

Type	SBW-10KVA ~ 5000 K	DBW-10KVA ~ 200 K
Input voltage	380 V ± 20 %	220 V ± 20 %
Input phase	Three phase four-line + PE	
Output voltage	380 V	220 V
Protection	Over-voltage, over-current, machine fault, phase sequence protection (< SBW150KVA), phase failure protection	Over-voltage, over-current, machine fault phase sequence protection
Environment	Operating temperature	-5 °C ~ 40 °C
	Humidity	< 95 %
Accuracy of output voltage	±1~5 % (adjustable)	
Efficiency	≥ 95 %	
Electric strength	2000 V / 1 min	
Overload capacity	2 times rated current, keeping 1min	
Waveform distortion	No	
Response time	≤ 1.5 S, when outside voltage has 10 % of change	
Insulation resistance	≥ 1 MΩ	

Compensated Voltage Stabilizers Series DBW / SBW

Selection and ordering data

DBW/SBW compensated type

Phase	Accuracy of output voltage (%)	Frequency (Hz)	Input voltage AC (V)	Output voltage AC (V)	Power capacity (KVA)	Type code	Order code
Three	±2~5 % (adjustable)	50/60	380 ± 20 %	380	10	SBW10	15863
					15	SBW15	15864
					20	SBW20	15865
					30	SBW30	15866
					50	SBW50	15867
					60	SBW60	15868
					80	SBW80	15869
					100	SBW100	15870
					120	SBW120	15871
					150	SBW150	15872
					180	SBW180	15873
					200	SBW200	15874
					225	SBW225	15875
					250	SBW250	15876
					300	SBW300	15877
					350	SBW350	15878
					400	SBW400	15879
					450	SBW450	15880
					500	SBW500	15881
					600	SBW600	15882
					800	SBW800	15883
					1000	SBW1000	15884
					1200	SBW1200	15885
1600	SBW1600	15886					
1800	SBW1800	15887					
2000	SBW2000	15888					
2500	SBW2500	15889					
3000	SBW3000	15890					
3500	SBW3500	15891					
4000	SBW4000	15892					
5000	SBW5000	15893					
Single	±2~5 % (adjustable)	50/60	220 ± 20 %	220	10	DBW10	15835
					15	DBW15	15836
					20	DBW20	15837
					25	DBW25	15838
					30	DBW30	15839
					40	DBW40	15840
					50	DBW50	15841
					60	DBW60	15842
					70	DBW70	15843
					80	DBW80	15844
					100	DBW100	15845
					150	DBW150	15846
					180	DBW180	15847
200	DBW200	15848					



Notes: Please indicate clearly about input voltage and accuracy of output voltage when placing an order.

Voltage Regulators

Series TDGC2J / TSGC2J

Applications and functions

- Wide range of output voltage from zero to the maximum value
- Applied in industries, scientific researches
- Suited to serve as ancillary facilities for analytical instruments in petroleum industry etc.
- Voltage regulating
- Temperature controlling



Features

- Energy saving type
- No wave distortion
- Small size and light weight
- Reliable performance
- High efficiency
- Convenient installation



5

Selection and ordering data

	Phase	Frequency (Hz)	Input voltage (V)	Output voltage (V)	Max.output current (A)	Capacity (KVA)	Shape		
								Type code	Order code
	1	50/60	110/220	0-250	0.88/2	0.5	Round	TDGC2J 0.5	15894
					1.6/4	1	Round	TDGC2J 1	15895
					3.2/8	2	Hexagon	TDGC2J 2	15896
					4.8/12	3	Round	TDGC2J 3	15897
					16	4	Octagon	TDGC2J 4	15902
					8/20	5	Octagon	TDGC2J 5	15898
					28	7	Octagon	TDGC2J 7	16067
					16/40	10	Octagon	TDGC2J 10	15899
					24/60	15	Octagon	TDGC2J 15	15900
					80	20	Octagon	TDGC2J 20	15901
					120	30	Octagon	TDGC2J 30	15903
	3	50/60	220/380	0-430	1.6/4	3	Hexagon	TSGC2J 3	15905
					3.2/8	6	Hexagon	TSGC2J 6	15906
					5.4/13.4	9	Hexagon	TSGC2J 9	15907
					20	15	Octagon	TSGC2J 15	15908
					28	20	Octagon	TSGC2J 20	15909
					40	30	Octagon	TSGC2J 30	15910

Applications and functions

- Micro processor control
- Pure sine wave
- Wide input voltage range
- Intelligent automatic voltage regulating technology
- Intelligent automatic voltage charging technology
- Over load, short circuit protection

Over-temperature protection

- By pass system
- Automatic charge even inverter is off
- Shut off output by manual if no need power
- Low battery protection
- Over voltage, low voltage protection

With polarity protection option

- Compatibility with generators
- The LED & LCD display design option

Technical specifications

Type	SKN-M500	SKN-M1000	SKN-M2000	SKN-M3000	SKN-M4000	SKN-M5000	SKN-M8000	SKN-M10000
Specification								
DC input								
Input voltage (Vdc)	12/24	24	24/48	48	48	48	96	96
Input current (A)	50/25	50	100/50	75	100	125	104	130
Input DC range (Vdc)	10~15/20~30	20~30/40~60		40~60			80-112	80-112
AC bypass								
Input AC range (Vac)	155 ~ 280 V			165 ~ 265 V				
Input frequency range (Hz)	45 ~ 55 Hz							
Input current (A)	2.3	4.5	9.1	13.6	18.2	22.7	51.7	64.6
Charge current	7~10 A		13~17 A		17~25 A			
Transfer time (ms)	≤ 4 ms							
AC output								
Capacity (VA)	500	1000	2000	3000	4000	5000	8000	10000
Output power (W)	350	700	1400	2100	2800	3500	4800	6000
Output voltage (Vac)	220 VAC ~ 110 VAC							
Output frequency range (Hz)	50/60 Hz							
Output current (A)	1.6	3.2	6.4	9.5	12.7	15.9		
Voltage precision (Vac)	220 ± 3%							
Frequency precision (Hz)	50 ± 1 %/60 ± 1 % (in inverter model)							
Wave distortion (TCKJ)	≤ 5%							
Power factor (PF)	0.6							
Overload capacity	100 % ~ 120 %, 25 mins, 120 % ~ 200 %, 1 mins, > 200 %, 0.1 mins							
Inversion efficiency	≥ 82 %				≥ 85 %			
Bypass transfer time (ms)	≤ 4 ms				≤ 10 ms			
Protection	Over temperature, over load, over voltage, low battery, low voltage, input low/high voltage, short current protection							
Ambient								
Noise (dB)	≤ 40 (1 meter)							
Temperature	-20 ~ +45 °C							
Humidity	0 ~ 95 % (no condensation)							
Altitude (m)	≤ 1500							
Dimension								
Package LxWxH (mm)	520x240x327		600x335x475				720x470x715	
Weight (kg)	9.5	15	22	28	39	43.5	71	81



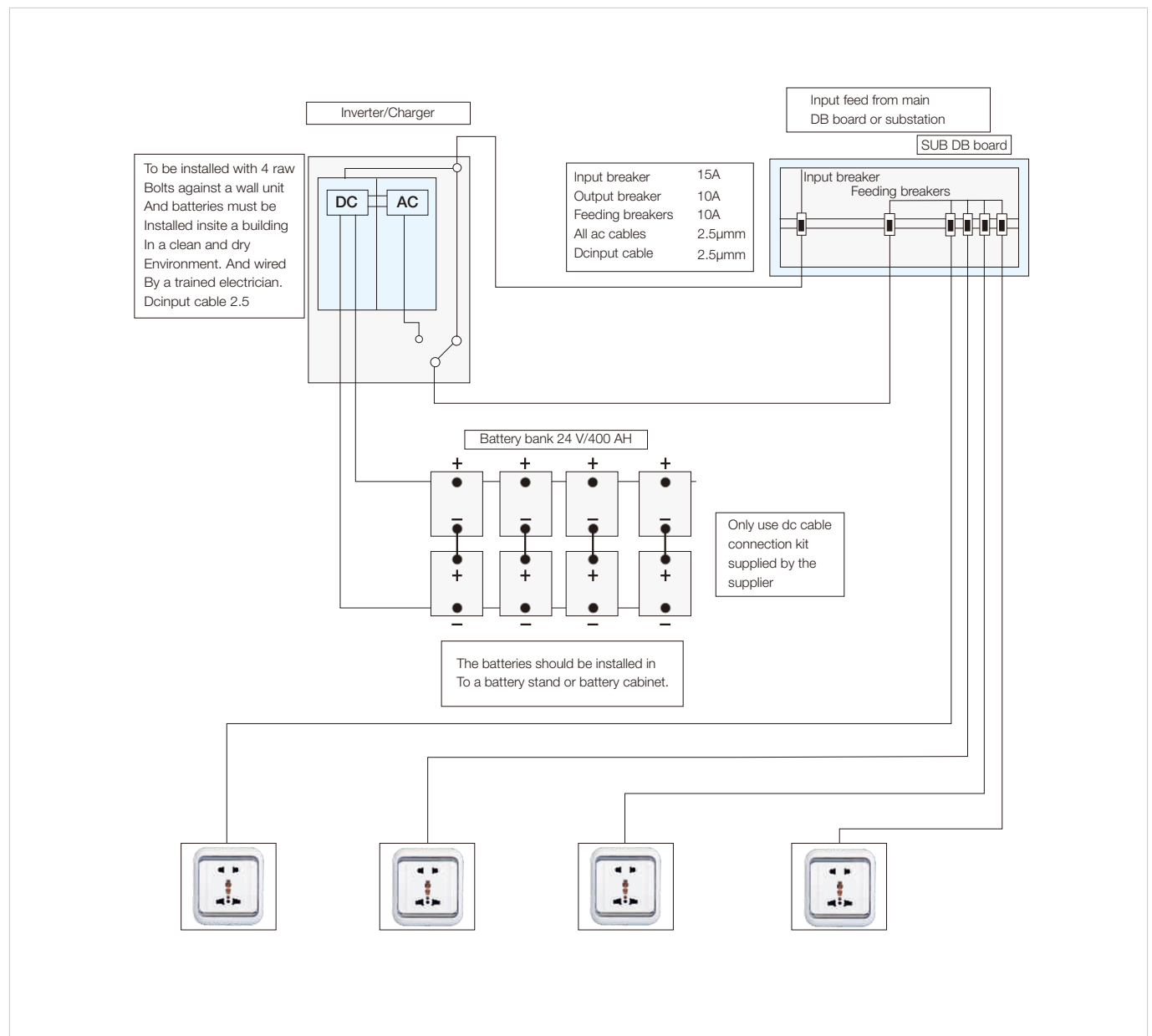
Pure Sine Wave Inverters

Series SKN-M

Selection and ordering data

Type	Input voltage	Type code	
		Type code	Order code
SKN-M500	12V	SKNM500 12	34719
	24V	SKNM500 24	34720
SKN-M1000	24V	SKNM1000 24	34721
	24V	SKNM2000 24	34722
SKN-M2000	48V	SKNM2000 48	34723
	48V	SKNM3000 48	34724
SKN-M4000	48V	SKNM4000 48	34725
SKN-M5000	48V	SKNM5000 48	34726
SKN-M8000	96V	SKNM8000 96	38333
SKN-M10000	96V	SKNM10000 96	38334

5



Modified Sine Wave Inverters Series SKN-H

Main Features

- Micro Processor Control
- User selectable for accepting wider input voltage
- Full automatic and silent operation
- Automatic Line-to-Battery Switch over
- Intelligent Automatic Charging Technology
- Rack and Tower design
- Automatic charge while AC recovery (off model charging)
- High Efficient DC-to-AC conversion. minimizing energy loss
- Over load, short circuit protection
- Low battery protection
- Cool start
- Isolated output
- Selectable charge current
- Compatibility with generators
- Multi-function LED & LCD Display Design and buzzer alarms
- Application for Fan, light, TV and office Appliances



Selection and ordering data

Type	Type code	Order code
SKN-H600	SKN H600	36493
SKN-H1000	SKN H1000	36494
SKN-H1200	SKN H1200	36495
SKN-H1500	SKN H1500	36496
SKN-H2000	SKN H2000	36497
SKN-H2400	SKN H2400	36498

Technical specifications

Specification	Type	SKN-H600	SKN-H1000	SKN-H1200	SKN-H1500	SKN-H2000	SKN-H2400
DC input							
Input voltage (Vdc)		12	12	12	24	24	24
Input DC range (Vdc)		15	10 ~		20 ~ 30		
Input AC range (V AC)		AC bypass in "on / off" switch off mode 220 / 230 / 240 V AC					
Input frequency (Hz)		177-280 V °C (narrow range) or 90-280 V AC (wide range)					
Bypass output Voltage (V AC)		50/60 Hz					
Bypass output Frequency (Hz)		Same as input AC					
Charge current (A)		Same as input frequency					
Charge floating voltage (V)		10 A ± 2 A or 10 A - 20 A Selectable			27.5 ± 0.4 V		
Over charge voltage (V)		13.75 ± 0.2 V			30.0 V ± 0.8 V charge stop		
AC efficiency		15.0 V ± 0.4 V charge stop			> 97 %		
Transfer time (ms)		Typical 15 ms					
AC output (inverter)							
Capacity (VA)		600	1000	1200	1000	2000	2400
Output power (W)		360	600	720	600	1200	1440
Output voltage		220 V AC					
Output frequency		50/60 HZ					
Output current (A)		2.7/1.6	4.5/2.7	5.4/3.2	4.5/2.7	9.1/5.5	10.8/6.4
Voltage precision (V AC)		220 ± 10 %					
Frequency precision (Hz)		50/60 Hz ± 0.1 Hz					
Wave		modify sine wave					
Power factor (PF)		0.6					
Inversion efficiency		> 85 %					
Bypass transfer time (ms)		≤ 8 ms					
Over load capacity		Over load 110 %, 60 s later shut offer					
Protection							
Protection		Over load / short circuit protection Over charge, discharge protection					
Ambient							
Noise (DB)		≤ 40 (1 meter)					
Temperature		-20 ~ +45 degree					
Humidity		0 ~ 95 % (no condensation)					
Altitude (m)		≤ 1500					
Dimension							
Package L×W×H (mm)		638×370×552 mm (10 pcs in one carton)					
GW. Weight (Kg) /Carton		26.5	27.5	27.8	27.2	28.2	28.6

Back-up UPS Series PCN-V

Main Features

- CPU control
- With Stabilizer Function
- Wide Input Voltage Range
- Wide Input Frequency Range
- High/Low Voltage Protection, Overload/Short Protection
- Cool start computer even there isn't main power
- Automatic recharge even UPS is off
- Automatic restart
- Beeping Alarm on Battery, Battery Low and Overload
- Beeping Selection
- Intelligent Battery Management
- Intelligent LCD Display
- Smart RS232 & Rj11 & USB Option
- Compatibility With Generators



Selection and ordering data

Type	Type code	Order code
PCN-V500	PCN V500	36509
PCN-V650	PCN V650	36510
PCN-V1000	PCN V1000	36511
PCN-V1200	PCN V1200	36512
PCN-V1500	PCN V1500	36513
PCN-V2000	PCN V2000	36514

Technical specifications

Type		PCN-V500	PCN-V650	PCN-V1000	PCN-V1200	PCN-V1500	PCN-V2000
Input	Voltage	80-150 V AC / 145-290 V AC \pm 5 V					
	Frequency	60/50 Hz \pm 10 %					
Output	Voltage (AC mode)	105-135 V AC / 190-250 V AC					
	Voltage (inverter mode)	120 V AC/220 V AC \pm 5 %					
	Capacity	500VA/300W	650VA/390W	1000VA/600W	1200VA/720W	1500VA/880W	2000VA/1100W
	Frequency (inverter mode)	60/50 Hz \pm 0.5 Hz					
	Transfer time	2 ms typical					
	Generator connection	Normal Working under the Generator					
	Waveform	modified Sine wave					
Protection	Spike & surge suppression	yes					
	Over / under volt.	Switch to Bat. O / P when Mains over regulation range					
Battery	Over load / short circuit	Fuse & current limited for both Mains and Battery modes					
	Type	Lead-Acid maintenance-free					
	DC Bus	12 V 7.0 Ah	12 V 7.0 Ah	12 V 7.0 Ah	12 V 7.0 Ah	12 V 9.0 Ah	12 V 7.0 Ah
	Number	1 PCS		2 PCS		3 PCS	
	Recharge time	8 hours \geq 90 %					
Physical	Back up time (one PC)	8-15 mins	8-15 mins	20-30 mins	20-30 mins	25-45 mins	30-45 mins
	Weight (KGs)	5	5.5	10.5	11	11.5	17
	Shipping Wt.	5.6	6	11	11.5	12	17.5
	Product dimensions (mm)	335x95x160			355x120x195		410x145x215
	Packing dimensions (mm)	435x395x275 / 2 PCS			435x395x275 / 2 PCS		495x250x335
Soft ware Function	Rs232 or USB option	Auto save & shut down					
	Cold start	UPS Start The Computer Even there Is no Main Power					
	Automatic charge	Automatic Charge when UPS is off					
	Automatic restart	Automatic Restart if main power resumes within one hour					
	Voltage display	220 V/230 V Optional					
	Frequency	50/60 Hz Optional					
	Beeping	Beeping optional at battery mode					
Efficiency	AC-AC	1					
	DC-AC	0.6					
Acoustic Ambient	Noise level	\leq 45 dB					
	Temperature	-5 ~ +45 °C					
	Humidity	20 % to 90 %					
Power Outlet	No. and types	2 sockets		3 sockets		4 sockets	

Applications and functions


- CPU control
- Wide input voltage range
- High/low voltage protection, overload/short circuit protection
- Cool start computer even there is no main power
- Automatic recharge even UPS is off
- Automatic restart
- Beeping alarm on battery, battery low and overload
- Beeping selection
- Intelligent battery management
- Intelligent LCD Display
- Smart RS232 & RJ11 & USB Option
- Compatibility with generators



Technical specifications

Type		PCS-500	PCS-650	PCS-800	PCS-1000	PCS-1200	PCS-1500
Input	Voltage (V)	145-290 V AC \pm 5					
	Frequency (Hz)	50 \pm 10 %					
Output	Voltage (AC Mode)	190 V - 250 V AC					
	Voltage (Inverter Mode)	220 V AC \pm 5 %					
	Capacity	500VA/300W	650VA/360W	800VA/480W	1000VA/600W	1200VA/720W	1500VA/880W
	Frequency (Inverter Mode)	50 Hz \pm 0.5 Hz					
	Transfer time (MS)	2					
	Generator connection	Normal working under the generator					
	Waveform	Modified-sinewave					
Protection	Spike & surge suppression	yes					
	Over/Under Volt.	Switch to Bat. O/P when mains over regulation range					
	Over load/short circuit	Fuse & current limited for both mains and battery modes					
	Type	Lead-Acid maintenance-free					
Battery	DC Bus	12 V 7.0 Ah			12 V 9.0 Ah		
	Number	1 PC			2 PC		
	Recharge time	8 hours \geq 90 %					
Physical	Back up time (one PC)	8-15 mins	10-18 mins	15-25 mins	20-30 mins	20-30 mins	25-45 mins
	Weight (KGS)	5	5.5	6.5	10.5	11	11.5
	Shipping Wt. (KG)	5.6	6	7	11	11.5	12
	Product dimensions (mm)	335x95x160			335x120x195		
	Package dimensions (mm)	375x170x200			420x190x250		
	Soft ware	Rs232 or USB option Windows & NT	Auto save & shut down				
Function	Cool start	UPS starts the computer even there is no main power					
	Automatic charge	Automatic charge when UPS is no main power					
	Automatic restart	Automatic restart if main power coming within one hour (UPS shutdown by Automatic)					
	Voltage display	220 V/230 V Optional following the real capacity					
	Frequency	50/60 Hz					
	Beeping	During the battery mode, the beeping optional					
Efficiency	AC - AC	1					
	DC - AC	0.6					
Acoustic	Noise level	\leq 45 dB					
Environmental	Temperature	-5-45 Degree C					
	Humidity	20 % to 90 %					
Power outlets	No.	2 sockets			3 sockets		

Selection and ordering data

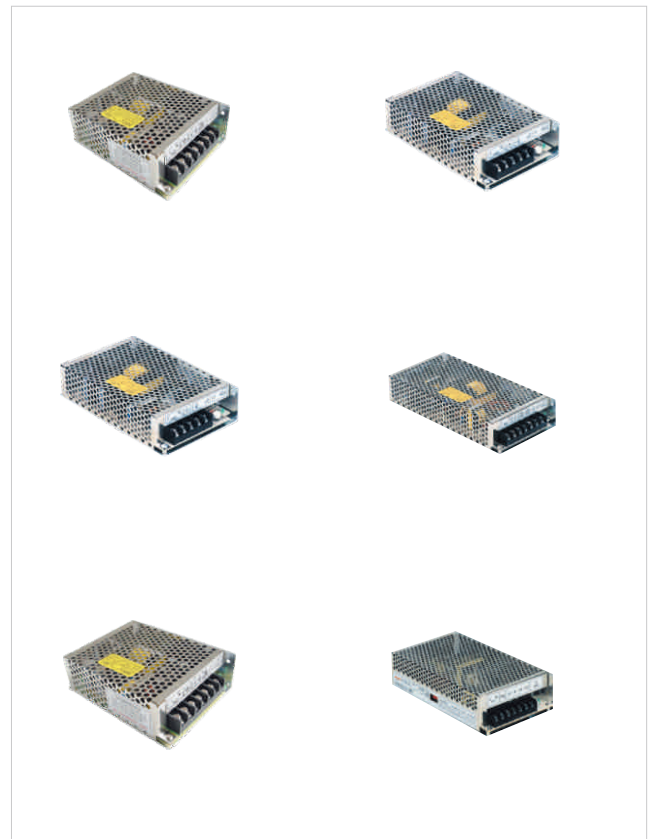
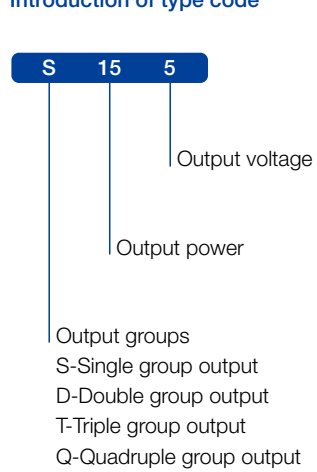
PCS Stand-by UPS	Power capacity (VA)	Input voltage 110V		Input voltage 220V	
		Type code	Order code	Type code	Order code
	500	PCS500110	32715	PCS500220	32721
	650	PCS650110	32716	PCS650220	32722
	800	PCS800110	32717	PCS800220	32723
	1000	PCS1000110	32718	PCS1000220	32724
	1200	PCS1200110	32719	PCS1200220	32725
	1500	PCS1500110	32720	PCS1500220	32726

Switching Power Supplies

Features

- High reliability
- Built-in EMI filter, good anti-jamming performance
- High efficiency
- Soft-start circuit design, AC surge current limiting
- Low operating temperature, long working life
- Wide input voltage range
- Good insulation, high dielectric strength
- Short circuit, overload, overvoltage protection
- 100% burn-in test
- Small size, light weight, beautiful appearance

Introduction of type code



Technical specifications

		Single output S series																
Rated output power		W	15	25	35	40	50	60	75	100	120	140	201	250	320	350	400	500
Rated output voltage DC																		
3 V										●								
5 V		●		●		●		●		●		●	●				●	●
7.5 V									●	●	●	●	●					
12 V		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
13.5 V													●		●			●
15 V			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
24 V		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
27 V																		
48 V										●	●	●	●	●	●	●	●	●
DC voltage adjustable range		±10 % of rated output voltage																
Input voltage range																		
85 ... 132 V AC 47-63 Hz		●	●	●	●	●	●			●	●	●	●	●	●	●	●	●
85 ... 264 V AC 47-63 Hz								●										
88 ... 264 V AC 47-63 Hz																		●
170 ... 264 V AC 47-63 Hz		●	●	●	●	●	●			●	●	●	●	●	●	●	●	●
120 ... 370 V DC								●										
240 ... 370 V DC		●	●	●	●	●	●			●	●	●	●	●	●	●	●	●
Typical input current																		
at 115 V AC		A	0.5	0.6	0.8	0.9	1.3	2	1.6	2.4	2.4	3.2	4.5	5	6	6.5	6.5	7
at 230 V AC		A	0.25	0.35	0.45	0.5	0.65	1	0.8	1.2	1.2	1.6	2.5	2.5	3.5	4	4	3.5
Inrush current (max.)																		
Cold start at 115 V AC		A	15		18				20				25			25	25	18
Cold start at 230 V AC		A	30		36				40				50		50	50	50	36
Leakage current at 240 V AC		mA	<0.5		<2	<0.5	<1		<3.5	<1			<3.5					
Time																		
Setup		ms	200				200			200		100	200		200			1500
Rise		ms	100				100			50		50	100		50			50
Hold up		ms	30				20			20		20	20		20			20
Overload protection																		
105 %-135 %, shut off, auto-reset								●	●		●		●	●	●	●	●	●
105 %-150 %, shut off, auto-reset		●	●	●	●	●				●								
Overvoltage protection																		
115 %-135 % shut off, auto-reset								●				●	●	●	●	●	●	●
Over temperature protection																		
≥80 °C shut off, auto-reset													●		●	●	●	
≥90 °C shut off, auto-reset																		●
Fan ON/OFF control																		
≥80 °C fan start, ≤45 °C fan off																●	●	
Withstand voltage																		
I/P-O/P, AC 1 minute		kV	1.5															3
I/P-FG, AC 1 minute		kV	1.5															1.5
O/P-FG, AC 1 minute		kV	0.5															0.5
Operation temperature		-10 °C - +60 °C , 20 %-90 % RH																
Weight		kg	0.3	0.3	0.4	0.4	0.5	0.5	0.55	0.6	0.6	0.7	0.87	0.9	1	1	1	1.8
Packing unit		pcs	60	60	45	45	45	45	45	30	30	30	24	24	24	24	24	8

Switching Power Supplies

Technical specifications

	W	Dual output D series					Triple output T series					Quadruple output Q series	
		30	50	60	120	200	30	50	60	100	120	60	120
Rated output power	W												
Rated output voltage DC													
5 V		●	●	●	●		●	●	●	●	●	●	●
12 V		●	●	●	●	●	●	●	●	●	●	●	●
15 V								●	●	●	●	●	●
24 V		●	●	●	●	●		●				●	●
-5 V							●	●	●	●	●	●	●
-12 V							●	●	●	●	●	●	●
-15 V								●	●	●	●	●	●
DC voltage adjustable range		±10 % of rated output voltage					±10 % of rated output voltage						
Input voltage range													
85 ... 132 V AC 47-63 Hz		●	●		●		●	●		●	●	●	●
85 ... 264 V AC 47-63 Hz				●									
88 ... 132 V AC 47-63 Hz						●							
88 ... 264 V AC 47-63 Hz									●				
170 ... 264 V AC 47-63 Hz		●	●		●	●	●	●		●	●	●	●
120 ... 370 V DC				●									
240 ... 370 V DC		●	●		●	●	●	●	●	●	●	●	●
Typical input current													
at 115 V AC	A	0.8	1.3	2	2.5	4.5	0.8	1.6	2	2.5	2.5	2	3
at 230 V AC	A	0.45	0.65	1	1.25	2.5	0.45	0.8	1	1.25	1.25	1	1.25
Inrush current (max.)													
Cold start at 115 V AC	A	18			30	25	18	20	30			18	30
Cold start at 230 V AC	A	36			30	50	36	40	60			36	60
Leakage current at 240 V AC	mA	< 0.5			< 3.5	< 3.5	< 0.75	< 0.5	< 3.5			< 1	< 3.5
Time													
Setup	ms	200		300	200		200	200	300	800		800	200
Rise	ms	50		50	50		100	50	50	20		20	50
Hold up	ms	30		80	20		30	15	80	20		70	20
Overload protection													
105 %-135 %, shut off, auto-reset					●	●				●	●		
105 %-150 %, shut off, auto-reset		●	●	●			●	●	●			●	●
Overvoltage protection													
115 %-135 % shut off, auto-reset				●	●	●			●	●	●	●	●
Over temperature protection													
≥80 °C shut off, auto-reset						●							
Withstand voltage													
I/P-O/P, AC 1 minute	kV	1.5					1.5					1.5	
I/P-FG, AC 1 minute	kV	1.5					1.5					1.5	
O/P-FG, AC 1 minute	kV	0.5					0.5					0.5	
Operation temperature		-10 °C - +60 °C, 20 %-90 % RH											
Weight	kg	0.4	0.52	0.55	0.85	0.85	0.4	0.54	0.56	0.85	0.85	0.5	0.88
Packing unit	pcs	45	45	45	24	24	45	45	45	24	24	45	24

Selection and ordering data

Model	Output voltage	Output current	Tolerance	Residual ripple and noise voltage	Efficiency	Type code	Order code
	(V DC)	(A)		(mV)			
Single output							
S-15	5	0-3	± 2%	50	65%	S-15-5	34665
	12	0-1.3	± 1%	50	68%	S-15-12	34666
	24	0-0.7	± 1%	100	72%	S-15-24	34667
S-25	12	0-2.1	± 1%	100	68%	S-25-12	34668
	15	0-1.7	± 1%	100	68%	S-25-15	34669
	24	0-1.1	± 1%	100	72%	S-25-24	34670
S-35	5	0-7	± 2%	75	70%	S-35-5	34671
	12	0-3	± 1%	100	76%	S-35-12	34672
	15	0-2.4	± 1%	100	78%	S-35-15	34673
	24	0-1.5	± 1%	100	78%	S-35-24	34674
S-40	12	0-3.5	± 1%	100	76%	S-40-12	34675
	15	0-2.8	± 1%	100	76%	S-40-15	34676
	24	0-1.8	± 1%	100	78%	S-40-24	34677
S-50	5	0-10	± 2%	75	71%	S-50-5	34678
	12	0-4.2	± 1%	100	76%	S-50-12	34679
	15	0-3.4	± 1%	100	78%	S-50-15	34680
	24	0-2.1	± 1%	100	82%	S-50-24	34681
S-60	12	0-5	± 1%	100	78%	S-60-12	34682
	15	0-4	± 1%	100	78%	S-60-15	34683
	24	0-2.5	± 1%	100	82%	S-60-24	34684
S-75	5	0-15	± 2%	70	71%	S-75-5	34685
	12	0-6.3	± 1%	100	78%	S-75-12	34686
	15	0-5	± 1%	100	78%	S-75-15	34687
	24	0-3.2	± 1%	100	82%	S-75-24	34688
S-100	3	0-20	± 2%	100	71%	S-100-3	34689
	5	0-20	± 2%	100	78%	S-100-5	34690
	7.5	0-13.6	± 1%	100	80%	S-100-7.5	34691
	12	0-8.5	± 1%	100	81%	S-100-12	34692
	15	0-6.7	± 1%	100	81%	S-100-15	34693
	24	0-4.5	± 1%	100	84%	S-100-24	34694
	27	0-3.7	± 1%	100	84%	S-100-27	34695
	48	0-2	± 1%	100	84%	S-100-48	34696
S-120	7.5	0-16	± 1%	100	80%	S-120-7.5	34697
	12	0-10	± 1%	100	81%	S-120-12	34698
	15	0-8	± 1%	100	81%	S-120-15	34699
	24	0-5	± 1%	100	84%	S-120-24	34700
	27	0-4.5	± 1%	100	84%	S-120-27	34701
	48	0-2.5	± 1%	100	84%	S-120-48	34702
S-140	5	0-25	± 2%	100	78%	S-140-5	34703
	7.5	0-18	± 1%	100	80%	S-140-7.5	34704
	12	0-12	± 1%	100	80%	S-140-12	34705
	15	0-9.7	± 1%	100	80%	S-140-15	34706
	24	0-6	± 1%	100	83%	S-140-24	34707
	48	0-3	± 1%	100	83%	S-140-48	34708
S-201	5	0-40	± 2%	150	74%	S-201-5	34709
	7.5	0-26.5	± 2%	150	79%	S-201-7.5	34710
	12	0-16.5	± 1%	150	80%	S-201-12	34711
	13.5	0-14.7	± 1%	150	80%	S-201-13.5	34712
	15	0-13	± 1%	150	81%	S-201-15	34713
	24	0-8.3	± 1%	150	83%	S-201-24	34714
	27	0-7.4	± 1%	200	83%	S-201-27	34715
	48	0-4.2	± 1%	240	84%	S-201-48	34716
S-250	12	0-20	± 1%	120	79%	S-250-12	34717
	15	0-16	± 1%	120	80%	S-250-15	34718
	24	0-10	± 1%	120	82%	S-250-24	34727
	27	0-9	± 1%	150	82%	S-250-27	34728
	48	0-5.2	± 1%	200	84%	S-250-48	34729
S-320	12	0-25	± 1%	150	74%	S-320-12	34730
	13.5	0-22	± 1%	150	78%	S-320-13.5	34731
	15	0-20	± 1%	150	78%	S-320-15	34732
	24	0-12.5	± 1%	150	81%	S-320-24	34733
	27	0-11	± 1%	200	82%	S-320-27	34734
	48	0-6.5	± 1%	240	83%	S-320-48	34735

Switching Power Supplies

Selection and ordering data

Model	Output voltage	Output current (A)	Tolerance	Residual ripple and noise voltage (mV)	Efficiency	Type code	Order code
	(V DC)						
Single output							
S-350	5	0-50	± 2%	150	73%	S-350-5	34736
	12	0-29	± 1%	150	74%	S-350-12	34737
	15	0-23.2	± 1%	150	78%	S-350-15	34738
	24	0-14.6	± 1%	150	81%	S-350-24	34739
	27	0-13	± 1%	200	82%	S-350-27	34740
S-400	48	0-7.3	± 1%	240	83%	S-350-48	34741
	5	0-60	± 1%	150	73%	S-400-5	34742
	12	0-33	± 1%	150	74%	S-400-12	34743
	15	0-27	± 1%	150	78%	S-400-15	34744
	24	0-17	± 1%	150	81%	S-400-24	34745
	48	0-8.3	± 1%	240	82%	S-400-48	34746
Dual output							
D-30A	5	0.5-4	± 2%	50	72%	D-30A-5	34747
	12	0.1-1	± 3%-7%	100	72%	D-30A-12	34748
D-30B	5	0.5-4	± 2%	50	84%	D-30B-5	34749
	24	0.1-1	± 3%-5%	100	84%	D-30B-24	34750
D-50A	5	1-6	± 2%	50	72%	D-50A-5	34751
	12	0.3-2	± 5%, -8%	100	72%	D-50A-12	34752
D-50B	5	1-6	± 2%	50	84%	D-50B-5	34753
	24	0.2-1	± 8%	100	84%	D-50B-24	34754
D-60A	5	0.3-6	± 2%	75	73%	D-60A-5	34755
	12	0.2-4	± 6%	150	73%	D-60A-12	34756
D-60B	5	0.3-6	± 2%	75	76%	D-60B-5	34757
	24	0.2-2.2	± 5%	150	76%	D-60B-24	34758
D-120A	5	2-12	± 2%	60	78%	D-120A-5	34759
	12	0.5-5	± 6%	120	78%	D-120A-12	34760
D-120B	5	2-10	± 2%	60	80%	D-120B-5	34761
	24	0.4-4	± 7%	150	80%	D-120B-24	34762
D-120C	12	1-8	± 2%	150	80%	D-200C-12	34763
	24	0.5-4.5	± 6%	150	80%	D-200C-24	34764
Triple output							
T-30A	5	0.5-3	± 2%	50	70%	T-30A-5	34765
	12	0.1-1	± 2%, -6%	100	70%	T-30A-12	34766
	-5	0.1-0.5	± 2%, -10%	50	70%	T-30A-(-5)	34767
T-30B	5	0.5-3	± 2%	50	72%	T-30B-5	34768
	12	0.1-1	± 2%, -6%	100	72%	T-30B-12	34769
	-12	0.1-0.5	± 6%	100	72%	T-30B-(-12)	34770
T-50A	5	0.6-7	± 2%	100	66%	T-50A-5	34771
	12	0.2-1	± 5%	100	66%	T-50A-12	34772
	-5	0.2-1	± 5%	100	66%	T-50A-(-5)	34773
T-50B	5	0.6-5	± 2%	100	69%	T-50B-5	34774
	12	0.2-1	± 5%	100	69%	T-50B-12	34775
	-12	0.2-1	± 5%	100	69%	T-50B-(-12)	34776
T-50C	5	0.6-4	± 2%	100	71%	T-50C-5	34777
	15	0.2-1	± 5%	100	71%	T-50C-15	34778
	-15	0.2-1	± 5%	100	71%	T-50C-(-15)	34779
T-50D	5	0.6-4	± 2%	50	72%	T-50D-5	34780
	12	0.2-1.2	± 6%	120	72%	T-50D-12	34781
	24	0.2-1.2	± 6%	120	72%	T-50D-24	34782
T-60A	5	0.5-7	± 2%	100	72%	T-60A-5	34783
	12	0.2-3.5	± 6%	100	72%	T-60A-12	34784
	-5	0-1	± 6%	100	72%	T-60A-(-5)	34785
T-60B	5	0.5-7	± 2%	100	72%	T-60B-5	34786
	12	0.2-3.5	± 6%	100	72%	T-60B-12	34787
	-12	0-1	± 6%	100	72%	T-60B-(-12)	34788
T-60C	5	0.5-7	± 2%	100	72%	T-60C-5	34789
	15	0.2-3	± 6%	100	72%	T-60C-15	34790
	-15	0-1	± 6%	100	72%	T-60C-(-15)	34791

Selection and ordering data

Model	Output voltage	Output current (A)	Tolerance	Residual ripple and noise voltage (mV)	Efficiency	Type code	Order code
	(V DC)						
Triple output							
T-100A	5	2-8	± 2%	80	77%	T-100A-5	34792
	12	0.5-4	± 6%	120	77%	T-100A-12	34793
	-5	0.2-1	± 6%	80	77%	T-100A- (-5)	34794
T-100B	5	2-8	± 2%	80	77%	T-100B-5	34795
	12	0.5-4	± 6%	120	77%	T-100B-12	34796
	-12	0.2-1	± 6%	120	77%	T-100B- (-12)	34797
T-100C	5	2-8	± 2%	80	76%	T-100C-5	34798
	15	0.5-4	± 10%, -5%	150	76%	T-100C-15	34799
	-15	0.2-1	± 10%, -5%	150	76%	T-100C- (-15)	34800
T-120A	5	2-12	± 2%	80	77%	T-120A-5	34801
	12	0.5-5	± 6%	120	77%	T-120A-12	34802
	-5	0.2-1	± 6%	80	77%	T-120A- (-5)	34803
T-120B	5	2-12	± 2%	80	77%	T-120B-5	34804
	12	0.5-5	± 6%	120	77%	T-120B-12	34805
	-12	0.2-1	± 6%	120	77%	T-120B- (-12)	34806
T-120C	5	2-12	± 2%	80	76%	T-120C-5	34807
	15	0.5-5	± 10%, -5%	150	76%	T-120C-15	34808
	-15	0.2-1	± 10%, -5%	150	76%	T-120C- (-15)	34809
Quadruple output							
Q-60B	5	0.5-8	± 2%	100	70%	Q-60B-5	34810
	12	0.1-3	± 6%	120	70%	Q-60B-12	34811
	-5	0-1	± 5%	100	70%	Q-60B- (-5)	34812
	-12	0-1	± 5%	120	70%	Q-60B- (-12)	34813
Q-60C	5	0.5-8	± 2%	100	72%	Q-60C-5	34814
	15	0.1-3	± 8, 8%	120	72%	Q-60C-15	14130
	-5	0-1	± 5%	100	72%	Q-60C- (-5)	14131
	-15	0-1	± 5%	120	72%	Q-60C- (-15)	14132
Q-60D	5	0.5-8	± 2%	100	75%	Q-60D-5	14133
	12	0.1-3	± 6%	120	75%	Q-60D-12	14134
	24	0-1.5	± 8, 4%	150	75%	Q-60D-24	14135
	-12	0-1	± 5%	120	75%	Q-60D- (-12)	14136

Control Transformers

Series JBK3

Applications and functions

- AC 50/60 Hz
- Used as control sources for various mechanical equipment
- Used as control sources for general electrical appliances
- Used as power supplies for working illumination and indication of machinery
- Rated input voltage: < 500 V
- Rated output voltage: < 220 V



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Technical specifications

Type	Power capacity (VA)	Rated input voltage (V)	Rated output voltage		
			Control (V)	Illumination	Indication
JBK3-40	40	220 ± 5 %	110	24	6
JBK3-63	63	380 ± 5 %	(127)	(36)	(12)
JBK3-100	100				
JBK3-160	160				
JBK3-250	250				
JBK3-400	400				
JBK3-630	630				
JBK3-1000	1000				
JBK3-1600	1600				
JBK3-2500	2500				

Distribution of capacity for different winding may be according to the users' request.

Order code	Type code	Page
14130	Q-60C-15	5-29
14131	Q-60C-(-5)	5-29
14132	Q-60C-(-15)	5-29
14133	Q-60D-5	5-29
14134	Q-60D-12	5-29
14135	Q-60D-24	5-29
14136	Q-60D-(-12)	5-29
15802	PCH500	5-5
15803	PCH1000	5-5
15804	PCH1500	5-5
15805	PCH2000	5-5
15806	PCH3000	5-5
15807	PCH5000	5-5
15808	PCH8000	5-5
15809	PCH1000	5-5
15818	SVC SH500	5-10
15819	SVC SH1000	5-10
15820	SVC SH1500	5-10
15821	SVC SH2000	5-10
15822	SVC SH3000	5-10
15823	SVC SH5000	5-10
15824	SVC SH8000	5-10
15825	SVC SH10000	5-10
15826	SVC SV5000D	5-12
15827	SVC SV8000D	5-12
15828	SVC SV10000D	5-12
15829	SVC SV5000P	5-12
15830	SVC SV8000P	5-12
15831	SVC SV10000P	5-12
15832	SVC SV15000P	5-12
15833	SVC SV20000P	5-12
15834	SVC SV30000P	5-12
15835	DBW10	5-17
15836	DBW15	5-17
15837	DBW20	5-17
15838	DBW25	5-17
15839	DBW30	5-17
15840	DBW40	5-17
15841	DBW50	5-17
15842	DBW60	5-17
15843	DBW70	5-17
15844	DBW80	5-17
15845	DBW100	5-17
15846	DBW150	5-17
15847	DBW180	5-17
15848	DBW200	5-17
15849	SVC TH1.5	5-14
15850	SVC TH3	5-14
15851	SVC TH4.5	5-14
15852	SVC TV6	5-14
15853	SVC TV9	5-14
15854	SVC TV15	5-14
15855	SVC TV20	5-14
15856	SVC TV30	5-14
15857	SVC TV50	5-14
15858	SVC TV60	5-14
15863	SBW10	5-17
15864	SBW15	5-17
15865	SBW20	5-17
15866	SBW30	5-17
15867	SBW50	5-17
15868	SBW60	5-17
15869	SBW80	5-17
15870	SBW100	5-17
15871	SBW120	5-17
15872	SBW150	5-17
15873	SBW180	5-17
15874	SBW200	5-17
15875	SBW225	5-17
15876	SBW250	5-17
15877	SBW300	5-17

Order code	Type code	Page
15878	SBW350	5-17
15879	SBW400	5-17
15880	SBW450	5-17
15881	SBW500	5-17
15882	SBW600	5-17
15883	SBW800	5-17
15884	SBW1000	5-17
15885	SBW1200	5-17
15886	SBW1600	5-17
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