

Frequency Inverter Catalog



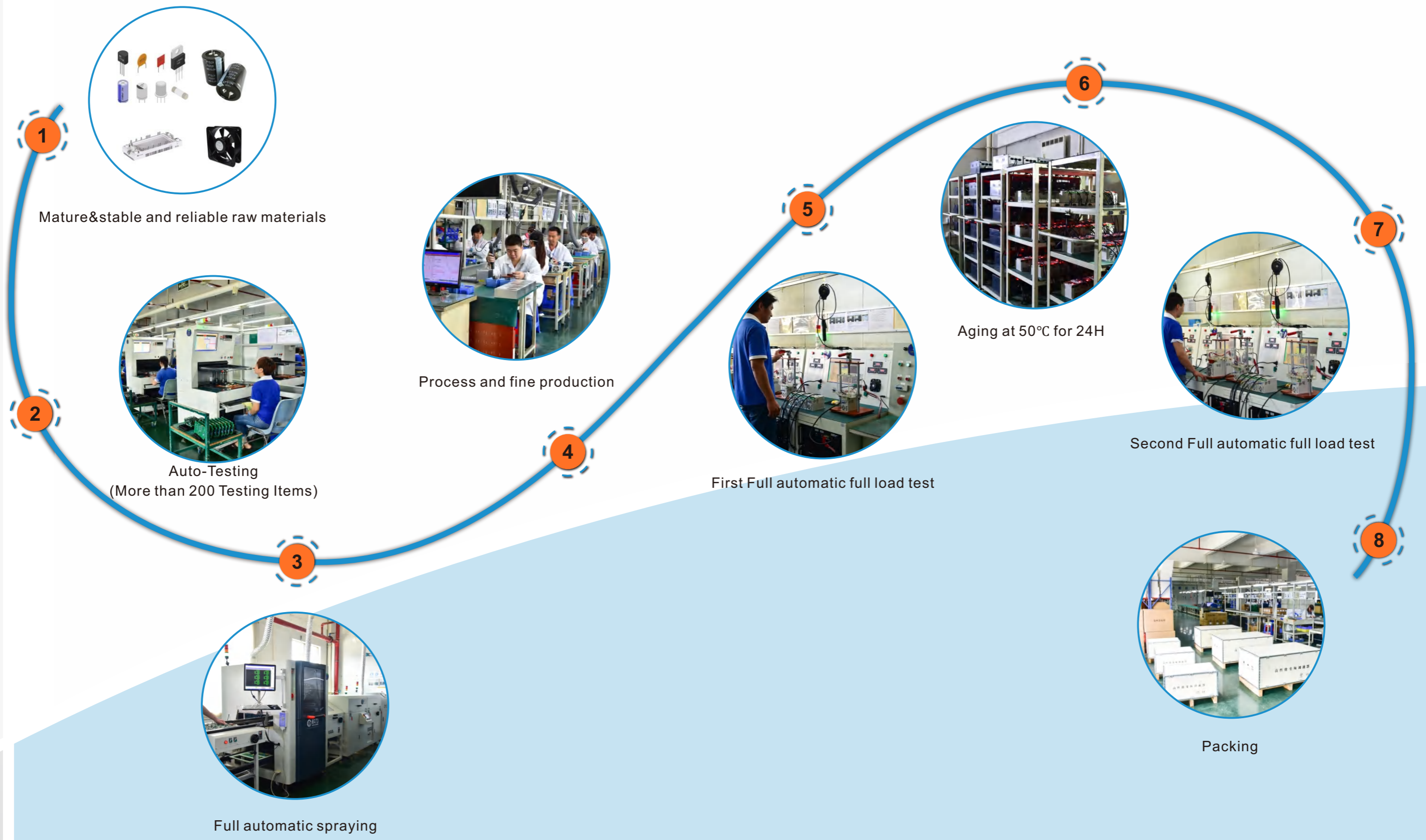
Shenzhen Socon Electric Co.,Ltd.

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Quality



SC500 Series



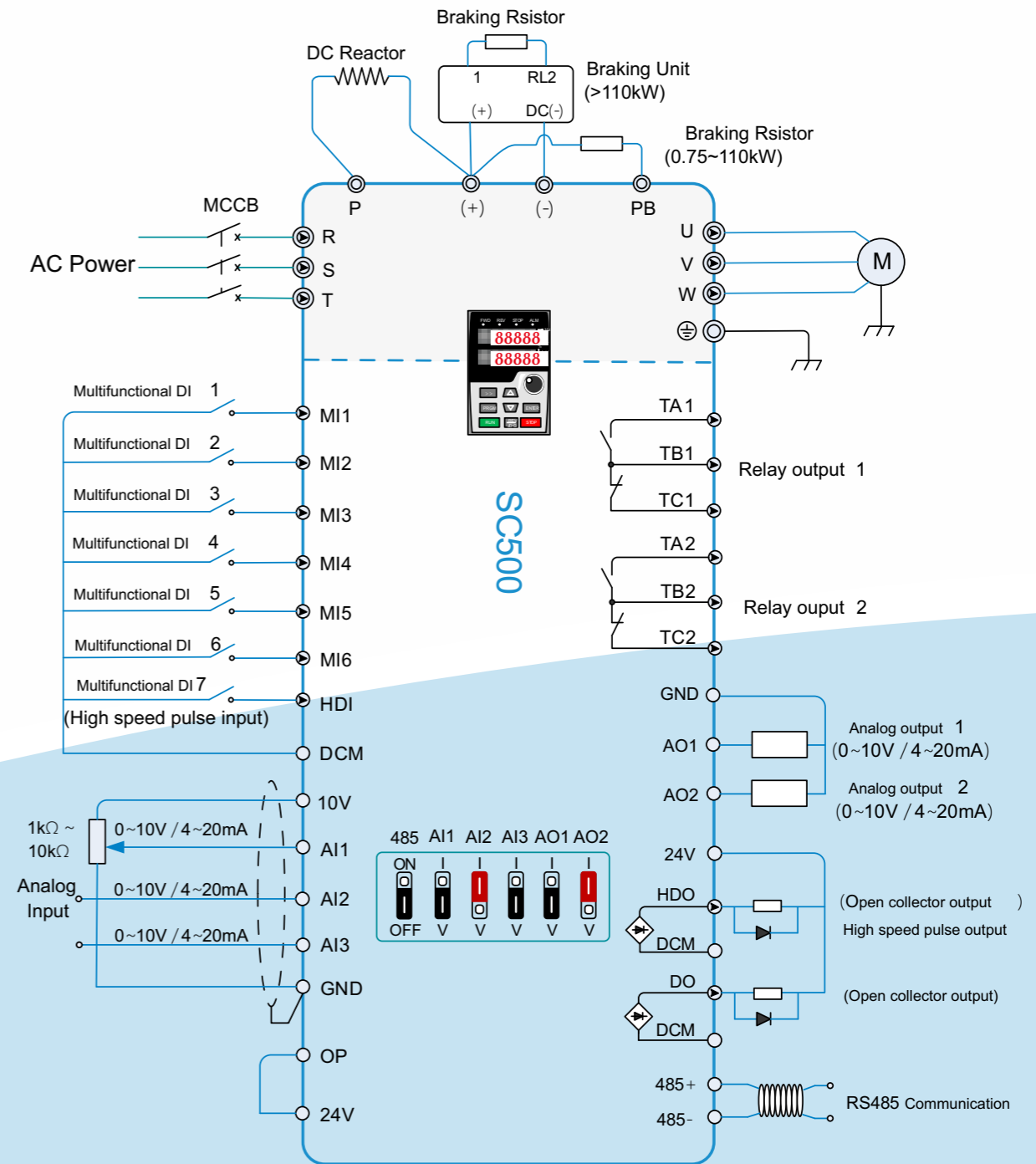
1PH 220V 0.75~2.2kW
 3PH 220V 0.75~160kW
 3PH 380V 0.75~630kW

SC500 series frequency inverter fully investigates the market demand, adopts new structural design and optimized hardware and software configuration to realize higher performance and higher precision motor control.

We always insist on adopting standardized and refined management processes, starting from every detail to continuously improve the stability and reliability of products.

With its stable and reliable operation performance, this series of frequency converters are deeply trusted by customers. They are widely used in textile, papermaking, machine tool, packaging, food, fan, water pump and other industries and various automatic production equipment.

Diagram



- ▶ 0.75~7.5kW Diagram please refer the manual.
- ▶ 0.75~37kW built-in braking unit, 45~110kW braking unit is option.

Advantages

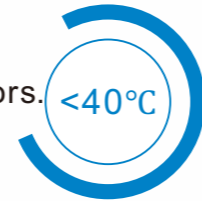
01 Carrying capacity
120% Rated current and below
 ——Continuous working
150% Rated current, 120s
160% Rated current, 60s
180% Rated current, 10s
200% Rated current, 1s



02 Strong starting Torque
0.5Hz/150%, Open loop control
1Hz/100%, V/f Control



03 Low Temperature rise
 Fully equipped with cooling fans and radiators.
 Optimization design by thermal simulation software.
 The temperature rise of the whole series controlled within 40 °C.



04 New Design
 The whole series adopts narrow body structure design.
 High power density.
 Save installation space.



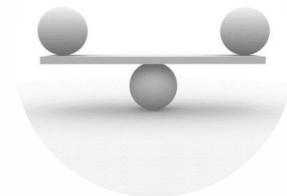
05 Optimized function design
 New hardware design ideas.
 Reasonable selection and layout of components.
 High stability and excellent performance.



06 Fast dynamic response and stable torque output.
More than 30 fault protection functions are built to ensure the stable and safe operation of the system.



07 International and domestic first-class components,
 Stable, reliable and durable.
Select components in full, never cut corners, and strive to provide customers with value-added products.



08 The automatic three proof paint spraying line adopts high-quality three proof paint, which has better waterproof, dustproof and anti-corrosion performance.
 Independent air duct design is adopted to effectively isolate external dust and better environmental adaptability.



09 Optimized speed tracking function; Realize the smooth restart of the running motor.



10 Built in timing, length and counting functions
 Meet a variety of special applications.

Technical Feature

Input & Output

Input Voltage	1PH 220V (+15%)
	3PH 220V (+15%)
	3PH 380V (+15%)
Input Frequency	50/60Hz ±5%
Output Voltage	0~input voltage, Deviation less than ±3%
Output Frequency	0~600Hz

Control Feature

Control mode	V/F Control, Open Loop Control
Carrying capacity	120% Rated current and below, Continuous working.
	150% Rated current, 120s
	160% Rated current, 60s
	180% Rated current, 10s
	200% Rated current, 1s
Starting torque	0.5Hz 150%(V/F)
	0.25Hz 180%(Open loop)
Speed accuracy	±0.5%(V/F Control)
	±0.2%(Vector Control)
Torque response	<10ms
Carrier frequency	0.5~16.0KHz
ACC/DEC MODE	4 types Acc/Dec time(0.1~3600.0s)
Simple PLC Multi-Speed	Up to 16 speed control is realized through built-in PLC or control terminal
PID Function	Built-in dual PID function
Communication	Modbus RTU

Environment

Installation	No direct sunlight, no corrosive, combustible, explosive, absorbent dust substances, and no accumulation of wool flocs
Altitude	0~2000 m
	After exceeding 1000m, the output will be derated by 1% every 100m
Environment Temp.	-10~+50°C
Storage Temp.	-20~+60°C
Relative Humidity	5%~95%, No condensation

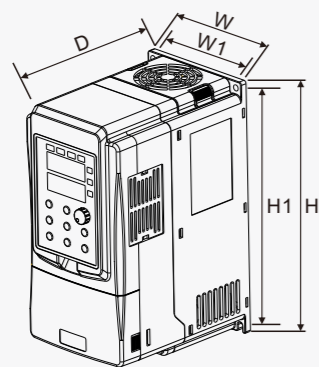
Feature

Feature	Wide range of voltage input
	AVR Auto voltage regulation
	Build-in Torque Control
	V/F Voltage frequency separation control
	The speed tracking function can smoothly restart the running motor
	More than 30 kinds of perfect fault protection functions such as overload, overcurrent, over-voltage, undervoltage and fault

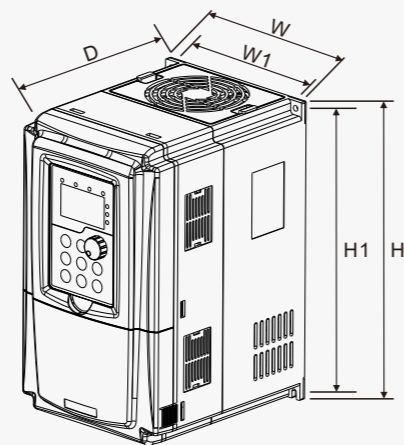
Model rule

SC500 - 4 T - 4P0 G

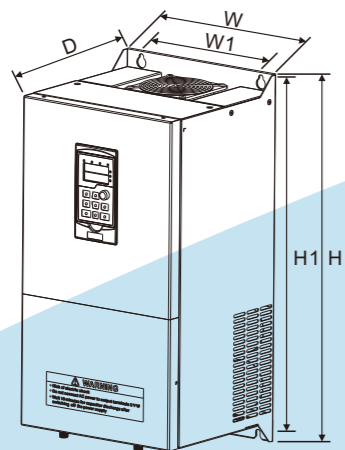
Series Voltage level Phase Power Load Type
 SC500 Series VFD 2:220V S:1PH T:3PH
 4:380V~440V
 4P0:4.0KW G:General Type
 0P7:0.75KW
 1P5:1.5KW
 110:110KW



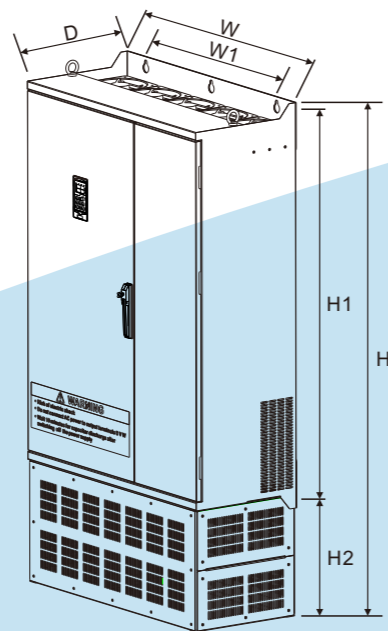
0.75-7.5kW



11-22kW



30-110kW



132-630kW

Specification 1PH 220V

Product selection			Dimension					
Model	Output Power (kW)	Output Current (A)	H (mm)	W (mm)	D (mm)	H1 (mm)	W1 (mm)	Mounting Aperture (mm)
SC500-2S-0P7G	0.75	4						
SC500-2S-1P5G	1.5	7	187	90	133	177	80	4.5
SC500-2S-2P2G	2.2	9.6						
SC500-2S-4P0G	4.0	17	247	130	162	236.5	115	5
SC500-2S-5P5G	5.5	25	272	160	201	259	146	5.2

Specification 3PH 220V

Model	Output Power (KW)	Output Current (A)	H (mm)	W (mm)	D (mm)	H1 (mm)	H2 (mm)	W1 (mm)	Mounting Aperture (mm)
SC500-2T-0P7G	0.75	4							
SC500-2T-1P5G	1.5	7	187	90	133	177	-	80	4.5
SC500-2T-2P2G	2.2	9.6							
SC500-2T-4P0G	4.0	17	247	130	162	236.5	-	115	5
SC500-2T-5P5G	5.5	25	272	160	201	259	-	146	5.2
SC500-2T-7P5G	7.5	32							
SC500-2T-011G	11	45	313	211	205	299	-	196	6.5
SC500-2T-015G	15	60							
SC500-2T-018G	18.5	75	418	252	206.9	399	-	201	9
SC500-2T-022G	22	90							
SC500-2T-030G	30	110	603	299	276.7	581	-	240	9
SC500-2T-037G	37	152							
SC500-2T-045G	45	176	643	338	312	619	-	280	11
SC500-2T-055G	55	210							
SC500-2T-075G	75	304							
SC500-2T-093G	93	340	1126	410	383.7	776	356	320	12
SC500-2T-110G	110	426							
SC500-2T-132G	132	520	1472	650	430.2	1046.8	426	520	13
SC500-2T-160G	160	585							

▶ H2 is the base size, optional for 75-93kw base, and standard for power above 110KW.

Specification 3PH 380V

Product selection			Dimension						
Model	Output Power (kW)	Output Current (A)	H (mm)	W (mm)	D (mm)	H1 (mm)	H2 (mm)	W1 (mm)	Mounting Aperture (mm)
SC500-4T-0P7G	0.75	2.8							
SC500-4T-1P5G	1.5	4.4	187	90	133	177	-	80	4.5
SC500-4T-2P2G	2.2	5.8							
SC500-4T-4P0G	4.0	10	207	100	142	197	-	90	4.5
SC500-4T-5P5G	5.5	13							
SC500-4T-7P5G	7.5	17	247	130	162	236.5	-	115	5
SC500-4T-011G	11	25							
SC500-4T-015G	15	32	272	160	201	259	-	146	5.2
SC500-4T-018G	18.5	37							
SC500-4T-022G	22	45	313	211	205	299	-	196	6.5
SC500-4T-030G	30	60							
SC500-4T-037G	37	75	418	252	206.9	399	-	201	9
SC500-4T-045G	45	90							
SC500-4T-055G	55	110	603	299	276.7	581	-	240	9
SC500-4T-075G	75	152							
SC500-4T-093G	93	176	643	338	312	619	-	280	11
SC500-4T-110G	110	210							
SC500-4T-132G	132	253							
SC500-4T-160G	160	304	1126	410	383.7	776	356	320	12
SC500-4T-185G	185	350							
SC500-4T-200G	200	377							
SC500-4T-220G	220	426							
SC500-4T-250G	250	470	1472	650	430.2	1046.8	426	520	13
SC500-4T-280G	280	520							
SC500-4T-315G	315	585							
SC500-4T-355G	355	650							
SC500-4T-400G	400	725	1698	800	438	1280	426	700	16
SC500-4T-450G	450	820							
SC500-4T-500G	500	900							
SC500-4T-560G	560	1000	1900	1028	450	1460	450	800	16
SC500-4T-630G	630	1100							

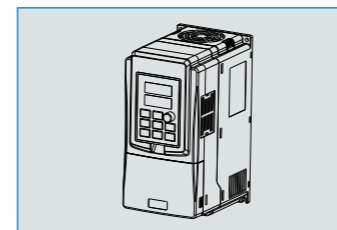
▶ H2 is the base size, 132-200kw base is optional, and 220kw and above power is standard.

SC500-S Series



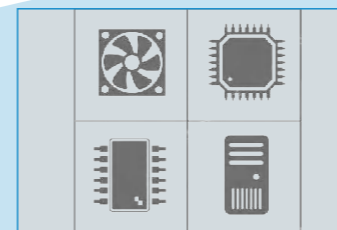
SC500-S series economical frequency converter integrates the frequency conversion technology precipitation of the R & D and application team for many years, and combines the market demand for product structure, hardware and software. It is a reliable, stable and cost-effective product.

Advantages



New structural design

- ▶ 7.5KW and below, Reasonable power distribution, Cost-effective.
- ▶ Independent air duct design prevents external dust from entering the inverter.



Optimized hardware design

- ▶ Selection of long-life components & fine design.
- ▶ The layout of components is more reasonable.
- ▶ The switching power supply output short-circuit protection
- ▶ High standard EMC design to improve anti-interference ability.



High thermal conductivity and insulation medium

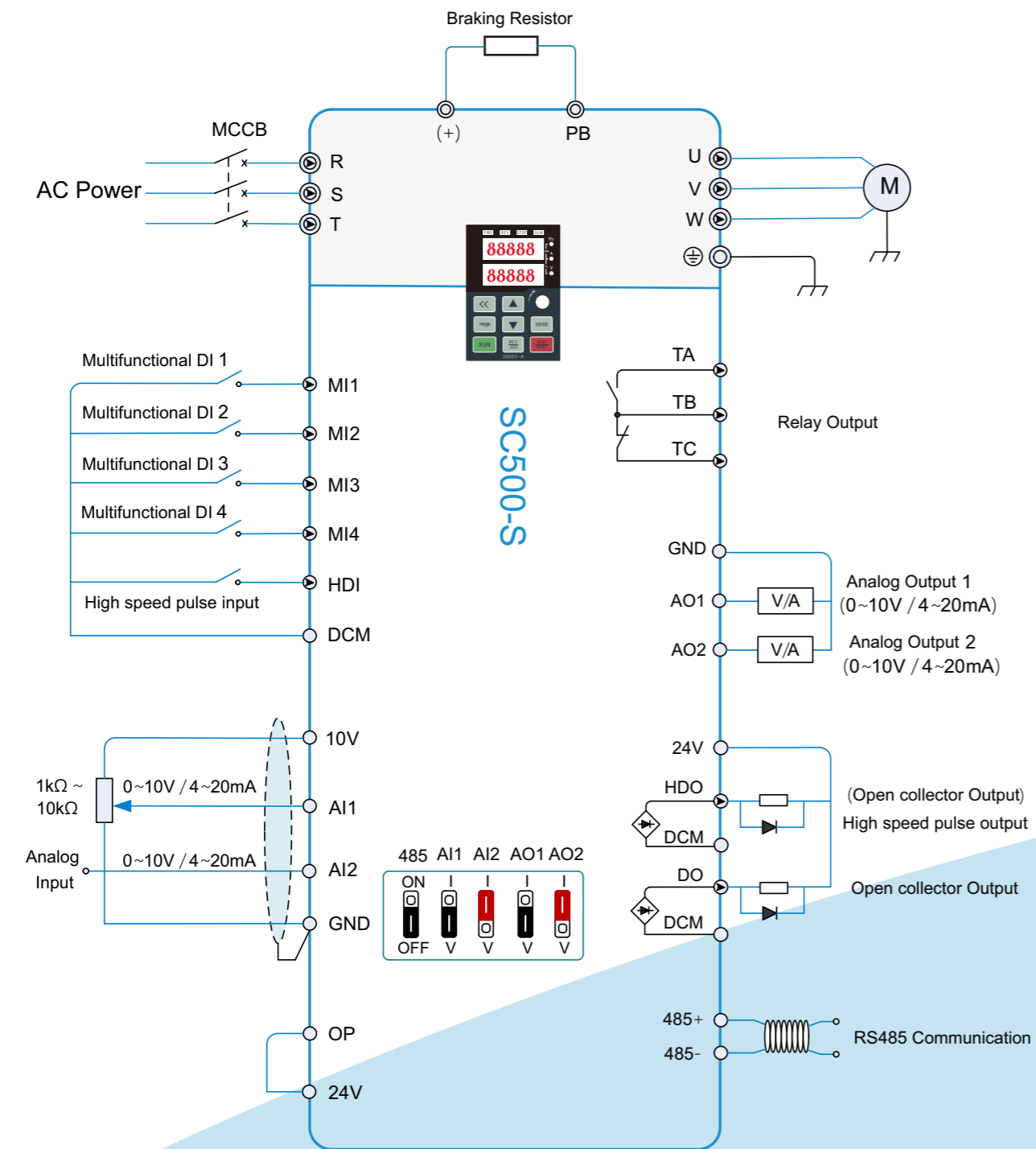
- ▶ Alumina ceramic sheet is used for heat dissipation.
- ▶ Significantly reduce internal temperature rise



Strict production and testing

- ▶ Automatic three proof paint spraying process.
- ▶ EMC tests such as EFT test, surge test and electrostatic test have passed industry standards.
- ▶ Conduct strict and perfect test through ATE automatic system.

Diagram



Technical Feature

Item	Specification	
Basic function	Control Mode	Open loop vector control, V/F control
	Output Frequency	Open loop vector control: 0~600Hz V/F control: 0~6000Hz
	Carrying capacity	Continuous working while under 120%, 150%/120s, 160%/60s, 180%/3s
	RS485 Communication	RS485, Modbus-RTU slaver
	LED Display	Dual LED display two parameter at same time
	Major function	PID, AVR, Automatic speed compensation, Multi-Speed, Frequency hopping, Torque Limiting, UP-DOWN control, Timer, Fixed length, swing frequency.
Applicable environment	Applicable cases	Indoor, free from direct sunlight, dust, corrosive gas, combustible gas, oil mist, water vapor, dripping water or salt, etc
	Altitude	Lower than 1000m
	Ambient temperature	-10 ~ + 40 °C (derating is required when the ambient temperature is 40 ~ 50 °C)
	Vibration	<5.9m/s ² (0.6g)

Specification

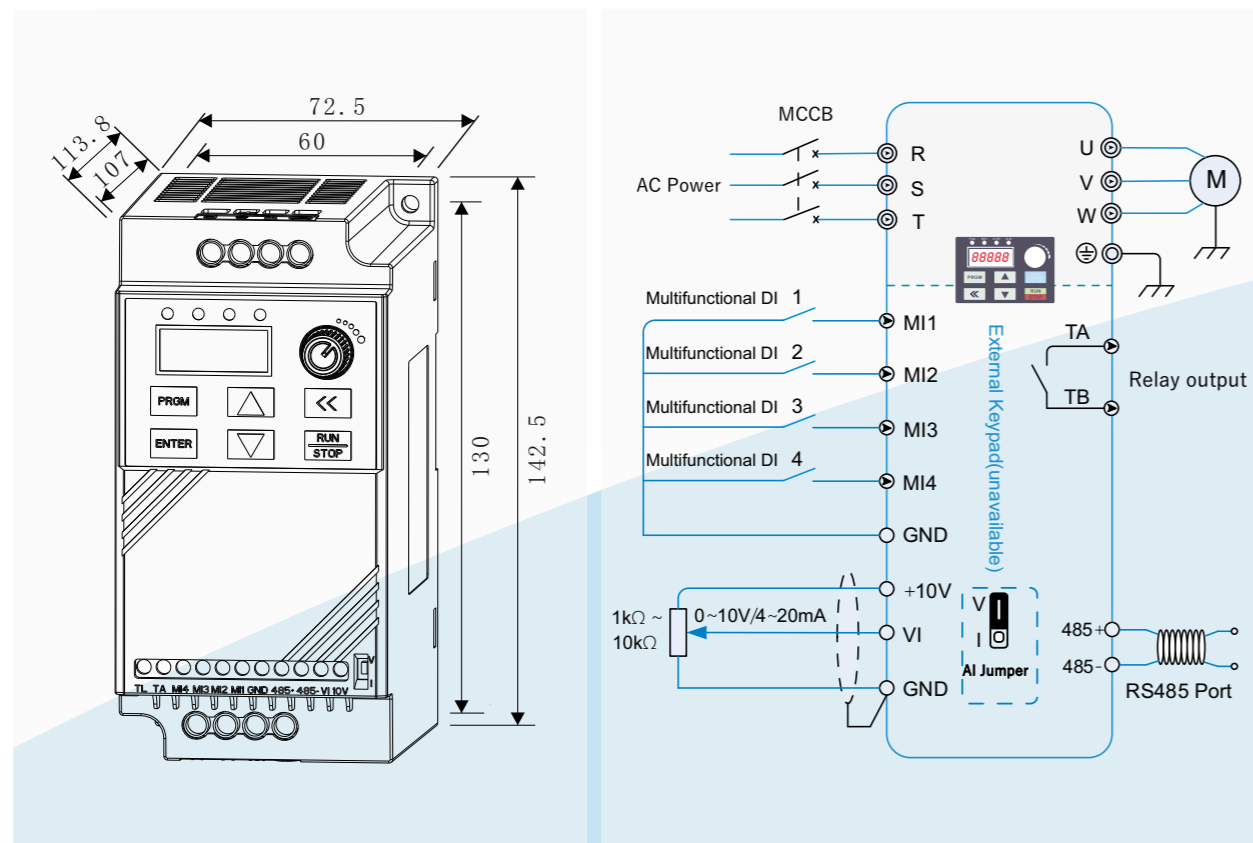
Product selection			Dimension					
Model	Output Power (KW)	Output Current (A)	W (mm)	H (mm)	D (mm)	W1 (mm)	H1 (mm)	Mounting Aperture (mm)
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SC500-2S-1P5S	1.5	7	90	187	133	80	177	4.5
SC500-2S-2P2S	2.2	9.6						
SC500-4T-0P7S	0.75	2.8						
SC500-4T-1P5S	1.5	4.4	90	187	133	80	177	4.5
SC500-4T-2P2S	2.2	5.8						
SC500-4T-4P0S	4.0	10	100	207	142	90	197	4.5
SC500-4T-5P5S	5.5	13						
SC500-4T-7P5S	7.5	17	130	247	162	115	236.5	5

SC20 & SC20-M

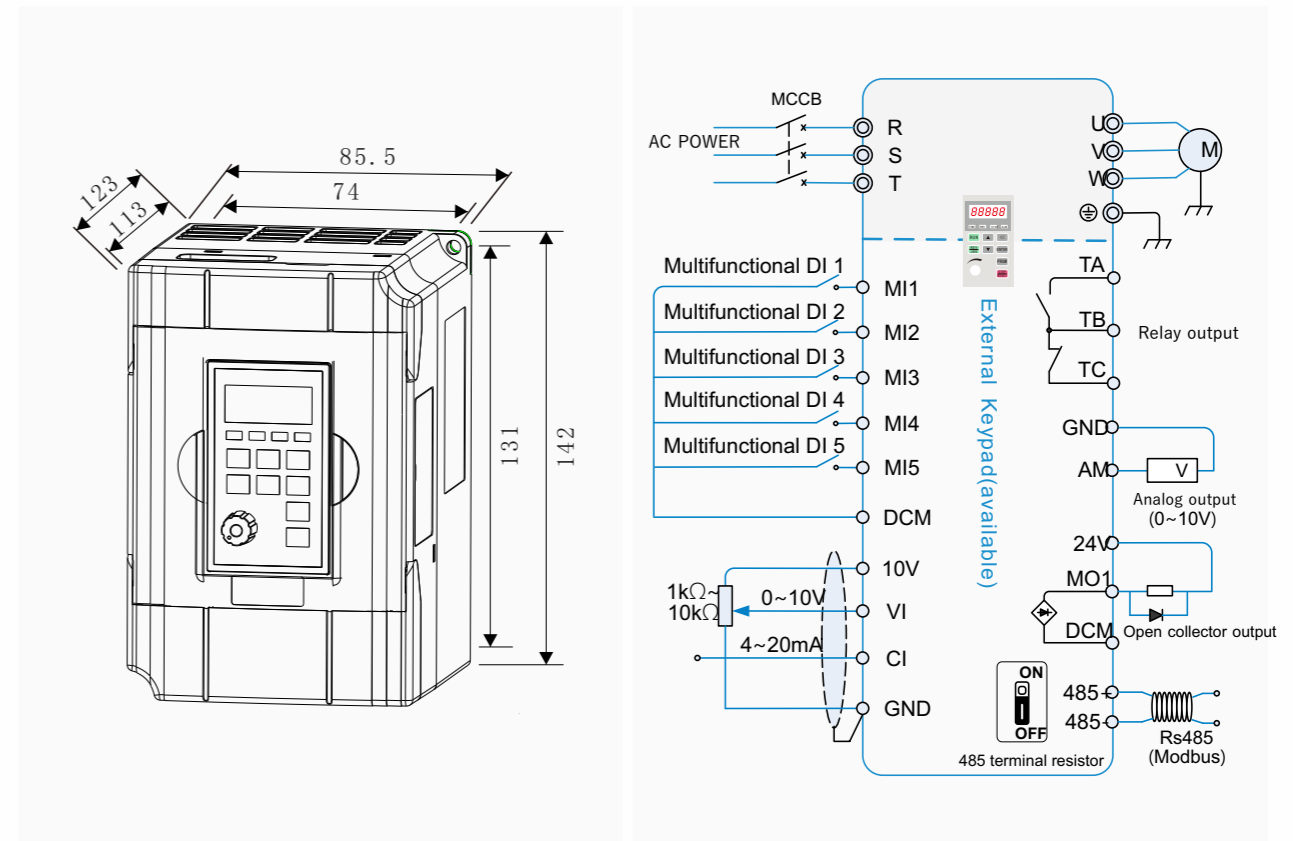


Based on years of experience in frequency converter R&D and application, two simple and economical frequency converters are launched, both of which have high cost performance. Its structure design is compact, and its hardware and software design fully considers the requirements of overheating and overload in practical application. It has been mature and applied in many industrial sites.

Dimension & Diagram



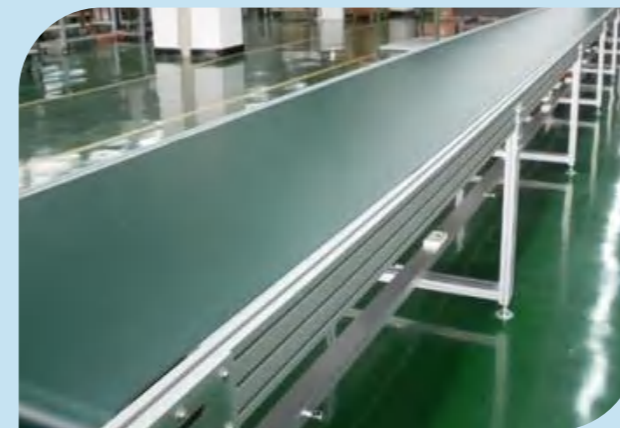
▶ SC20 Type has no build-in braking unit



▶ SC20-M type has no build-in braking unit

Applications

▶ Assembly line, fan, water pump, food, printing and dyeing, ceramics, packaging, pharmaceutical and other low-power application industries.



Application field



Printing & Dyeing



Packing



Rubber machinery



Textile



Industry washer



Water supply



Motor Solution



Wood machine



Hoisting industry



Ball mill



Stone industry



Oilfield industry



Building elevator

Business Network



SOCON