

SAJ General Purpose VFD

Service Provider for
Digitized
Building Energy Management



★ VM1000H Series AC Drive ★ VM1000 Series AC Drive ★ 8000B Series AC Drive ★ 8000m Series AC Drive

Drive&Zero-Carbon Innovator

Guangzhou Sanjing Electric Co.,Ltd.

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GUANGZHOU SANJING ELECTRIC CO.,LTD. (stock code: 835613)

To build **green**, intelligent
and **efficient** energy
environment, and to create better,
happier and healthier lives
for people everywhere.



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About SAJ

Headquartered in Guangzhou, serves the world

Guangzhou Sanjing Electric Co., LTD (Stock Code: 835613, hereinafter referred to as SAJ) is a professional leading provider of motor drive and control technology, renewable energy conversion, transmission and storage solutions. Established in 2005, with the registered capital of 50.4 million RMB, SAJ has a strong Research & Development and technical service team.

Focusing on the technical innovation, SAJ masters the leading technology of high performance frequency vector control, motion control, and photovoltaic power generation. SAJ has been awarded as National High-tech Enterprise, Intertek "Authorized Satellite Lab", Guangzhou "Little Giant" Enterprise of Science & Technology, Guangdong Solar Inverter Engineering & Technology Research Center and so on. So far, the company has been authorized 20 invention patents, 76 utility model patents, 15 exterior design patents, 25 software copyrights and 6 software product registrations.

SAJ specializes in providing professional distributed solar inverter, energy storage hybrid solar inverter and monitoring solution, general frequency drive, smart pump drive, and solar pumping system. Now regarding the total shipment, SAJ general frequency drive (<11kW) ranks Top 5, smart pump drive and solar pumping system as Top 1 in domestic market, meanwhile, SAJ solar inverters has been awarded the Top 10 solar inverter brand in China for last five consecutive years, and become the golden supplier of Belgium largest community solar project. For the residential solar inverter (1kW-10kW), SAJ monthly average shipment has become the Top 3 as the first choice for residential solar investment, so far, SAJ has provided distributed solar inverters & solutions for poverty alleviation projects from more than 18 provinces.

With the strategy of local service network, SAJ has 16 branch offices and 50 service centers in China, overseas service center has expanded to Germany, Switzerland, Belgium, Australia and other countries. With the superior quality and comprehensive service network, SAJ has successfully applied 1 million sets of products around the world.

Adhering to the concept of "integrity, learning, innovation, win-win cooperation", SAJ is devoted to the development of the leading drive & zero-carbon and energy saving technology, to build green, smart and efficient energy environment, to make lives better, happier, and healthier.





Top 10 China Low Voltage AC Drive



2016年

- Wins Top 10 National Low Voltage AC Drive Brand
- Set up SAJ Jiangxi Daughter Company
- Signed Strategic Cooperative Agreement with TÜV Rheinland
- The 4th time to win China Top 10 Solar Inverter Enterprise(2016)
- Total 1,000,000 AC Drive Released Since Established

2017

- Released High Performance VM1000 Vector Control VFD and PDG10 Smart Pump Drive
- Started HR Optimization Project With MERCER.
- Won "China Top 30 Science and Technology Innovation Pioneer" in the "Power of Role Model—Science and Technology Innovation Competition"
- SAJ Solar Family Photovoltaic Academy Started National Tour from Foshan City
- Won SNEC "Top 10 Highlights" Golden Award of GW Level
- Won "2017 Asia Photovoltaic—Photovoltaic Application Award"
- Won the Honor of "China Top 10 Solar Inverter Enterprise" for 5 Consecutive Years
- SAJ Jiangxi Factory with an area of 22,000 m2 has been put into Production and its Annual Production Capacity is up to 3GW
- SAJ Solar Shared Operation and Maintenance Platform (eSolar O&M) Launched Officially



2015

- Wins guangdong solar inverter engineering&technology research center
- Wins 2015 excellent supplier of string inverter
- Wins 2015 china top 10 solar inverter enterprise
- Wins 2015 top 10 solar innovation enterprises in asia
- Release pdm20 smart mini pump drive
- Passed the ohsas 18001 occupational health and safety management system certification
- Wins guangzhou little giant enterprises in science&technology



2014

- IEEE fellow, Chinese-American scientist Feng Lin introduced by Thousand Talents program joins SAJ
- Enters the field of water-application drive; launches IP54 water and dust proof 8200B series smart pump drive
- Passes ISO14001:2004 Environment Management System Certification
- Becomes the top 1 brand of smart pump drive industry in China
- Releases PDS23 high performance AC solar pump controller and entire solutions

2013

- Ranks in top 20 companies for patent creator in Guangzhou development zone
- Sets up European daughter company in Belgium to execute local managing strategy
- SAJ's solar inverters are widely reported by CCTV news
- Wins 2013 innovation award on photovoltaic product



2012

- Releases the enhanced variable frequency drive 8000B
- Successfully rolls out the 500,000th set of variable frequency drive
- The first phase construction of SAJ HI-TECH Park officially starts with annual production capacity increased to 300,000 sets and a total investment of 35 million RMB.

2011

- Starts using the new ERP system
- Obtains "software production" certificate of Guangdong
- Obtains "Enterprise of good faith and credit (grade A)"
- Sets up SAJ Renewable Business, entering solar inverter industry
- Establishes the research and innovation base for graduate students in South China University of Technology
- Obtains Intertek "authorized satellite lab"
- Obtains German TÜV, Australian SAA, and UK G83 certificate



2010

- Heads for servo drives with its successful application to injection molding machine
- Obtains "2010-2011 the best growth brand of Chinese automation"
- Successfully breaks through the vector control platform
- Establishes variable frequency drive engineering research center of Harbin Institute of Technology
- Passes ISO9001:2008 international quality system certification



2009

- Obtains Private Science & Technology Enterprise Certificate
- Obtains National Hi-Tech Enterprise Certificate
- Obtains independent Import/Export License
- Moves to and headquartered in Science City, Guangzhou High-tech Zone

2007

- Builds the most cost-effective brand in industrial automation
- Launches 8000 series variable frequency drive



2005

- Enters the field of industrial automation
- Determines variable frequency drives as the core business
- Founded in Guangzhou, Guangdong Province

Milestones

500 thousand sets

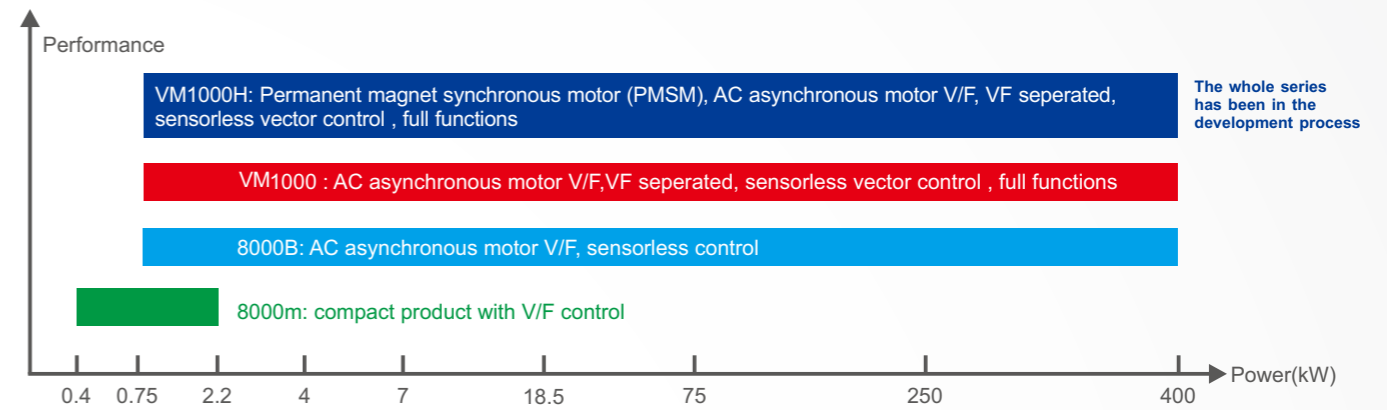
General Purpose VFD

VM1000H Series AC Drive, VM1000 Series AC Drive, 8000B Series AC Drive, 8000m Series AC Drive



VM1000 Series

Sequence chart of general purpose VFD



Application selection guide of general purpose VFD

	8000m	8000B	Vm1000	VM1000H
Structure	rail-mounting and wall-mounting installation	wall-mounted and foot-mounted (high power) installation	wall-mounted, foot-mounted(high power)installation	wall-mounted, foot-mounted(high power)installation
Size with the same power	Small	Big	Medium	Medium
Performance	Common	Higher	Highest	High
Load	Light load	Heavier load	heaviest load	heaviest load
Function	Standard functions	Standard functions	Full functions	Full functions
Optional accessories	None	LCD keyboard	LCD keyboard	LCD keyboard
Common application	Fan, pump and light loaded small machines	Constant torque machinery like air compressor, conveyor, building material mining machinery	Variable frequency power source and heavy load constant torque machinery like lifting machine and machine tool	Constant force torque loading ways such as PMSM, numeric control machine, lifting and well drilling tools

How to select general purpose VFD

- ★ Rated load current of motor can't exceed rated current of AC drive.
- ★ Select V/F mode AC drive for fan and pump type loads.
- ★ Select AC drive with sensorless vector control mode for loads with high dynamic/static index requirement such as lifting machine.



8000B Series

8000m Series

VM1000 Series

Power range: single phase input and three-phase output (220V): 0.75-2.2kW; three-phase input and three-phase output (380V):1.5-400kW

VM1000 VECTOR MASTER

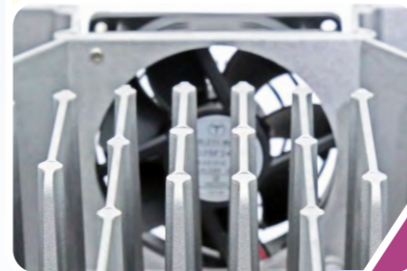
New-Generation High-Performance General AC Drive

New-generation variable-frequency drive with high performance and high reliability;
Higher power density, superior product design, user friendly operation;
Applicable to the occasions with requirements of heavy load and fast dynamic response



Superior Design

- Complete metal frame
- High-Capacity power module
- Optimized structure



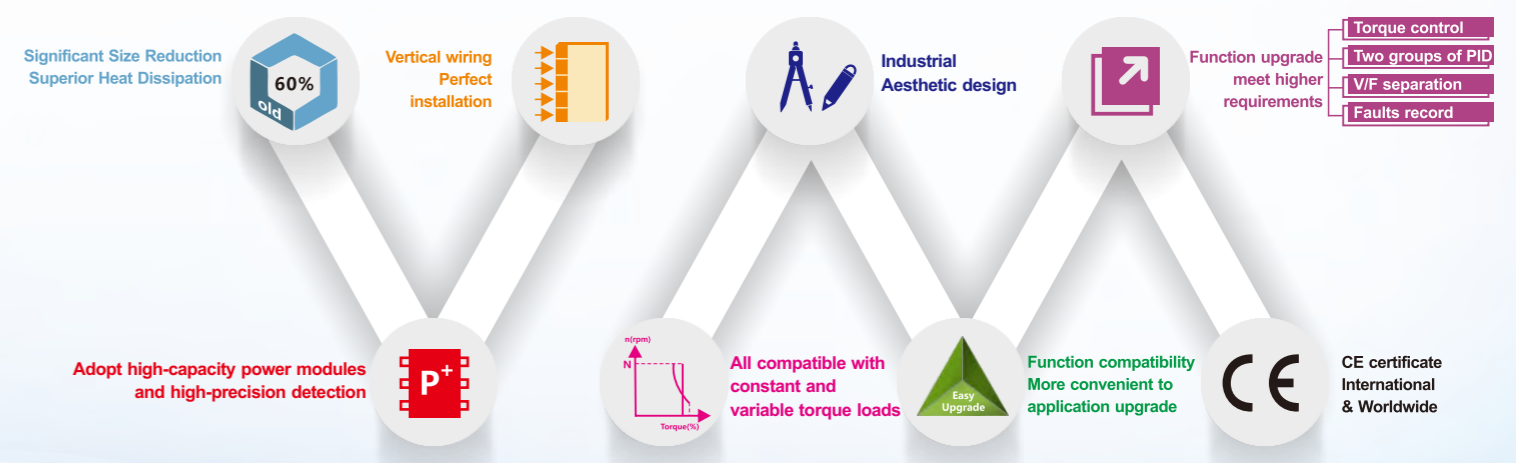
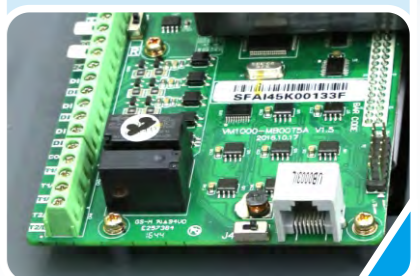
User Friendly

- Simplified keypad
- Easy wiring
- Industrial aesthetic design



Excellent Performance

- Rich functions
- Higher torque at low frequency
- CE certification



Datasheet

Control characteristic	Max. Output Frequency	500Hz
	Carrier Frequency	0.5kHz ~16kHz; it can adjust load frequency automatically according to the load character
	Control Mode	V/F control; SVC control; torque control
	Starting Torquee	G load type: 0.5Hz/150% (SVC) P load type: 0.5Hz/100%
	Speed Adjustable range	1:100 (SVC)
	Speed-holding Precision	±0.5% (SVC)
	Overload capacity	G load type: 60s for150% rated current; 1s for180% rated current P load type: 60s for120% rated current; 1s for 150% rated current
	Torque boost	0.0% auto torque boost; customized torque boost 0.1% ~ 30.0%
	V/F curve	Three types: linear, multipoint, square V/F curve
	V/F separation	Whole separation, semi separation
	Acceleration and deceleration Time	Linear mode and S curve acceleration and deceleration mode; four groups of acceleration and deceleration time; the range of acceleration and deceleration time is 0.0 ~ 6500.0s
	DC braking	Braking time: 0.0s ~ 100.0s; braking current value: 0.0% ~ 100.0%
	JOG control	JOG frequency range: 0.00Hz ~ max frequency; JOG acceleration and deceleration time 0.0s ~ 6500.0s
	Simple PLC,multi-speed control	Up to 16 steps speed can be realized by integrated simple PLC and control terminals function
	Integrated PID	Closed-loop control system
	AVR	When grid voltage changes, it keeps output voltage constant automatically
	Control of overvoltage, overcurrent, speed stall	The current and voltage are limited automatically during the running process so as to avoid frequent tripping due to overvoltage/overcurrent
	Rapid current limit	Decrease overcurrent at max, protect VFD to operate regularly
	Torque limit and control	Limit the torque automatically and prevent frequent over current tripping during the running process
	Input/output	Power peripheral and safety self-checking
MF.K Key		Programmable: command channel switching, forward rotation and reverse rotation, JOG function selection
Textile swing frequency control		Control function of triangular-wave frequency
Timing control		Timing control range: 0h ~ 65535h
Operation command channel		Three channels: operation keypad, control terminal, and communication. It can be switched by various methods
Frequency source		10 frequency sources: digital setting, analog voltage setting, analog current setting, pulse setting and serial communication port setting etc. It can be switched by these frequency sources in various methods
Auxiliary frequency source		Ten auxiliary frequency sources. It can implement fine tuning of auxiliary frequency and frequency synthesis
Input terminal		6 digital input terminals. One of them can be used as high speed pulse input, which can reach 100KHz at max All of them support PNP and NPN input. 2 analog input (AI) terminals, one of which only supports voltage input and the other supports voltage input or current input
Output terminal		1 High-speed pulse output terminal (open-collector) that supports 0-100 kHz square wave signal output 2 relay outputs. 2 analog outputs (AO) terminal that supports 0/4mA-20 mA current output or 0/2V-10 V voltage output
Display and panel operation		LED display
	LCD display	Optional; operation content indicated
	Parameters copy	Parameters fast copy via LCD keypad
	Key locking and function selection	It can lock the keys partially or completely and define the function range of some keys so as to prevent mis-operation
	Protection function	Motor short-circuit detection at power-on, input/output phase loss protection, overcurrent protection, overvoltage protection, undervoltage protection, overheat protection and overload protection etc
Application environment	Accessories selection	LCD operation keypad, braking unit etc
	Installation location	Indoor, free from direct sunlight, dust, corrosive gas, combustible gas, oil smoke, vapour, drip or salt
	Altitude	Lower than 1000m, derating if higher than 1000m
	Ambient temperature	-10°C to +40°C (derating if the ambient temperature is between 40°C and 50°C)
	Humidity	Less than 95%RH, without condensing
	Vibration	Less than 5.9m/s2(0.6g)
Storage temperature	- 40°C ~ + 70°C	

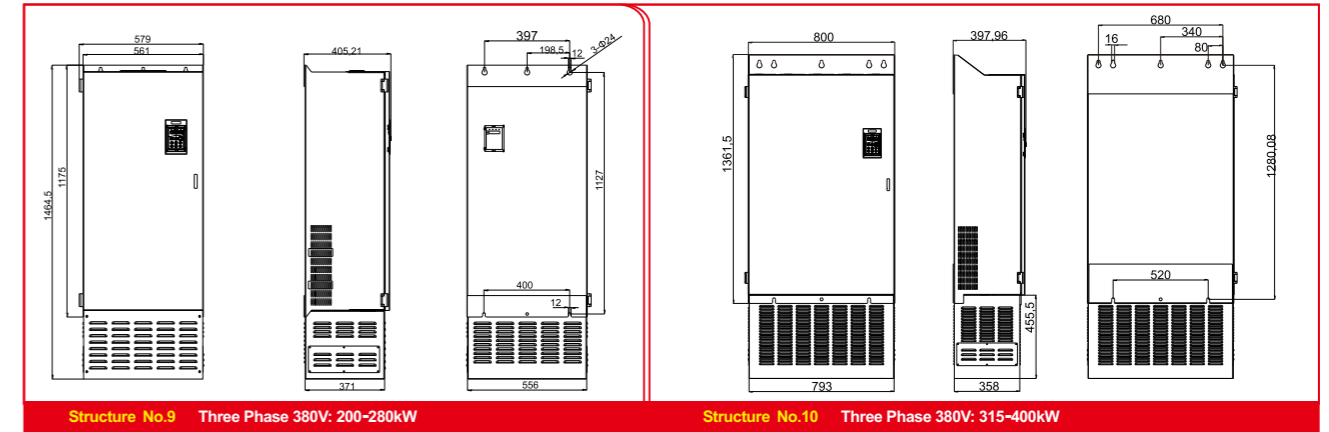
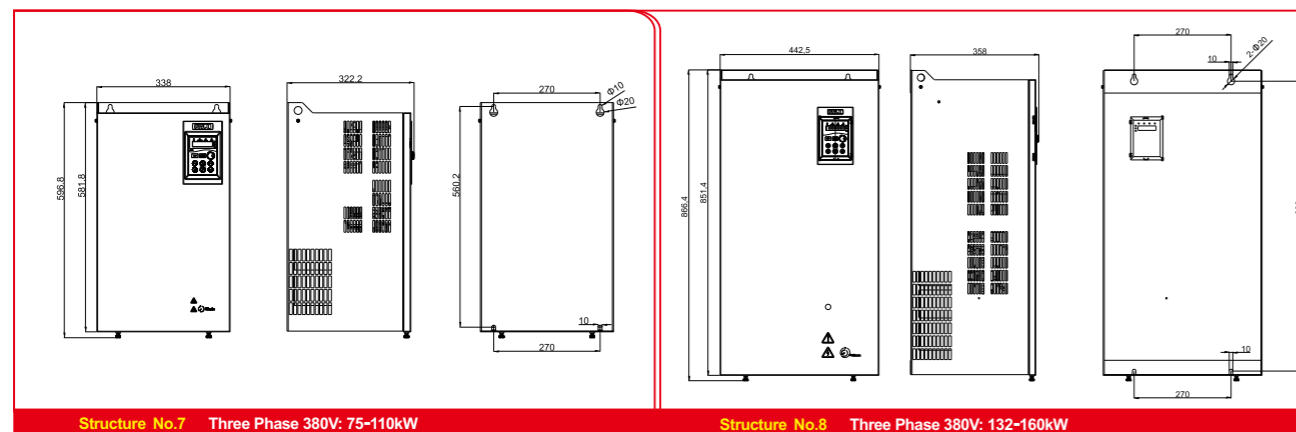
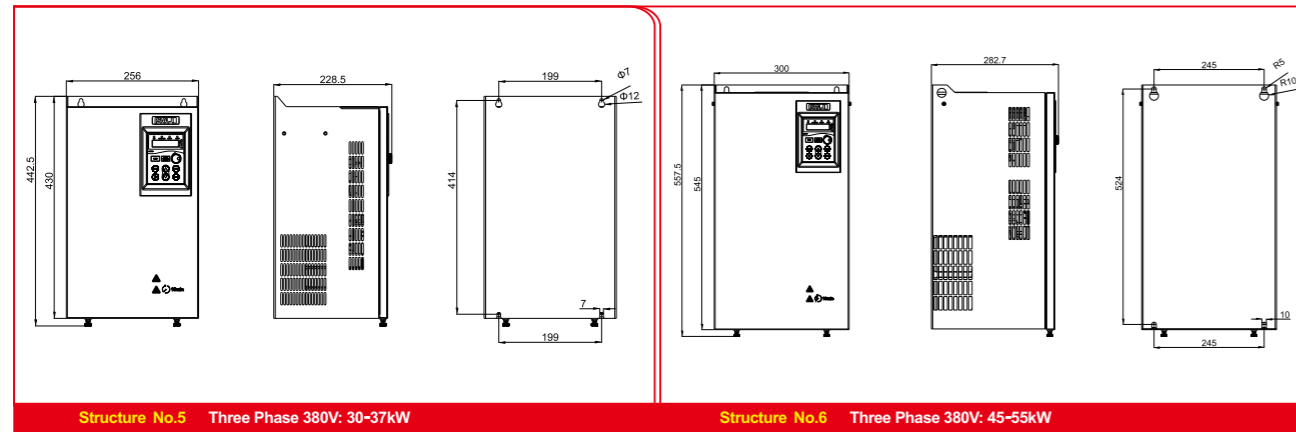
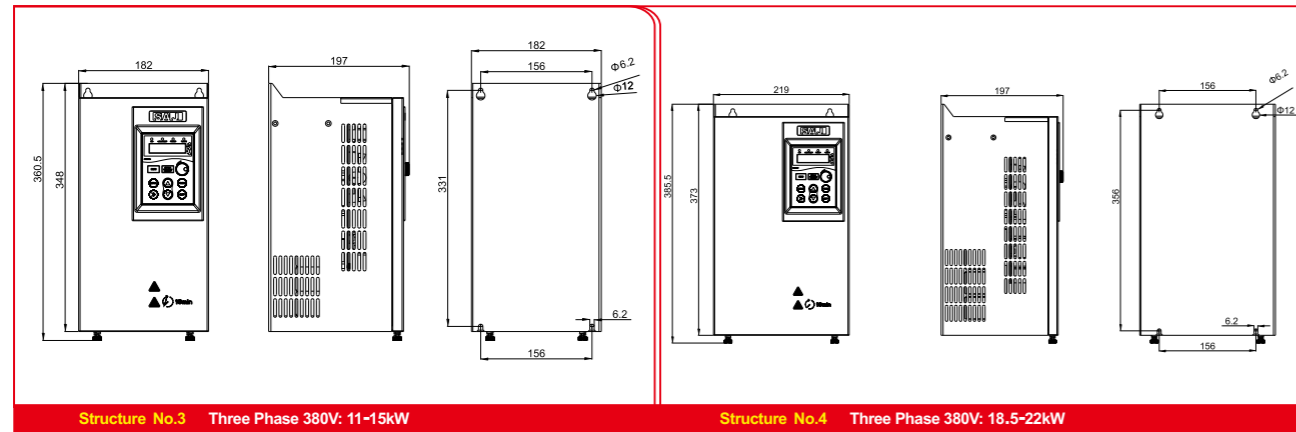
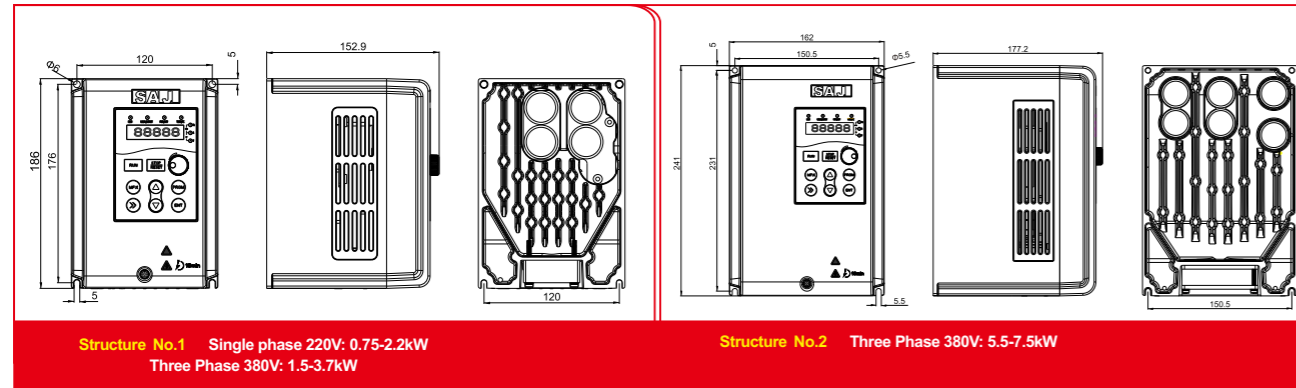
Model number description

VM1000 - 4 T 18R5GB /022PB	
VM1000: product series	022~22kw P: variable torque load B: integrated braking unit
2: 220V 4: 380V	18R5~18.5KW R: decimal point
S: single phase; T: three-phase	G: constant torque load B: integrated braking unit

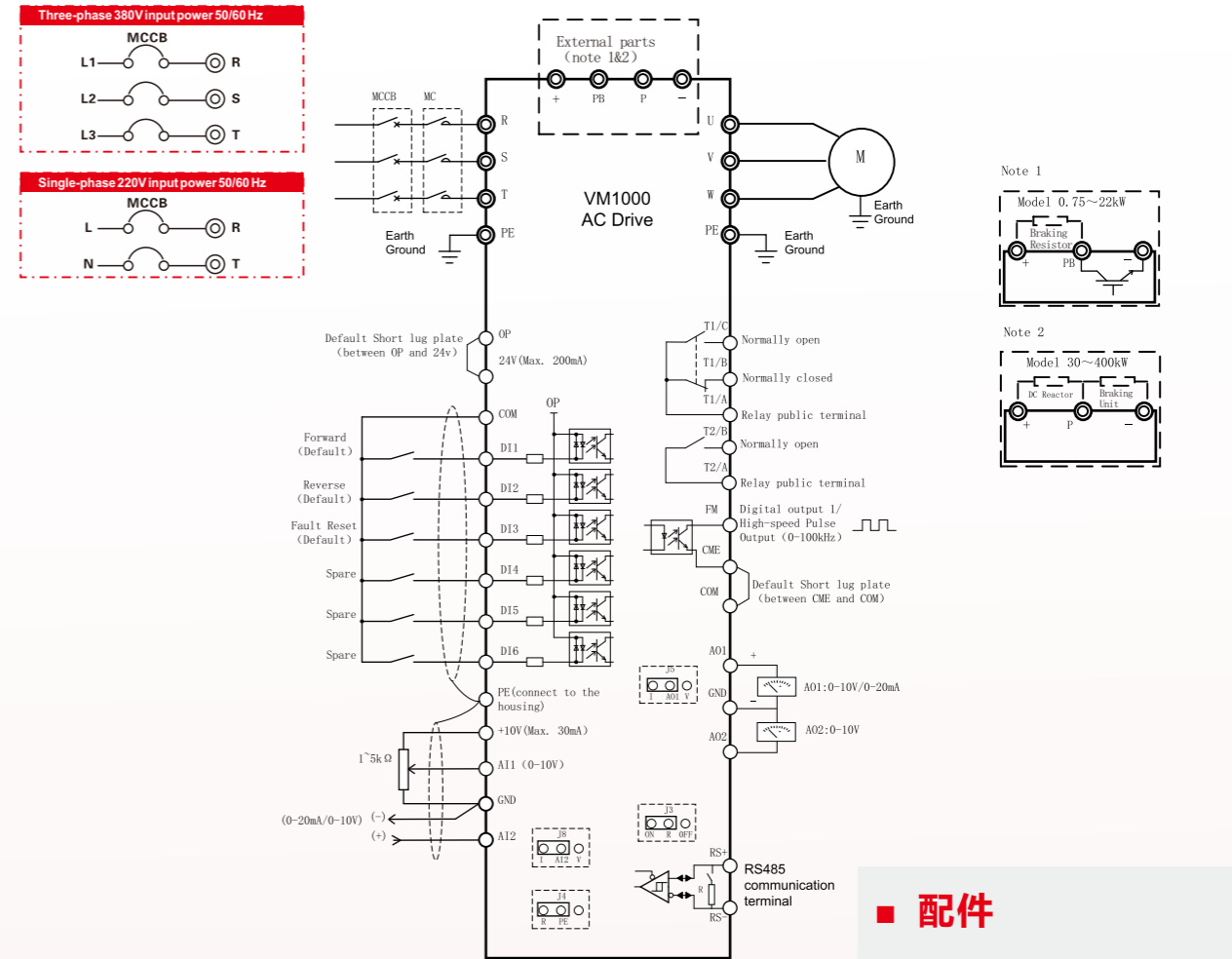
Specification and selection guide

Voltage grade	Power		Rated input current(A)	Rated output current(A)	Structure No.	Series No.	2:220V 4:380V	S:single phase T: three phase	Adaptive motor power	G: general type	B: integrated with brake function Blank: optional brake function
	kW	HP									
Single phase 220VAC ±15%	0.75	1	8.2	4.5	1	VM1000	- 2	S	0.75	G	B
	1.5	2	14.2	7	1	VM1000	- 2	S	1.5	G	B
	2.2	3	23	10	1	VM1000	- 2	S	2.2	G	B
Three phase 380VAC ±15%	1.5/2.2	2/3	5.0/5.8	3.8/5.1	1	VM1000	- 4	T	1.5/2.2	G/P	B
	2.2/3.7	3/5	5.8/10.5	5.1/9	1	VM1000	- 4	T	2.2/3.7	G/P	B
	3.7/5.5	5/7.5	10.5/14.6	9/13	1	VM1000	- 4	T	3.7/5.5	G/P	B
	5.5/7.5	7.5/10	14.6/20.5	13/17	2	VM1000	- 4	T	5.5/7.5	G/P	B
	7.5	10	20.5	17	2	VM1000	- 4	T	7.5	G	B
	11	15	26	25	2	VM1000	- 4	T	11	P	B
	11/15	15/20	26/35	25/32	3	VM1000	- 4	T	11/15	G/P	B
	15/18.5	20/25	35/38.5	32/37	3	VM1000	- 4	T	15/18.5	G/P	B
	18.5/22	25/30	38.5/46	37/45	4	VM1000	- 4	T	18.5/22	G/P	B
	22/30	30/40	46.5/62	45/60	4	VM1000	- 4	T	22/30	G/P	B
	30/37	40/50	62/76	60/75	5	VM1000	- 4	T	30/37	G/P	
	37/45	50/60	76/92	75/91	5	VM1000	- 4	T	37/45	G/P	
	45/55	60/70	92/113	91/110	6	VM1000	- 4	T	45/55	G/P	
	55/75	70/100	113/157	112/150	6	VM1000	- 4	T	55/75	G/P	
	75/90	100/125	157/180	150/170	7	VM1000	- 4	T	75/90	G/P	
	90/110	125/150	180/214	170/210	7	VM1000	- 4	T	90/110	G/P	
	110/132	150/180	214/256	210/253	7	VM1000	- 4	T	110/132	G/P	
	132/160	180/220	256/307	253/304	8	VM1000	- 4	T	132/160	G/P	
	160	220	307	304	8	VM1000	- 4	T	160	G	
	200/220	275/300	385/430	377/426	9	VM1000	- 4	T	200/220	G/P	
220/250	300/340	430/468	426/465	9	VM1000	- 4	T	220/250	G/P		
250/280	340/380	468/525	465/520	9	VM1000	- 4	T	250/280	G/P		
280/315	380/430	525/590	520/585	9	VM 1000	- 4	T	280/315	G/P		
315/355	430/480	590/665	585/650	10	VM 1000	- 4	T	315/355	G/P		
355/400	480/545	665/785	650/725	10	VM 1000	- 4	T	355/400	G/P		
400	545	785	725	10	VM 1000	- 4	T	400	G		

■ Dimensions(mm)



■ Wiring diagram



Note:
1. "⊙" refers to main circuit terminals; "○" refers to control circuit terminals.

■ 配件

VM1000 LCDkeyboard
Adaptation: whole series of models

VM1000 Industry Applications



Large inertia braking

Typical equipment: game machine, industrial washing machine

Requirements: high overload capability, gentle start, high precision of steady speed

VM1000 features: high start torque, stall protection, high overload capability, wide voltage range



Fluid machinery

Typical equipment: draught fan, pump, air compressor

Requirements: variable torque load, energy saving control, steady output

VM1000 features: automatic energy saving operation, high precision process PID adjustment, torque tracking restart



Tension machinery

Typical equipment: dividing and cutting machine, coiler

Requirements: high precision of steady speed, high speed response

VM1000 features: torque control mode, low speed high torque output, high precision process PID adjustment

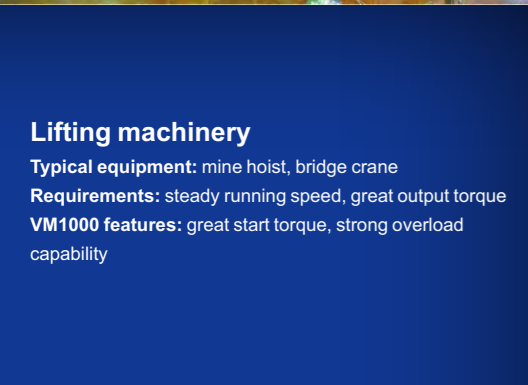


Extrusion machinery

Typical equipment: plastic extruder

Requirements: wide speed regulation range, steady torque, low speed fluctuation

VM1000 features: low speed high torque, quick dynamic response, automatic voltage regulation



Lifting machinery

Typical equipment: mine hoist, bridge crane

Requirements: steady running speed, great output torque

VM1000 features: great start torque, strong overload capability



metal cutting and forming machinery

Typical equipment: metal forming machine, numerical control machine

Requirements: processing torque holding, quick response to impact load

VM1000 features: high start torque, quick frequency response, steady output speed

VM1000 industry applications
Drive&zero-carbon energy-saving innovator

8000B Series

Power range: single phase input and three-phase output (220V): 0.75-2.2kW; three-phase input and three-phase output (380V):0.75-400kW

8000B series enhanced AC drive

8000B series AC drive is a brand new product optimized from 8000 series standard AC drive. Its overall performance is highly improved and is the best choice for high performance speed control of general machinery.

8000B series AC drive is suitable for common draught fan, pump, especially for circumstance with high load and quick response demands.



Flexible & practical

- Rich and practical terminal function and virtual terminals
- Integrated PID regulator and industry application functions
- RS-485 communication, standard Modbus protocol

High performance

- Sensor-less vector control and V/F control, strong applicability
- 0.5Hz low frequency high torque output reaches 150%, adapts to heavy load startup
- 150% overload for 1 minute, high reliability
- Accurate motor parameter identification, convenient debugging

Stable & reliable

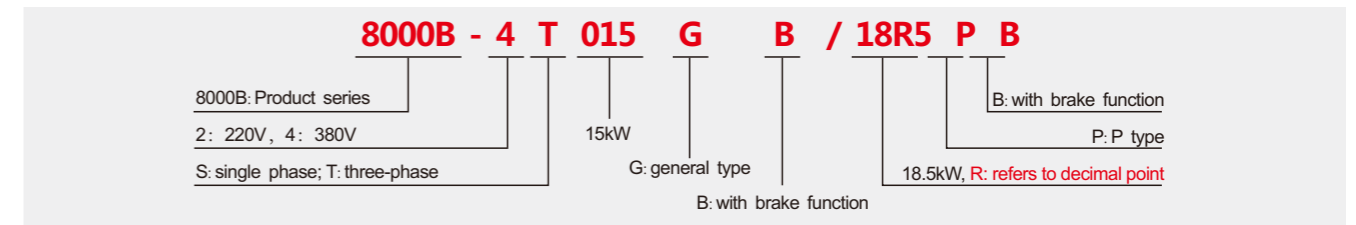
- Up to 27 fault detection and protection, safer
- High standard hardware configuration, long lifetime
- $\pm 15\%$ wide voltage input design, strong applicability
- Automatic protective paint spray, quality assurance
- More than 500,000 application verification, high reliability



Datasheet

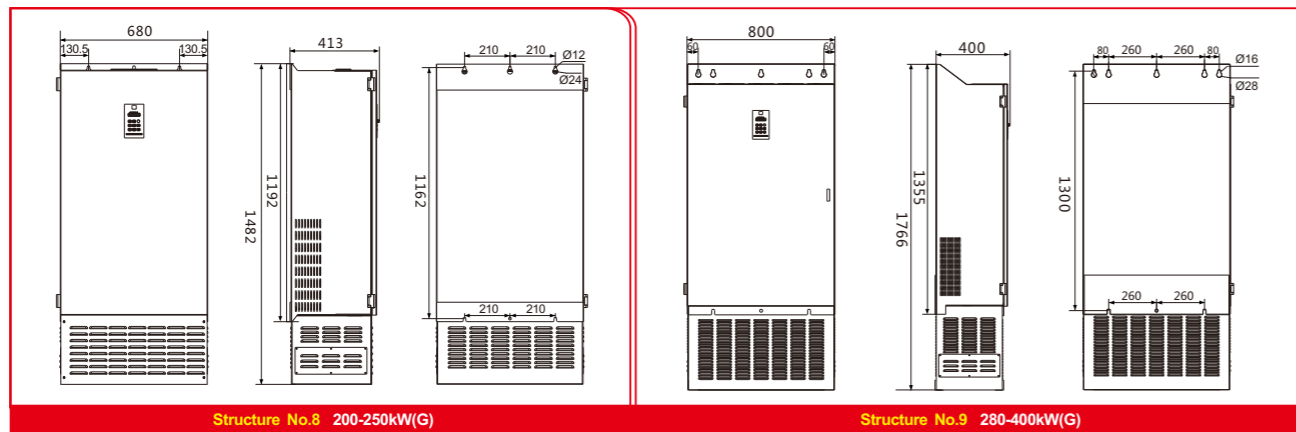
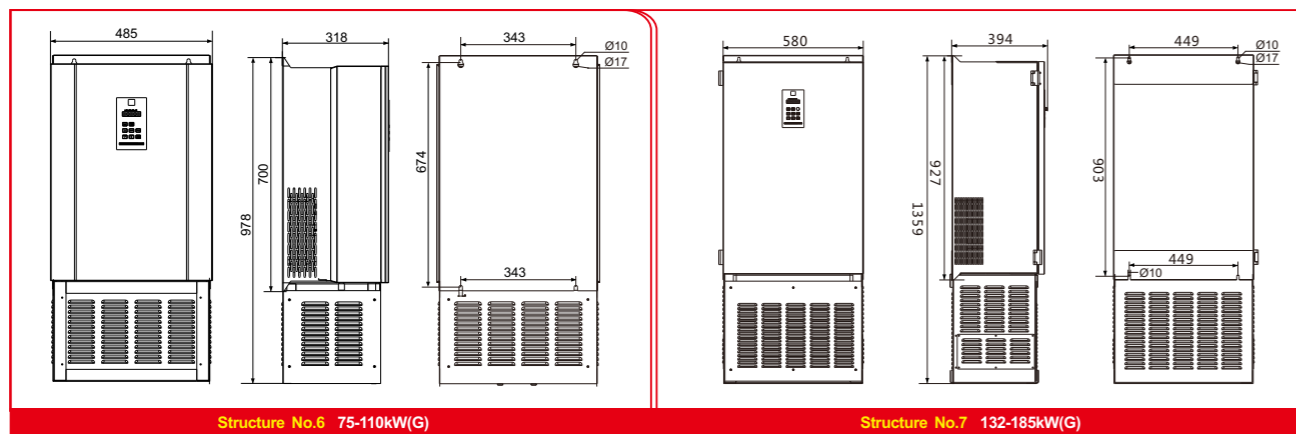
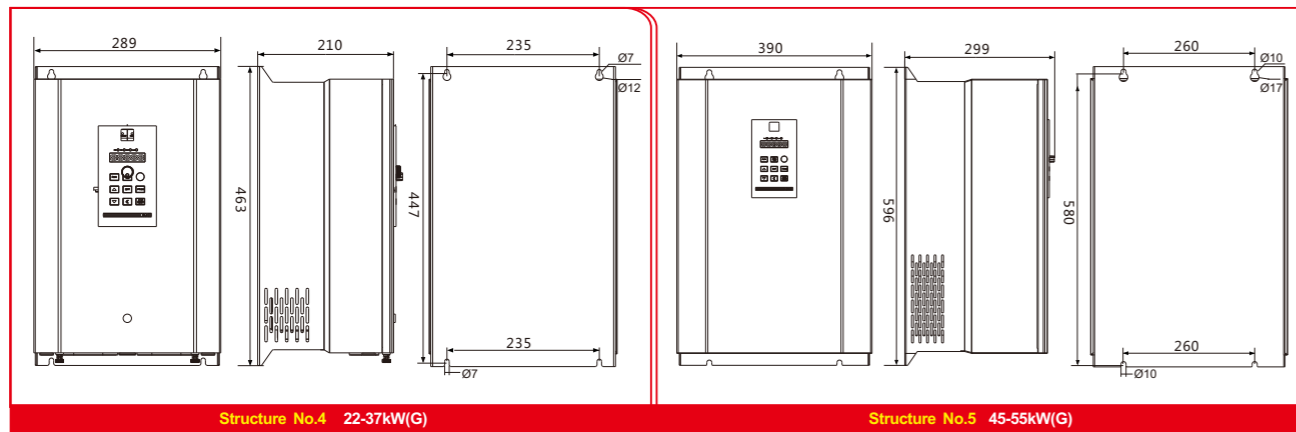
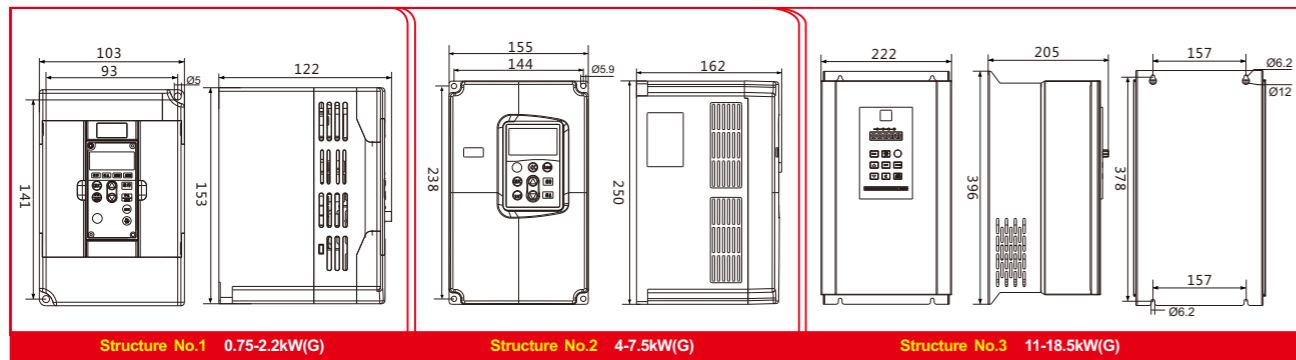
Control characteristic	Control mode	speed sensorless vector control(SVC)	V/F control
	Starting torque	0.5Hz 150%	0.5Hz 100%
	Speed adjustable range	1:100	1:20
	speed-holding precision	±0.5%	±1.0%
	Overload capability	G type: 150% rated current for 60s; 180% rated current for 1s P type: 120% rated current for 60s; 150% rated current for 1s	
	V/F curve	Linear, square, multipoint type	
	DC braking capacity	Braking current: 0-150% rated current(G type), 0-100% rated current(P type); braking time: 0.0-50.0s	
	Inching running	Inching frequency range: 0.00-maximum frequency; inching acceleration and deceleration time range: 0.1-3600S	
	acceleration and deceleration time	Two kinds: linear or S curve mode: acceleration and deceleration time range: 0.1-3600S	
	Torque compensation	Manual: 0.1-30.0%; automatic: 0.0	
Input/output	Start frequency	0.50-10Hz	
	Input voltage	220V/380V±15%	
	Input frequency	50/60Hz, fluctuation range: ±5%	
peripheral interface	Output voltage	0-rated input voltage	
	Output frequency	SVC: 0~300Hz, V/F: 0~600Hz	
	Programmable digital input	6 ways of digital terminal input	
Basic function	Programmable analog input	AVI: 0-10V; ACI: 0-10V or 0/4-20mA	
	Relay output	1 way of output, programmable	
	Open-collector output	1 way of output, programmable	
	Analog output	0.75-2.2kW: FM: 0-10V; AM: 4-20mA; 4-400kW: FM: 0-10V; AM: 4-20mA	
	Serial communication port	RS-485 half-duplex, standard modbus protocol	
	Command running channel	Set by operation panel, external terminals and RS-485 communication port, switchable by many ways	
	Main frequency source	Multiple setting ways: set by potentiometer of operation board, digital button UP/DOWN, analog terminals, RS-485 communication, PID etc.	
	Auxiliary frequency source	Capable of frequency synthesis and frequency trimming	
	Simple PLC	PLC running mode can be defined	
	multi-speed control	16 sections of different speed can be chosen by external digital input terminals	
Industrial application	Integrated PID	For the convenience to realize closed-loop control	
	AVR	When grid voltage changes, it keeps output voltage constant automatically. By default, it doesn't work at deceleration	
	Stall control	Automatically limit current and voltage at running period to prevent tripping caused by frequent overcurrent/ overvoltage	
	Pendulous frequency	Multiple triangular wave frequency control function, mainly used in traversing and winding situations	
Personalization function	Frequency hopping	Two configurable frequency hopping points and hopping frequency range to avoid motor resonance frequency point	
	Droop control	Mainly used in the case that multiple motors drive the same load where balanced load is needed	
	Metering control	Automatically calculate and save meters of products according to set base when driving the motor	
	LED display	multiple variables can be displayed including running frequency, set frequency, bus voltage, output voltage, output current etc	
Application environment	Automatic energy saving	Decrease output voltage at light load automatically to save energy	
	Password setting	4-bit password can be set with non-zero numbers. Exit password setting interface and the password will be valid after 1 minute	
	Parameter lock	Define whether the parameter is locked in running or stopped state in case of misoperation	
	Protection	Over current protection, over voltage protection, input/output phase loss protection, undervoltage protection, overheating protection, over load protection etc	
Application environment	Altitude	Lower than 1000m, service in derated capacity above 1000m. Derate 1% capacity every 100m increase in height	
	Environmental temperature	-10°C+ ~ 40°C, service in derated capacity for 40°C~50°C. Derate 4% capacity every 1°C increase in temperature	
	Humidity	≤95%RH, no water condensation	
	Vibration	< 5.9m / S2 (0.6G)	
	Storage temperature	-40°C~+70°C	

Model number description

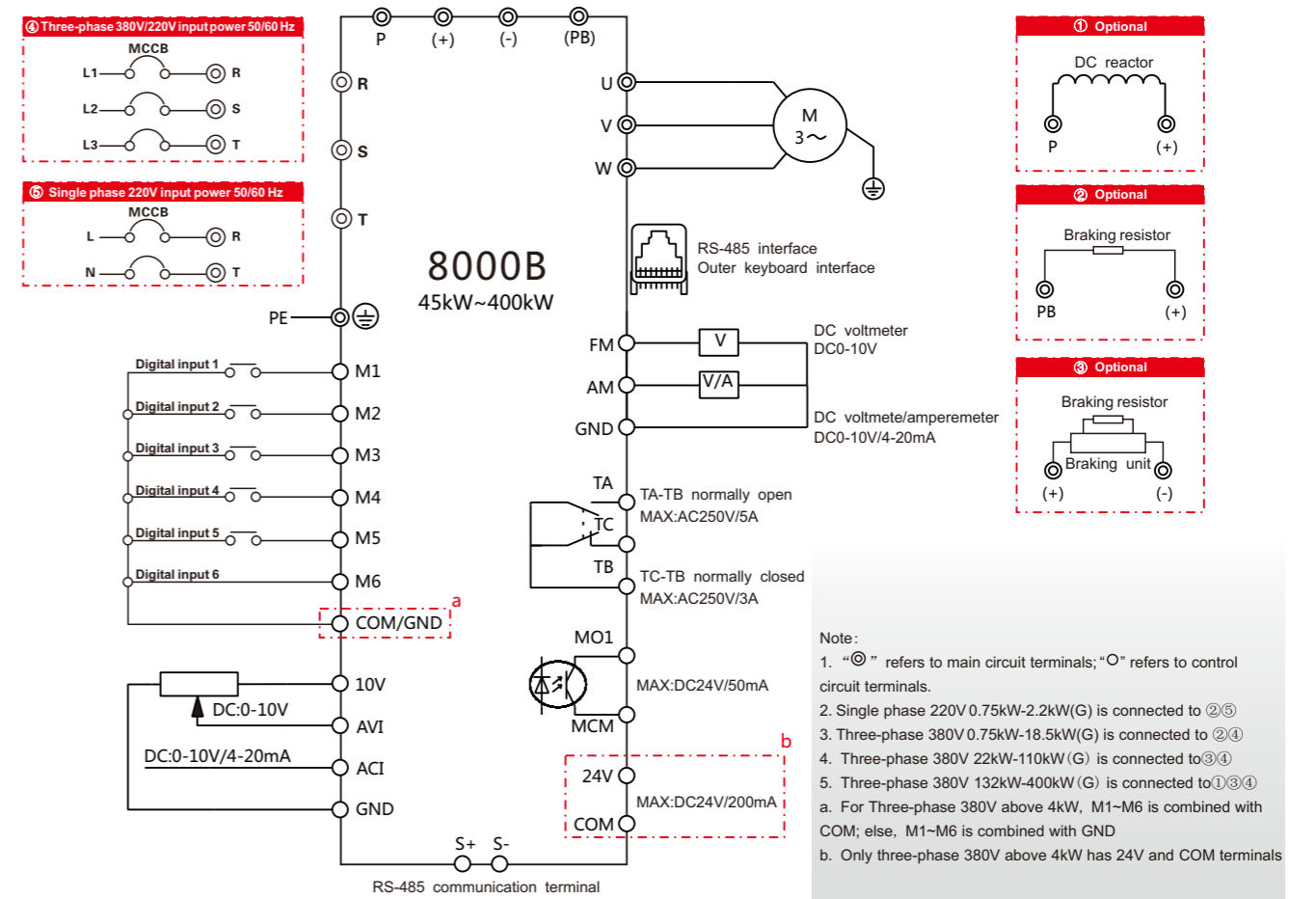


Voltage grade	Power		Rated input current(A)	Rated output current(A)	Structure No.	Series No.	B: enhanced type	2: 220V 4: 380V	S:single phase T: three-phase	Adaptive motor power	G: general type P: fan and pump type (Some models support GP integration)	B: integrated with brake function	
	kW	HP											
Single phase 220VAC ±15%	0.75	1.0	8.2	4.5	1	8000	B	-	2	S	R75	G	B
	1.5	2.0	14.2	7	1	8000	B	-	2	S	1R5	G	B
	2.2	3.0	23	10	1	8000	B	-	2	S	2R2	G	B
Three phase 380VAC ±15%	0.75	1.0	3.4	2.5	1	8000	B	-	4	T	R75	G	B
	1.5	2.0	5	3.7	1	8000	B	-	4	T	1R5	G	B
	2.2	3.0	5.8	5	1	8000	B	-	4	T	2R2	G	B
	4/5.5	5.5/7.5	10/15	9/13	2	8000	B	-	4	T	4/5R5	G/P	B
	5.5/7.5	7.5/10	15/20	13/17	2	8000	B	-	4	T	5R5/7R5	G/P	B
	7.5	10.2	20	17	2	8000	B	-	4	T	7R5	G/P	B
	11/15	15/20.4	26/35	25/32	3	8000	B	-	4	T	11/15	G/P	B
	15/18.5	20.4/25.2	35/38	32/37	3	8000	B	-	4	T	15/18R5	G/P	B
	18.5	25.2	38	37	3	8000	B	-	4	T	18R5	G	B
	22/30	30/40.8	46/62	45/60	4	8000	B	-	4	T	22/30	G/P	
	30/37	40.8/50.3	62/76	60/75	4	8000	B	-	4	T	30/37	G/P	
	37	50.3	76	75	4	8000	B	-	4	T	37	G	
	45/55	61.2/74.8	91/113	90/110	5	8000	B	-	4	T	45/55	G/P	
	55/75	74.8/102	113/157	110/150	5	8000	B	-	4	T	55/75	G/P	
	75/93	102/126.5	157/180	150/176	6	8000	B	-	4	T	75/93	G/P	
	93/110	126.5/149.7	180/214	176/210	6	8000	B	-	4	T	93/110	G/P	
	110	149.7	214	210	6	8000	B	-	4	T	110	G	
132/160	179.6/217.7	253/307	250/300	7	8000	B	-	4	T	132/160	G/P		
160/185	217.7/251.7	307/346	300/340	7	8000	B	-	4	T	160/185	G/P		
185	251.7	346	340	7	8000	B	-	4	T	185	G		
200/220	272.1/229.3	385/420	380/415	8	8000	B	-	4	T	200/220	G/P		
220/250	299.3/340.1	420/473	415/470	8	8000	B	-	4	T	220/250	G/P		
250/280	340.1/381	473/525	470/520	8	8000	B	-	4	T	250/280	G/P		
280/315	381/428.6	525/603	520/600	9	8000	B	-	4	T	280/315	G/P		
315	428.6	603	600	9	8000	B	-	4	T	315	G		
350	476.2	655	640	9	8000	B	-	4	T	350	G		
400	544.2	710	690	9	8000	B	-	4	T	400	G		

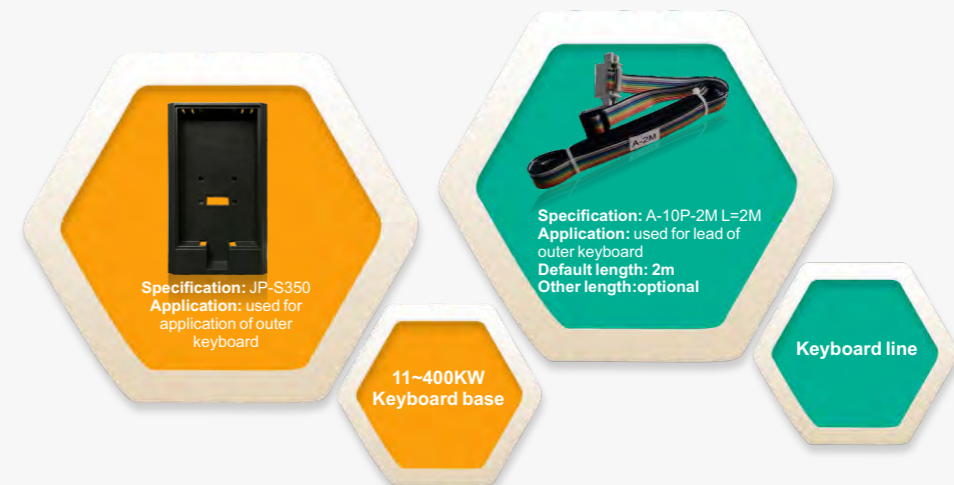
■ Dimensions(mm)



■ Wiring diagram



■ Accessories



8000B Industry Applications



Building material mining processing machinery

Typical equipment: dredger, stonewall
Requirements: great inertial load, instant high overload, electricity generation of motor is frequently switched.
8000B features: high start torque, stall control, high overload capability, wide voltage range



General fluid machinery

Typical equipment: draught fan, pump, air compressor
Requirements: variable torque load, energy saving control
8000B features: automatic energy saving operation, process PID adjustment, torque tracking restart, long term reliability



Metal/civil working machinery

Typical equipment: numerical control machine tool, engraving and milling machine
Requirements: constant torque, rapid start/stop control
8000B features: parameter identification, DC braking, analog and communication given frequency



Textile/chemical fiber machinery

Typical equipment: double twister, needling machine, needling machine
Requirements: stepless speed regulation, low speed high torque, low speed fluctuation
8000B features: low speed high torque, quick dynamic response



Conveying machinery

Typical equipment: roller conveyer line
Requirements: constant torque, great inertial load
8000B features: high start torque, parameter identification, DC braking, rapid start/stop, integrated brake unit for 18.5kW and below



Rubber and plastics machine

Typical equipment: plastic extruder
Requirements: wide speed regulation range, steady torque, low speed fluctuation
8000B features: low speed high torque, quick dynamic response, AVR automatic voltage regulation

8000B industry applications
Drive&zero-carbon energy-saving innovator

8000m Series

Power range: single phase input and three-phase output(220V); three-phase input and three-phase output(380V): 0.75-2.2kW

Flexible

Dual-core

Economical

8000m series Compact AC drive

With ten-year experience, combining general market demands and adopting new design philosophy, SAJ develops 8000m series new generation economical low power AC drive, which is convenient to debug, high in efficiency and reliable in application.

IP20



International chip quality, dual-core control



Core computing DSP (CPU)—American Texas Instruments
World's leading analog and digital semiconductor IC design and manufacturing company



Power components—German Infineon
World's biggest power semiconductor supplier—former semiconductor business unit of Siemens



Processor MCU—STMicroelectronics
One of the world's biggest semiconductor suppliers and advanced integrated component manufacturer

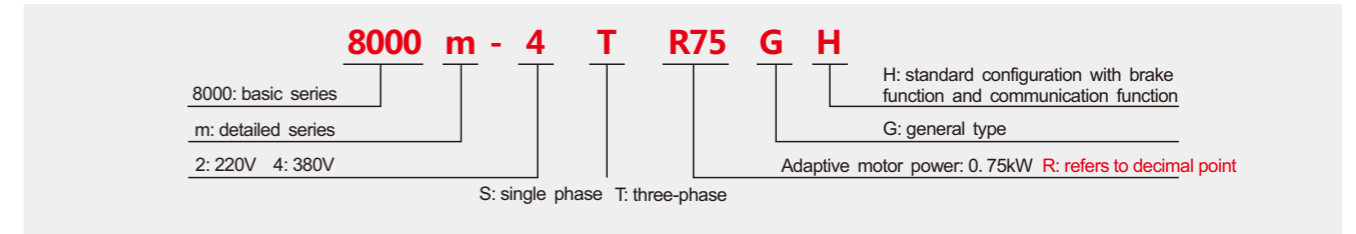
Flexible and compact design



■ Datasheet

Control characteristic	Control mode	V/F control
	Starting torque	0.5Hz 100%
	Speed adjustable range	1:20
	Speed-holding precision	±1.0%
	Overload capability	G type: 150% rated current for 60s; 180% rated current for 1s
	V/F curve	Linear, square, multipoint type
	DC braking capacity	DC braking frequency:0.00-maximum frequency; braking time: 0.1-50.0s
	Inching running	Inching frequency range: 0.00-maximum frequency; inching acceleration and deceleration time range: 0.1-3600S
	Acceleration and deceleration time	Linear mode: acceleration and deceleration time range: 0.1-3600S
	Torque compensation	Manual: 0.1-30.0%; automatic: 0.0
Input/output	Start frequency	0.50-10Hz
	Input voltage	220V/380V±15%
	Input frequency range	50/60Hz, fluctuation range: ±5%
	Input frequency precision	Analog setting: maximum frequency×0.1%; digital setting: 0.01Hz
	Output voltage	0-rated input voltage
	Output frequency	0.00-600Hz
Peripheral interface	Programmable digital input	4 ways of digital terminal input
	Programmable analog input	AVI: 0-10V
	Relay output	1 way of output, programmable
	Open-collector output	1 way of output, programmable
	Analog output	Default: FM: 0-10V; jumper: 4-20mA
	Serial communication port	RS-485 half-duplex, standard modbus protocol
Basic function	Command running channel	Three kinds of channels: set by operation panel, control terminal and serial communication port, switchable by many ways
	Frequency source	7 frequency sources: set by potentiometer of operation board, digital button UP/DOWN, communication port, PID etc
	Auxiliary frequency source	1 auxiliary frequency source, capable of frequency synthesis and frequency trimming
	Simple PLC, multi-speed control	Multiple sections speed and PLC running mode can be defined
	Integrated PID	For the convenience to realize closed-loop control
	AVR	When grid voltage changes, it keeps output voltage constant automatically. By default, it doesn't work at deceleration
Personalization function	Stall control	Automatically limit current and voltage at running period to prevent tripping caused by frequent overcurrent/ overvoltage.
	LED display	16 kinds of variables can be displayed including running frequency, set frequency, bus voltage, output voltage, output current etc
	Automatic energy saving	Decrease output voltage at light load automatically to save energy
	Password setting	4-bit password can be set with non-zero numbers. Exit password setting interface and the password will be valid after 1 minute
	Parameter lock	Define whether the parameter is locked in running or stopped state in case of misoperation.
	Protection	Over current protection, over voltage protection, output phase loss protection, undervoltage protection, overheating protection, over load protection etc
Application environment	IP grade	Ip20, suitable for dusty environment with dust-proof strip added
	Altitude	Lower than 1000m, service in derated capacity above 1000m. Derate 1% capacity every 100m increase in height
	Environmental temperature	-10°C~+40°C, service in derated capacity for 40°C~+50°C. Derate 4% capacity every 1°C increase in temperature
	Humidity	≤95%RH, no water condensation
	Vibration	<5.9m / S2 (0.6G)
	Storage temperature	-20°C~+60°C

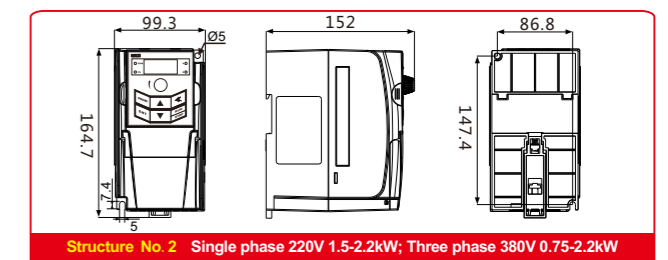
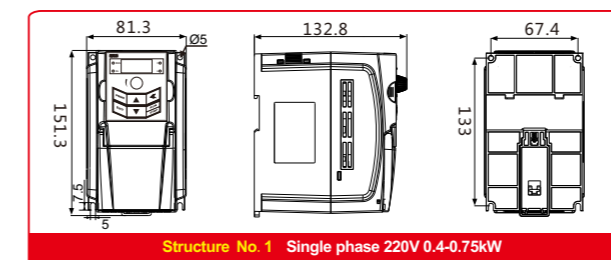
■ Model number description



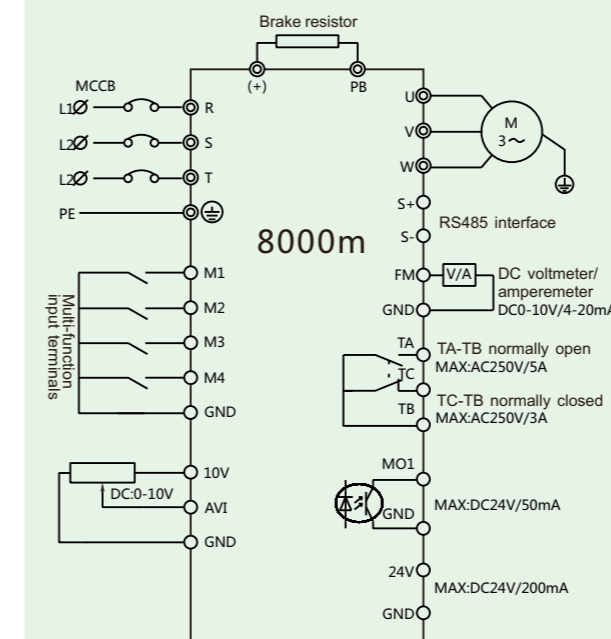
■ Specification and selection guide

Voltage grade	Power		Rated input current(A)	Rated output current(A)	Structure No.	Series No.	2 : 220V 4 : 380V	S: single phase T: three-phase	Adaptive motor power	G: general type	H: standard configuration with brake function and communication function	
	kW	HP										
Single phase 220VAC ±15%	0.4	0.55	4.5	2.4	1	8000m	-	2	S	R40	G	H
	0.75	1	8.2	4.5	1	8000m	-	2	S	R75	G	H
	1.5	2	14.2	7	2	8000m	-	2	S	1R5	G	H
	2.2	3	23	10	2	8000m	-	2	S	2R2	G	H
Three phase 380VAC ±15%	0.75	1	3.4	2.5	2	8000m	-	4	T	R75	G	H
	1.5	2	5	3.7	2	8000m	-	4	T	1R5	G	H
	2.2	3	5.8	5	2	8000m	-	4	T	2R2	G	H

■ Dimensions(mm)



■ Wiring diagram



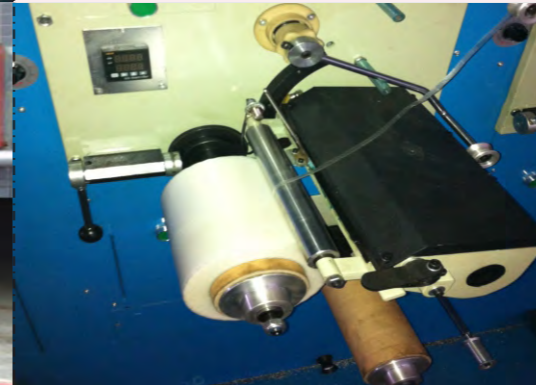
■ Accessories



8000m Industry Applications

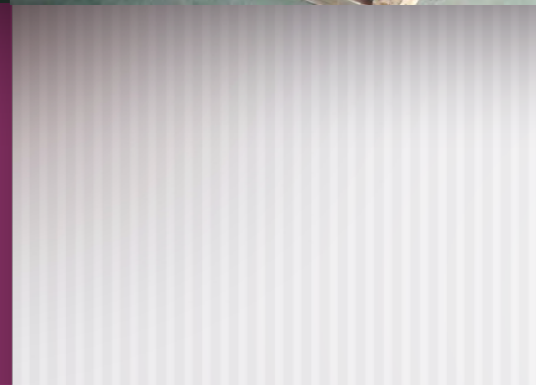
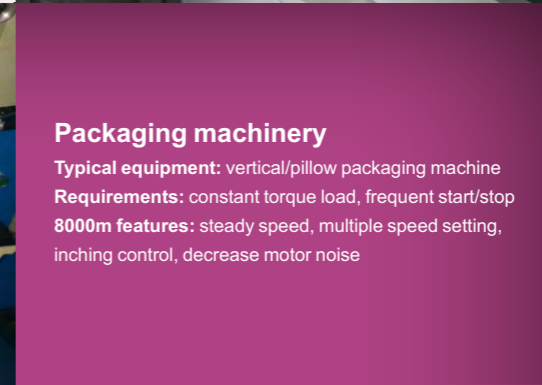
Fluid machinery

Typical equipment: draught fan, pump
Requirements: variable torque load, energy saving control
8000m features: speed regulation, energy conservation, automatic current-limiting and voltage-limiting



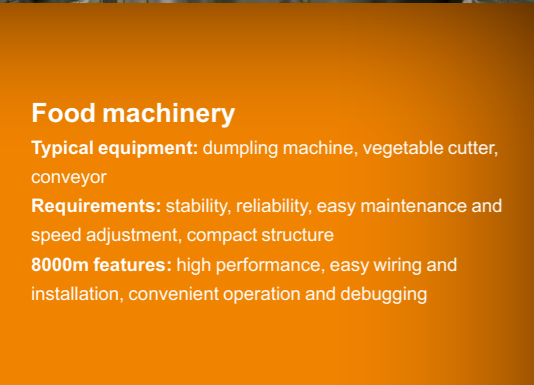
Packaging machinery

Typical equipment: vertical/pillow packaging machine
Requirements: constant torque load, frequent start/stop
8000m features: steady speed, multiple speed setting, inching control, decrease motor noise



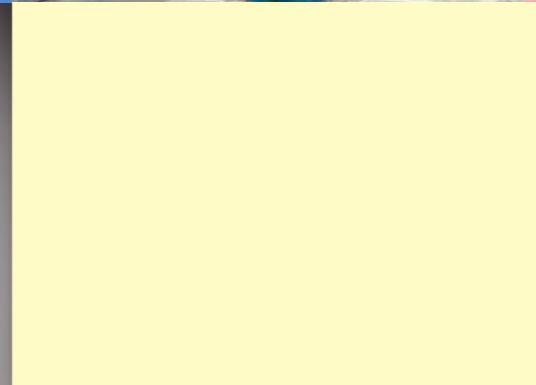
Food machinery

Typical equipment: dumpling machine, vegetable cutter, conveyor
Requirements: stability, reliability, easy maintenance and speed adjustment, compact structure
8000m features: high performance, easy wiring and installation, convenient operation and debugging



Plastic and chemical fiber machinery

Typical equipment: coiler
Requirements: high precision of steady speed, rapid response, adjustable control and alarm
8000m features: good dynamic performance, steady running speed, programmable



8000m industry applications
Drive&zero-carbon energy-saving innovator