

## Production Introduction

The AC drive supplied by us is special magnetic flux vector control mode, with compact design and stable performance; it can continuous running in instantaneous power off situation, this feature is very useful in the area with unstable electricity power supply; Tracking the electric motor speed and rotation direction in real time to enhance the motor protection while the motor is not started by zero speed. Monitor the AC motor operation status and record fault factors; Integrated RS 485 communication interface to enable flexible operation. Besides, we can customize AC drives base on different customers in different special solutions.

## Applications



## Technical Features

- Vector control variable frequency drive
- Power range: 0.4kW – 2.2kW for single phase 220VAC  
0.75kW – 55kW for three phase 220VAC  
0.75kW – 500kW for three phase 380VAC
- Wide range voltage input
- Built-in brake unit for power less than 15kW
- Built-in PID to achieve close loop control easily
- Special 32 bit advanced CPU for motor speed control
- Support RS 485, Modbus-RTU communication protocol
- Tracking motor speed in real time
- Continuous running in instantaneous power off
- Rapid response to load's change with dynamic torque current control
- Monitor & record AC drive running status
- Check and adjust parameters online
- Output high torque under low frequency: 0.5Hz/150%
- Provide LED, LCD keypads for option
- Parameters copy function for user controlling multiple drives easily
- Programmable multi-function input/output terminals
- Automatic calculate rolling diameter
- Compact design for easy install in small space
- Analog input/output 0 – 10V or 4 – 20mA
- Adjustable 7 speed steps
- Universal digital input/output terminals
- Strengthen environment adaptability with conformal coating
- Comply with EMC standard with reliable performance
- High speed control accuracy to achieve synchronization and position control conveniently



# Shenzhen Power Drive Co., Ltd

## AC Drive Selection Guide

Voltage: 220V - 240V AC ± 15%

Model No.	Motor power (kW)	Rated input voltage (V)	Rated output current (A)
S2R4GB	0.4	1AC 220V	2.4
S2R75GB	0.74	1AC 220V	4.5
S21R5GB	1.5	1AC 220V	7
S22R2GB	2.2	1AC 220V	11
2R75GB	0.75	3AC 220V	3
21R5GB	1.5	3AC 220V	7
22R2GB	2.2	3AC 220V	10
2004GB	4	3AC 220V	16
25R5GB	5.5	3AC 220V	20
27R5GB	7.5	3AC 220V	30
2011G	11	3AC 220V	42
2015G	15	3AC 220V	55
2018G	18.5	3AC 220V	70
2022G	22	3AC 220V	80
2030G	30	3AC 220V	110
2037G	37	3AC 220V	130
2045G	45	3AC 220V	160
2055G	55	3AC 220V	190

Voltage: 380V - 440V AC ± 15%

Model No.	Motor power (kW)	Rated input current (A)	Rated output current (A)
3R75GB	0.75	3.7	2.5
31R5GB	1.5	5.4	4
32R2GB	2.2	7	6
3004GB	4	10.7	9
35R5GB	5.5	15.5	13
37R5GB	7.5	20.5	17
3011GB	11	26	25
3015GB	15	35	32
3018G	18.5	38.5	37
3022G	22	46.5	45
3030G	30	62	60
3037G	37	76	75
3045G	45	92	90
3055G	55	113	110
3075G	75	157	150
3093G	90	180	176
3110G	110	214	210
3132G	132	256	250
3160G	160	307	300
3185G	185	385	340
3200G	200	385	380
3220G	220	430	415
3250G	250	500	470
3280G	280	548	520
3315G	315	625	600
3355G	355	710	680
3400G	400	760	750
3500G	500	910	900

Note: Model number with "B" means built-in brake unit

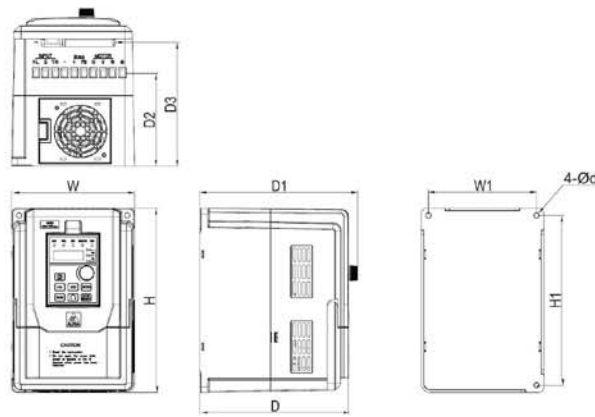
## Technical Specification

Item		Description
I/O Feature	Input voltage range	1AC 220~240V +15% 3AC 380~440V +15%
	Input frequency range	50/60Hz
	Output voltage range	0~rate input voltage
	Output frequency range	Below 4kW: 0.00~650.00Hz, Above 5.5kW: 0.00~400.00Hz
Control Feature	Control mode	Magnetic flux vector control
	Frequency reference source	Keyboard, Analog input, Pulse, Communication, Up/Down terminal, and so on
	Overload capacity	G: 60s for 150% rated current, 20s for 180% rated current
		P: 30s for 120% rated current, 1s for 150% rated current
	Start torque	0.5Hz 150%
	Speed adjusting range	1:100
	Speed control accuracy	≤1% the synchronous rotated speed at rated frequency
	Carrier frequency	1.0-16.0kHz. It can be adjusted according to temperature and load characteristic.
	Frequency resolution	Analog setting:1/1000 max. frequency; Pulse setting:0.5Hz; Digital setting:0.01Hz
	Acceleration-deceleration mode	Linearity, S curve
	Acc-dec time	0.1~3600s
	DC braking	Start frequency: 0.00~50.00Hz
		Braking time: 0.1~30s
		Braking current: G: 0~100%, P: 0~80%
		Brake waiting time: 0.00~10.00s
	Jog running	0.00~max. output frequency; support keyboard, terminal control
Simple PLC and multi-step operation	7 steps; the operation time, acc-dec time and direction can be set.	
PID Control	Analog PID, digital PID; support analog PID dormancy	
Automatic voltage regulation	Disable, enable, disable during deceleration (factory setting)	
Wobble frequency control	Special for spinning	
I/O Terminal	Analog input	2 programmable terminals: 0~10V or 0/4~20mA
	Digital input	8 programmable terminals: X1~X6 for low speed signal input, X7~X8 for high speed pulse input (compatible with low speed signal input)
	Analog output	2 programmable terminals: 0~10V or 0/4~20mA
	Digital output	Programmable open collector output: 2 terminals (24V, max. 50mA); programmable relay output: 2 terminals
Communication terminal	RS-485, support standard MODBUS-RTU protocol	
Human-Machine Interface	LED display	2 keyboards for option
	LCD display	Support 5.5kW and above
EMC	EMC Criterion	IEC61800-3
Environmental Constraint	Temperature	-10℃ ~ +40℃; ac drive will be derated if ambient temperature exceeds 40℃; each rise 1℃, the derate will be 5%
	Humidity	5%-95%, without condensation
	Altitude	≤1000m; ac drive will be derated if above 1000m
	Impingement and oscillation	Normal running: <5.9m/s <sup>2</sup> (0.6g); Transportation: <15m/s <sup>2</sup> (1.5g)
Store environment	-40℃ ~ +70℃; no dust, no corrosive gas, no direct sunlight	

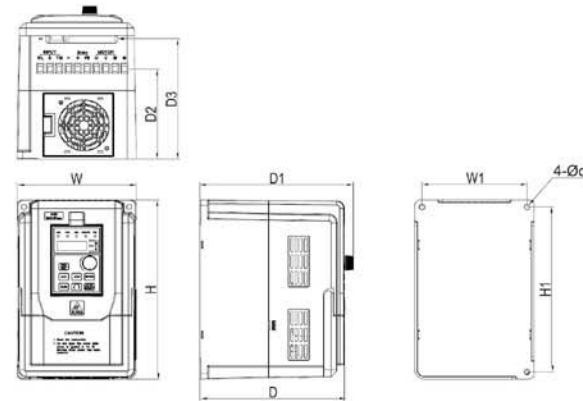
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## Dimension

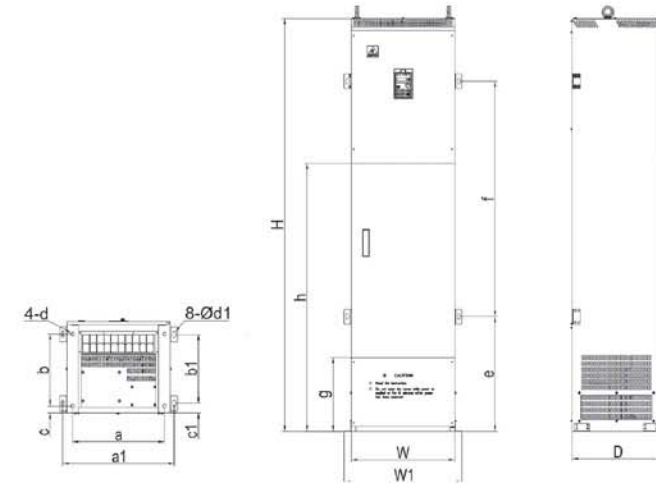
1AC 220V 0.4kW - 0.75kW



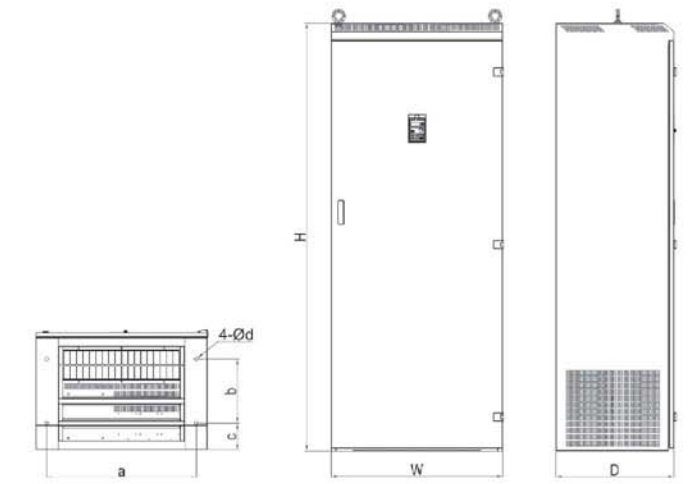
3AC 220V 0.75kW - 1.5kW 380V 0.75kW - 4kW



3AC 380V 160kW - 355kW Wall-mounted



3AC 380V 400kW - 500kW



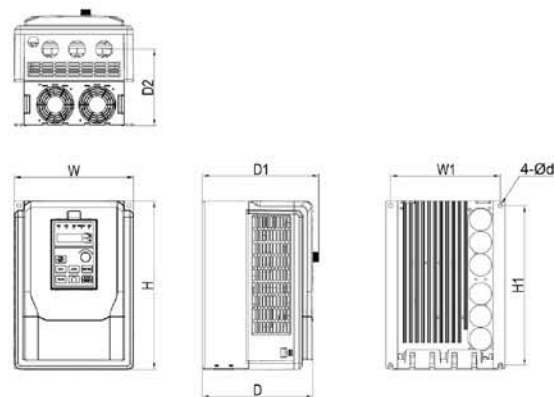
## Installation Dimension

Power range		H	H1	W	W1	D	D1	D2	D3	d	d1
1AC 220V	0.4 – 0.75kW	141.5	130.5	85	74	113	123	63	88	4.5	
1AC 220V	1.5 – 2.2kW	180	169	115	105	150	158	85	120	4.5	
3AC 220V	0.75kW	180	169	115	105	150	158	85	120	4.5	
3AC 220V	1.5kW	195	173	130	108	157	167	100	130	5.5	
3AC 220V	2.2kW	270	255	190	175	176	186	122		7	
3AC 220V	4 – 7.5kW	373	360	235	200	176	188	125		7	12
3AC 220V	11kW	420	405	270	200	218	230	175		7	14
3AC 220V	15 – 18.5kW	503	488	311	200	230	242	180		7	14
3AC 220V	22kW	590	570	351	200	254	266	192		10	20
3AC 220V	30 – 45kW	698	672	400	280	260	272	186		12	22

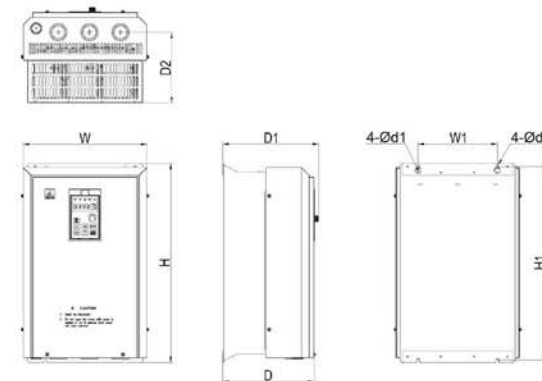
3AC 380V	0.75 – 2.2kW	180	169	115	105	150	158	85	120	4.5	
3AC 380V	4kW	195	173	130	108	157	167	100	130	5.5	
3AC 380V	5.5 – 7.5kW	270	255	190	175	176	186	122		7	
3AC 380V	11 – 15kW	373	360	235	200	176	188	125		7	12
3AC 380V	18.5 – 22kW	420	405	270	200	218	230	175		7	14
3AC 380V	30 – 37kW	503	488	311	200	230	242	180		7	14
3AC 380V	45 – 55kW	590	570	351	200	254	266	192		10	20
3AC 380V	75 – 93kW	698	672	400	280	260	272	186		12	22
3AC 380V	110 – 132kW	850	823	505	420	280	292	212		12	22

Power range		Installation method	H	h	W	W1	D	a	b	c	d	a1	e	f
3AC 380V	160 – 220kW	Cabinet, wall-mounted	1600	1016	450	514	400	400	315	30	15	485	496	830
3AC 380V	160 – 220kW	Wall-mounted	1361		450	485	400				13		281	830
3AC 380V	250 – 355kW	Cabinet, wall-mounted	1800	1166	450	514	400	400	315	30	15	485	502	1025
3AC 380V	250 – 355kW	Wall-mounted	1526	891	450	485	400				13		204	1025
3AC 380V	400 – 500kW	Cabinet,	2000		800		550	700	300	125	18			

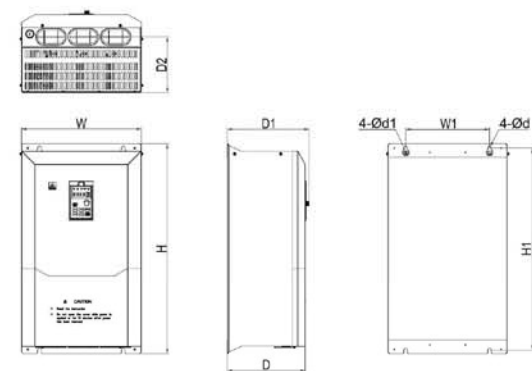
3AC 220V 2.2kW 380V 5.5kW - 7.5kW



3AC 220V 4kW - 18.5kW 380V 11kW - 37kW



3AC 220V 22kW - 55kW 380V 45kW - 132kW



3AC 380V 160kW - 355kW Cabinet, wall-mounted

