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Specification in this catalog are subject to change without notice for ongoing product modification and impression of the subject of the subj





AC Drive Family

Superior Performance for all Industries



About US

Shihlin Electric Group was established in 1955 with headquarter located in Taipei, Taiwan. The company has offered a wide range of services that cover the areas of power distribution system, automobile equipment, low-voltage electrics, factory automation, and system engineering. The products of Shihlin Electric, including universal circuit breaker, molded case circuit breaker, mini circuit breaker, contactor, thermal overload relay, surge protection device, automatic transfer switch, power transformer, switch cabinet, high-voltage switch, capacitor, programmable controller, ac drives, human-machine interface, servo motors & drives, temperature controller, sensor, car alternator, starter motor, etc., are famous for their excellence in quality, which are well appreciated by the clients in the industries.



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SA3 Series

Compact Design Vector Control AC Drive



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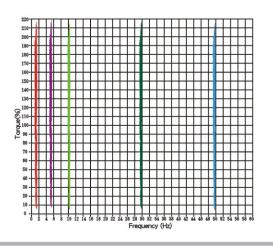
Product Range

Мо	del	KW (HP)	0.75 (1)	1.5 (2)	2.2 (3)	3.7 (5)	5.5 (7.5)	7.5 (10)	11 (15)	15 (20)	18.5 (25)	22 (30)	30 (40)	37 (50)	45 (60)	55 (75)	75 (100)	90 (120)	110 (150)	132 (175)	160 (215)		220 (300)		280 (375)	Belleste
	023	3-Phase 220V	•	•	· \	· \	•	$\overline{}$	<u>, </u>	· \	· \	<u>, </u>	•	•	· \		· \	· /								
SA3		2200		•	<u> </u>	•	•	•	•		•	<u> </u>	<u> </u>	•	<u> </u>	•	•	•	<u> </u>	•						
3/13	043	3-Phase	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	043	440V		•	•	•	`	•	•	`	•	•		•	•	`•	•	•	•	•	•	•	•	•	`	•

Product Features

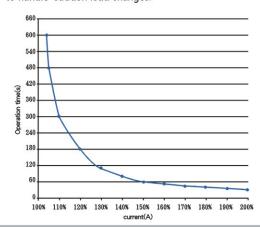
High Performance Vector Control Technology

- · Vector control and Sensorless vector control (Maximum operating frequency 120 Hz).
- High starting torque: Sensorless vector control (SVC)150% 0.3Hz,and closed-loop vector control(FOC + PG) 180% 0Hz.



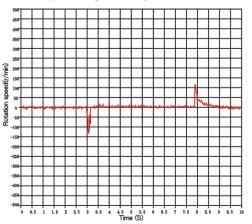
High Overload Capacity

Significantly improved overload capacity to 150% for 60 seconds and 200% for 3 seconds, making it suitable for tooling machinery applications that requires the ability to handle sudden load changes.



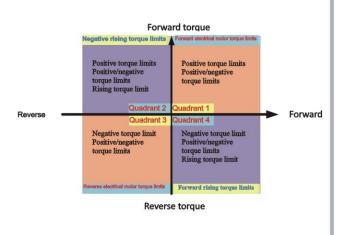
High Response Performance

- \cdot Speed accuracy: less than 1% with 0 to 100% load variation
- · For applications with sudden load changes such as cranes and metal processing machinery.



4-Quadrant Torque Control and Limits

· Parameters or analog signals can be used to simply establish limits for 4 torque items.

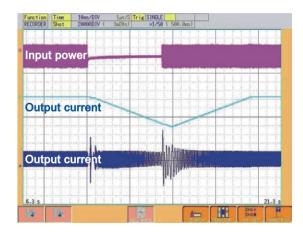


SA3 s

Product Features

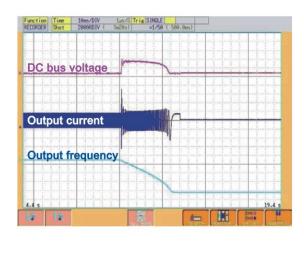
Temporary Compensation at Low Voltage

- During temporary power disruptions, output frequency can be controlled in order to maintain the DC bus voltage of the AC drive to control motor deceleration or stoppage.
- When power is restored, the AC drive will carry out re-acceleration to attain the frequency prior to power stoppage.
- · May be applied to equipment which is not permitted to operate when idle.



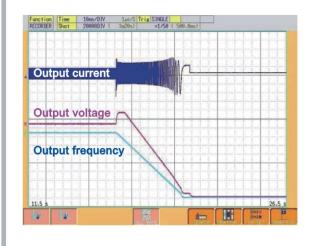
Regeneration Avoidance Functions

 By adjusting output frequency and voltage, DC bus voltage can be kept at a specified value and prevent overvoltage.



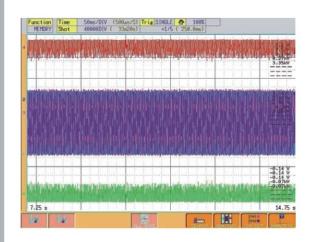
Magnetic Flux Brake

 When the motor is stopping, the magnetic flux will be transmitted to the motor coil to shorten deceleration time without relying on regenerative resistance.



Low-noise Carrier Wave Control (Soft-PWM)

 Motor noise is controlled so that the metallic sound is transformed into a more pleasing buzz.
 Low noise operations to reduce the interference exerted upon external radio frequencies



High Performance synchronous Motor Control Technology

- Supports induction motor (IM) and synchronous motor (IPM and SPM) control.
- · Supports open loop synchronous motor control.



LCD Operation Interface

- · Supports 2 display styles.
- · Able to simultaneously display 6 sets of operational data.
- · Calendar support.
- · Offers both English and Chinese language interfaces.
- · Capable of storing 3 sets of parameters.
- · Supports shuttle settings.



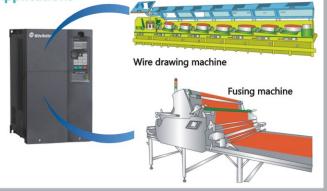
Isolated Air Channel

· Fan wind channels are sealed and isolated from the heat dissipation system and electrical parts. Dust will not be able to infiltrate the interior of the machine through the fans.



Supports Multiple Control Modes for Different Applications

- Built in position control, speed control, and tension control functions.
- Through I/O switching, multiple control functions can be applied to speed, torque, and position controls.
- Position control function supports home position return mode, zero servo control, and single-axis position control mode (Selective options: PG301C, PG301L, PG302L)
- Supports open-loop tension control, feeding disruption inspection, and automatic spool replacement functions.

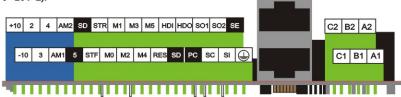




Product Features

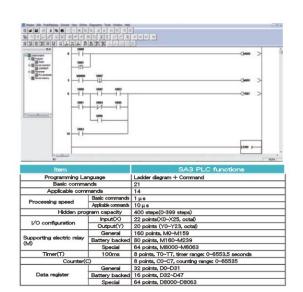
Multiple I/O Terminals

- · Includes 10 sets of multi-functional combinational logic input terminals (with high-speed pulse inputs *1)
- Includes 5 sets of multi-functional combinational output terminals (including electric relay output *2, transistor output *2, and high-speed pulse output *1).
- · Includes 3 sets of analog input signals (with -10~+10V*1 and 4~20mA/0~10V*2).
- · Includes 2 sets of analog output signals (0~20mA/0~10V*2).
- · 1 set of safety switch (S1~SC).



Built-in PLC Functions

Provides PLC programming software, easy for editing.
 Applicable for programming small number of points, and support multiple functions.



12 Sets of Alarm Records

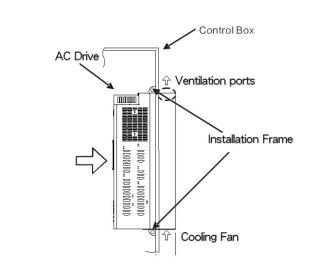
Complete alarm system for recording the output frequency, output current, output voltage, accumulated count of temperature increase, PN voltage, total AC drive operation time, AC drive operational status, alarm output time (only when used with PU301C)

Improved Protection

 Output phase failure protection, output short circuit protection, ground leakage protection, low voltage protection, motor overheating signal (PTC), and electrolytic capacitor life inspection.

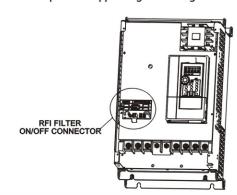
Through-the-wall Installation Support Provided for the Entire Series

· Improve heat dissipation, reduce heat generation within the cabinet, and improve protection for the cabinet contents.



SA3 All-Series Built-in RFI Filter

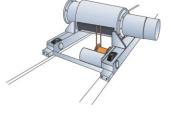
· RFI is capable of suppressing electromagnetic interference



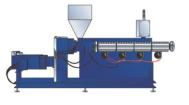
Applicable Industries



Air Compressor



Cranes



Extrusion Machine



Printing press

Textile Equipment

Electrical Specifications

		(0.9)			50			94150			200		17,000		100	162	1000		F805
		Frame			4			В		•	3		D				F	9	G
Мо	delSA:	3-023-□□□K□ -	0.75K 1.5KF	1.5K 2.2KF	2.2K 3.7KF	3.7K 5.5KF	5.5K 7.5KF	7.5K 11KF	11K 15KF	15K 18.5KF	18.5K 22KF	22K 30KF	30K 37KF	37K 45KF	45K 55KF	55K 75KF	75K 90KF	90K 110KF	110 132k
		Rated output capacity (kVA)	2	3.2	4.2	6.7	9.5	12.5	18.3	24.7	28.6	34.3	45.7	55	65	82	110	132	165
		Rated output current (A)	5	8	11	17.5	25	33	49	65	75	90	120	145	170	215	288	346	432
	HD	Applicable motor capacity (HP)	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	120	145
	טח	Applicable motor capacity (kW)	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110
		Overload current rating					150%	60 sec	onds 2	00% 3s	econds	(inverse	time cl	naracter	istics)				
0		Carrier frequency (kHz)					1~15	kHz							1~9	kHz			
Output		Rated output capacity (kVA)	3.2	4.2	6.7	9.5	12.5	18.3	24.7	28.6	34.3	45.7	55	65	82	110	132	165	193
7		Rated output current (A)	8	11	17.5	25	33	49	65	75	90	120	145	170	215	288	346	432	506
	ND	Applicable motor capacity (HP)	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	120	145	175
	IND	Applicable motor capacity (kW)	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132
		Overload current rating						120	% 60se	conds (i	nverse t	ime cha	aracteris	tics)					Ž.
		Carrier frequency (kHz)				1	L~15kH:	Z							1~9	kHz			
	Maximur	n output voltage							1	Three-p	hase 20	0-240V							
٦	Rated po	ower voltage							Three-	phase 2	00-240	√ 50Hz	/ 60Hz				1/22		
wer	Power vo	oltage permissible fluctuation							Three-	phase 1	70-264	√ 50Hz	/ 60Hz						
Power supply	Power fre	equency permissible fluctuation									±5%								
₹	Power so	ource capacity (kVA)	2.5	4.5	6.4	10	12	17	20	28	34	41	52	65	79	100	110	132	165
Co	oling ı	method	Self cooling							F	orced ai	ir coolin	g						
14/-	eight (ka)	3.15	3.15	3.15	3.15	6	6	6	10.6	10.6	33	33	33	42.7	42.7	56.5	89.28	90.2

Note: The test conditions of rated output current, rated output capacity and frequency converter inverter power consumption are: the carrier frequency (P.72) is at the set value; the frequency converter/inverter output voltage is at 220V; the output frequency is at 60Hz, and the ambient temperature is 40°C.



■ Electrical Specifications

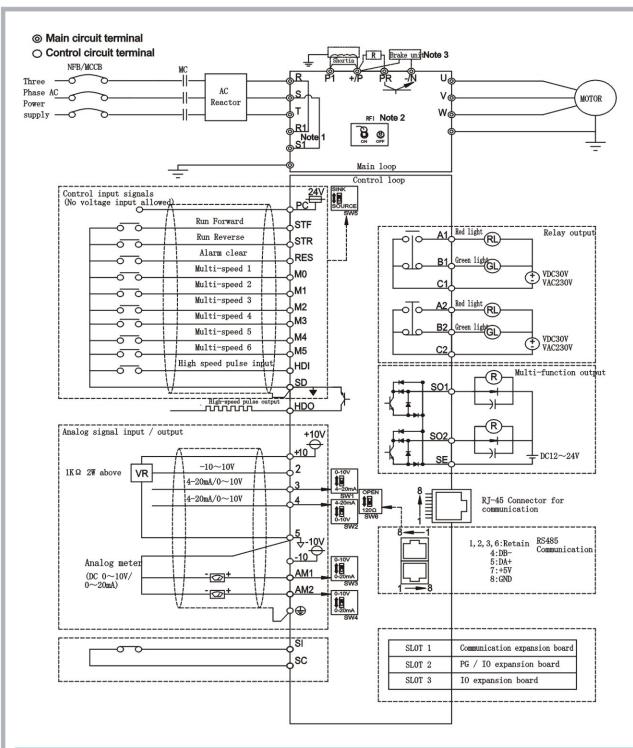
	5	Енама			Α				В			С		D
		Frame							No.				2011	-
Mod	el SA	3-043-□□□K □-	0.75K 1.5KF	1.5K 2.2KF	2.2K 3.7KF	3.7K 5.5KF	5.5K 7.5KF	7.5K 11KF	11K 15KF	15K 18.5KF	18.5K 22KF	22K 30KF	30K 37KF	37k 45K
		Rated output capacity (kVA)	2	3	4.6	6.9	10	14	18	25	29	34	46	56
		Rated output current (A)	3.0	4.2	6	9	12	17	24	32	38	45	60	73
	HD	Applicable motor capacity (HP)	1	2	3	5	7.5	10	15	20	25	30	40	50
	110	Applicable motor capacity (kW)	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37
		Overload current rating				150% 60 s	econds 20	00% 3seco	nds (invers	e time cha	aracteristics	5)		
0		Carrier frequency (kHz)						1 ~ 15kHz	:					1~9
Output		Rated output capacity (kVA)	3	4.6	6.9	10	14	18	25	29	34	46	56	69
7		Rated output current (A)	4.2	6	9	12	17	24	32	38	45	60	73	91
	ND	Applicable motor capacity (HP)	2	3	5	7.5	10	15	20	25	30	40	50	60
	ND	Applicable motor capacity (kW)	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45
		Overload current rating				12	20% 60sec	onds (inve	rse time cl	naracteristi	cs)			
		Carrier frequency (kHz)						1 ~ 15kHz	:					1~9
	Maximur	n output voltage					1	hree-phas	e 380-480	V				
Р	Rated po	wer voltage					Three-p	hase 380-	480V 50H	z / 60Hz				
Power supply	Power vo	oltage permissible fluctuation					Three-p	hase 342-	528V 50H	z / 60Hz				
dus	Power fre	equency permissible fluctuation						±!	5%					
₹	Power so	ource capacity (kVA)	2.5	4.5	6.9	10.4	11.5	16	20	27	32	41	52	65
	aalina	method	Self cooling					•	-			•		
C	OOIII IÇ		Jen cooling					For	ced air cod	oling				
	eight/		3.15	3.15	3.15	3.15	3.15	For 6	ced air cod	oling 6	9.8	9.8	9.8	33
	/eight	(kg)	,		3.15			6		6	110,000	9.8		
	/eight		3.15	D			Ē	6 F	6	6	G			Н
W	/eight	(kg) Frame 3-043-□□□K □-	,		3.15 75K 90KF			6		6	110,000	9.8 250K 280KF		H 315
W	/eight	(kg)	3.15 45K	D 55K	75K	90K	E 110K	6 F 132K	6 160K	6 185K	G 220K	250K	280K	H 315 355i
W	/eight	Frame 3-043K Rated output capacity (kVA) Rated output current (A)	3.15 45K 55KF	D 55K 75KF	75K 90KF	90K 110KF	110K 132KF	6 F 132K 160KF	160K 185KF	6 185K 220KF	220K 250KF	250K 280KF	280K 315KF	H 315 3551 493
W	/eight	Frame 3-043	3.15 45K 55KF 69	D 55K 75KF 84	75K 90KF 114	90K 110KF 137	110K 132KF 168	6 F 132K 160KF 198	160K 185KF 236	6 185K 220KF 295	220K 250KF 367	250K 280KF 402	280K 315KF 438	315 355 49 62
W	/eight	Frame 3-043K Rated output capacity (kVA) Rated output current (A)	3.15 45K 55KF 69 91	D 55K 75KF 84 110	75K 90KF 114 150	90K 110KF 137 180	110K 132KF 168 220	6 F 132K 160KF 198 260	160K 185KF 236 310	6 185K 220KF 295 340	220K 250KF 367 425	250K 280KF 402 480	280K 315KF 438 530	H 315 355 49 62 42
W	/eight	Frame 3-043	3.15 45K 55KF 69 91 60	D 55K 75KF 84 110 75	75K 90KF 114 150 100 75	90K 110KF 137 180 120 90	110K 132KF 168 220 150 110	6 F 132K 160KF 198 260 175 132	160K 185KF 236 310 215 160	6 185K 220KF 295 340 250 185	220K 250KF 367 425 300	250K 280KF 402 480 335 250	280K 315KF 438 530 375	H 315 355 49 62 42
W	/eight	Frame 3-043	3.15 45K 55KF 69 91 60	D 55K 75KF 84 110 75	75K 90KF 114 150 100 75	90K 110KF 137 180 120 90	110K 132KF 168 220 150 110 econds 20	6 F 132K 160KF 198 260 175 132	160K 185KF 236 310 215 160	6 185K 220KF 295 340 250 185	220K 250KF 367 425 300 220	250K 280KF 402 480 335 250	280K 315KF 438 530 375 280	H 315 3551 49 620 420
Mod	/eight	Frame 3-043	3.15 45K 55KF 69 91 60	D 55K 75KF 84 110 75	75K 90KF 114 150 100 75	90K 110KF 137 180 120 90	110K 132KF 168 220 150 110 econds 20	6 F 132K 160KF 198 260 175 132 132 132 132	160K 185KF 236 310 215 160	6 185K 220KF 295 340 250 185	220K 250KF 367 425 300 220	250K 280KF 402 480 335 250	280K 315KF 438 530 375 280	H 315 355 49 620 420 311
Mod	/eight	Frame 3-043	3.15 45K 55KF 69 91 60 45	55K 75KF 84 110 75 55	75K 90KF 114 150 100 75	90K 110KF 137 180 120 90 150% 60 s	110K 132KF 168 220 150 110 econds 20	132K 160KF 198 260 175 132 10% 3seco	160K 185KF 236 310 215 160 nds (invers	185K 220KF 295 340 250 185 e time cha	220K 250KF 367 425 300 220	250K 280KF 402 480 335 250	280K 315KF 438 530 375 280	H 315 355 49 62 42 31 6kHz 54
Mod	/eight	Frame 3-043	3.15 45K 55KF 69 91 60 45	55K 75KF 84 110 75 55	75K 90KF 114 150 100 75	90K 110KF 137 180 120 90 150% 60 s	110K 132KF 168 220 150 110 econds 20 1~9	6 F 132K 160KF 198 260 175 132 00% 3secon	160K 185KF 236 310 215 160 nds (invers	185K 220KF 295 340 250 185 et time cha	220K 250KF 367 425 300 220 aracteristics	250K 280KF 402 480 335 250	280K 315KF 438 530 375 280	H 315 355 49 62 42 31 6kHz 54 68
Mod	/eight	Frame 3-043-\Rightarrow K \Rightarrow - Rated output capacity (kVA) Rated output current (A) Applicable motor capacity (kW) Overload current rating Carrier frequency (kVA) Rated output capacity (kVA) Rated output capacity (kVA)	3.15 45K 55KF 69 91 60 45	55K 75KF 84 110 75 55	75K 90KF 114 150 100 75	90K 110KF 137 180 120 90 150% 60 s	110K 132KF 168 220 150 110 econds 20 1~9 198 260	132K 160KF 198 260 175 132 200% 3seco 0kHz 236 310	160K 185KF 236 310 215 160 ands (invers	185K 220KF 295 340 250 185 se time cha	220K 250KF 367 425 300 220 aracteristics 402 480	250K 280KF 402 480 335 250 s)	280K 315KF 438 530 375 280	H 315 355 49 620 420 31 6kHz 54 688 47
W	/eight	Frame 3-043-\Rightarrow K \Rightarrow - Rated output capacity (kVA) Rated output current (A) Applicable motor capacity (kW) Overload current rating Carrier frequency (kHz) Rated output capacity (kVA) Rated output current (A) Applicable motor capacity (HP)	3.15 45K 55KF 69 91 60 45 84 110 75	55K 75KF 84 110 75 55 114 150	75K 90KF 114 150 100 75 137 180	90K 110KF 137 180 120 90 150% 60 s 168 220 150	110K 132KF 168 220 150 110 econds 2C 1~9 198 260 175	132K 160KF 198 260 175 132 10% 3secon 0kHz 236 310 215	160K 185KF 236 310 215 160 nds (inversible) 295 340 250 185	185K 220KF 295 340 250 185 e time cha 367 425 300 220	220K 250KF 367 425 300 220 aracteristics 402 480 335 250	250K 280KF 402 480 335 250 5)	280K 315KF 438 530 375 280 1~ 491 620 420	H 315 3551 499 620 420 311 6kHz 544 683
W	/eight	Frame 3-043- K - Rated output capacity (kVA) Rated output current (A) Applicable motor capacity (kW) Overload current rating Carrier frequency (kHz) Rated output capacity (kVA) Rated output capacity (kVA) Rated output capacity (kVA) Applicable motor capacity (kW)	3.15 45K 55KF 69 91 60 45 84 110 75	55K 75KF 84 110 75 55 114 150	75K 90KF 114 150 100 75 137 180	90K 110KF 137 180 120 90 150% 60 s 168 220 150	110K 132KF 168 220 150 110 econds 20 1~9 260 175 132	132K 160KF 198 260 175 132 10% 3secon 0kHz 236 310 215	160K 185KF 236 310 215 160 nds (inversible) 295 340 250 185	185K 220KF 295 340 250 185 e time cha 367 425 300 220	220K 250KF 367 425 300 220 aracteristics 402 480 335 250	250K 280KF 402 480 335 250 5)	280K 315KF 438 530 375 280 1~ 491 620 420 315	H 315 355 493 620 420 319 6kHz 544 683 479
Mod	/eight	Frame 3-O43	3.15 45K 55KF 69 91 60 45 84 110 75	55K 75KF 84 110 75 55 114 150	75K 90KF 114 150 100 75 137 180	90K 110KF 137 180 120 90 150% 60 s 168 220 150	110K 132KF 168 220 150 110 econds 20 1~9 198 260 175 132 20% 60sec 1~9	132K 160KF 198 260 175 132 200% 3secon 0kHz 236 310 215 160 onds (inve	160K 185KF 236 310 215 160 nds (invers 295 340 250 185 rse time d	185K 220KF 295 340 250 185 se time cha 367 425 300 220	220K 250KF 367 425 300 220 aracteristics 402 480 335 250	250K 280KF 402 480 335 250 5)	280K 315KF 438 530 375 280 1~ 491 620 420 315	H 315 355i 49: 620 420 31! 6kHz 544 68: 479 35!
Mod	/eight lel SA: HD ND	Frame 3-043-\Rightarrow K \Rightarrow - Rated output capacity (kVA) Applicable motor capacity (kW) Applicable motor capacity (kW) Overload current rating Carrier frequency (kHz) Rated output capacity (kVA) Rated output capacity (kVA) Applicable motor capacity (kW) Overload current rating Carrier frequency (kHz)	3.15 45K 55KF 69 91 60 45 84 110 75	55K 75KF 84 110 75 55 114 150	75K 90KF 114 150 100 75 137 180	90K 110KF 137 180 120 90 150% 60 s 168 220 150	110K 132KF 168 220 150 110 econds 20 1~9 260 175 132 20% 60seo	132K 160KF 198 260 175 132 200% 3secon 18Hz 236 310 215 160 onds (inve	160K 185KF 236 310 215 160 nds (invers 295 340 250 185 rse time d	185K 220KF 295 340 250 185 e time cha 367 425 300 220 naracteristi	220K 250KF 367 425 300 220 aracteristics 402 480 335 250	250K 280KF 402 480 335 250 5)	280K 315KF 438 530 375 280 1~ 491 620 420 315	H 315 3551 49: 620 420 31: 6kHz 54: 68: 47: 35:
Mod	/eight lel SA: HD ND Maximur Rated po	Frame 3-043-	3.15 45K 55KF 69 91 60 45 84 110 75	55K 75KF 84 110 75 55 114 150	75K 90KF 114 150 100 75 137 180	90K 110KF 137 180 120 90 150% 60 s 168 220 150	110K 132KF 168 220 150 110 econds 20 1~9 198 260 175 132 20% 60sec 1~9	132K 160KF 198 260 175 132 10% 3secon 0kHz 236 310 215 160 onds (inve	160K 185KF 236 310 215 160 nds (inversional displayments) 295 340 250 185 rse time classification displayments	185K 220KF 295 340 250 185 e time cha 367 425 300 220 haracteristi	220K 250KF 367 425 300 220 aracteristics 402 480 335 250	250K 280KF 402 480 335 250 5)	280K 315KF 438 530 375 280 1~ 491 620 420 315	H 315 3551 49: 620 420 31: 6kHz 54: 68: 47: 35:
Mod	Aeight Aeight	Frame 3-043-	3.15 45K 55KF 69 91 60 45 84 110 75 55	55K 75KF 84 110 75 55 114 150	75K 90KF 114 150 100 75 137 180	90K 110KF 137 180 120 90 150% 60 s 168 220 150	110K 132KF 168 220 150 110 econds 20 1~9 198 260 175 132 20% 60sec 1~9	132K 160KF 198 260 175 132 00% 3secon 9kHz 236 310 215 160 onds (inversible) 9kHz Three-phass 380-shase 342-shase 34	160K 185KF 236 310 215 160 nds (inversional displayments) 295 340 250 185 rse time classification displayments	185K 220KF 295 340 250 185 e time cha 367 425 300 220 haracteristi	220K 250KF 367 425 300 220 aracteristics 402 480 335 250	250K 280KF 402 480 335 250 5)	280K 315KF 438 530 375 280 1~ 491 620 420 315	H 315 3551 49: 620 420 31: 6kHz 54: 68: 47: 35:
Mod Output Power supp	/eight lel SA: HD Maximur Rated po	Frame 3-O43	3.15 45K 55KF 69 91 60 45 84 110 75 55	55K 75KF 84 110 75 55 114 150	75K 90KF 114 150 100 75 137 180	90K 110KF 137 180 120 90 150% 60 s 168 220 150	110K 132KF 168 220 150 110 econds 20 1~9 198 260 175 132 20% 60sec 1~9	132K 160KF 198 260 175 132 00% 3secon 9kHz 236 310 215 160 onds (inversible) 9kHz Three-phass 380-shase 342-shase 34	160K 185KF 236 310 215 160 nds (invers 295 340 250 185 rse time d	185K 220KF 295 340 250 185 e time cha 367 425 300 220 haracteristi	220K 250KF 367 425 300 220 aracteristics 402 480 335 250	250K 280KF 402 480 335 250 5)	280K 315KF 438 530 375 280 1~ 491 620 420 315	H 315 3551 499 620 311 6kHz 544 683 475 355
Output Power supply	HD Maximur Rated po Power for Power so	Frame 3-043-	3.15 45K 55KF 69 91 60 45 84 110 75 55	55K 75KF 84 110 75 55 114 150 100 75	75K 90KF 114 150 100 75 137 180 120 90	90K 110KF 137 180 120 90 150% 60 s 168 220 150 110	110K 132KF 168 220 150 110 econds 2C 1~9 260 175 132 20% 60sec 1~9 Three-p	132K 160KF 198 260 175 132 10% 3secon 0kHz 236 310 215 160 onds (inversible Line) 160kHz 17hree-phass 160kHz 17hree-phass 160kHz 17hree-phass 160kHz	160K 185KF 236 310 215 160 nds (invers 295 340 250 185 rse time d	185K 220KF 295 340 250 185 e time cha 367 425 300 220 naracteristi	220K 250KF 367 425 300 220 aracteristics 402 480 335 250 cs)	250K 280KF 402 480 335 250 5) 438 530 375 280	280K 315KF 438 530 375 280 1~ 491 620 420 315	H 315 355i 49: 620 420 31! 6kHz 544 68: 479 35!

Note: The test conditions of rated output current, rated output capacity and frequency converter AC Drive power consumption are: the carrier frequency (P.72) is at the set value; the frequency converter/AC Drive output voltage is at 440V; the output frequency is at 60Hz, and the ambient temperature is 40° C.

Common Specifications

	Control met	thod	SVPWM control, V/F control, close-loop V/F control (VF+PG), general flux vector control, sensorless vector control (SVC), close-loop vector control (FOC+PG), torque control (TQC+PG).
Out	put frequenc	cy range	0~650.00Hz
	Digi	it setting	The resolution is 0.01Hz.
set	uency Itting Iution Anak	og setting	0.01Hz/60Hz (Terminal 2: -10~+10V/13bit) 0.015Hz/60Hz (Terminal 2: 0~±10V/12bit; Terminal 3: 0~10V, 4-20mA/12bit) 0.03Hz/60Hz (Terminals 2, 3; 0~5V/11bit) 0.06Hz/60Hz (Terminal 4: 0~10V, 4-20mA/10bit) 0.12Hz/60Hz (Terminal 4: 0~5V/9bit)
Ou	tput Dig	it setting	Maximum target frequency ±0.01%.
	uency uracy Anak	og setting	Maximum target frequency ±0.1%.
SĮ	peed control	range	IM: WhenSVC, 1:200; when FOC+PG, 1:1000. PM: When SVC,1:20; when FOC+PG, 1:1000.
	Start torqu	ue	150% 0.3Hz (SVC), 180% 0Hz (FOC+PG).
	V/F character	ristics	Constant torque curve, variable torque curve, five-point curve, VF separation
	leration / de		Linear acceleration /deceleration curve, S pattern acceleration /deceleration curve1 & 2 & 3
C	urve characte Driving mo	239	Induction motor (IM), permanent magnet motor (SPM and IPM)
Sta	Il current pro		The stalling protection level can be set to 0~400% (06-01(P.22)). The default value is 150%.
	get frequency		Parameter unit setting, DC 0~5V/10V signal, DC -10~+10V signal, DC 4~20 mA signal, multiple speed stage level setting, communication setting, HDI setting.
	PID contr	lo	Please refer to 08-00~08-01、08-04~08-14 / P.170~P.182 in chapter 4.
E	Built-in simple	e PLC	Supports 21 basic instructions and 14 application instructions, including PC editing software;
Operati	Opera monito		Output frequency, output current, output voltage, PN voltage, output torque, electronic thermal accumulatio rate, temperature rising accumulation rate, output power, Analog value input signal, digital input and output terminal status; alarm history 12 groups at most, the last group of alarm message is recorded.
Operation panel	LED indic lamp (55555555555555	Forward rotation indication lamp, reverse rotation indication lamp, frequency monitoring indication lamp, voltage monitoring indication lamp, current monitoring indication lamp, NET indication lamp, PU controlindication lamp, EXT indication lamp, PLC indication lamp and MON monitoring indication lamp.
Com	nmunication	functions	RS-485 communication, can select Shihlin/Modbus communication protocol, communication speed38400bp or below, built-in CanOpenprotocol(SA3-CP301 expanded board can be optional), double RJ-45 connectors (the connector can also be connected to parameter unit)
Pro	tection mecl alarm funct		Output short circuit protection, Over-current protection, over-voltage protection, under-voltage protection, motor over-heat protection (06-00(P9)), IGBT module over-heat protection, communication abnormality protection, PTC temperature protection etc, electrolytic capacitor overheat, input and output phase failure, to-earth (ground) leakage currents protection, circuit error detection
	Ambient ten	mperature	Over load : -10 \sim +50°C (non-freezing) , Light load : -10 \sim +40°C (non-freezing), please refer to 3.4.5 Class of protection and operation temperature for details.
	Ambient h		Below 90%Rh (non-condensing).
	Storage terr	-	-20~ +65℃
<u>F</u> .	Surroun		Indoors, no corrosive gases, no flammable gas, no flammable powder.
Environment	Altitu	ıde	Altitude below 3000 meters,when altitude is above 1,000 m,derate the rated current 2% per 100 m Note 1: according to the safety of CE certification to meet specification EN61800-5-1, this series of frequency converter, using at an altitude of less than 3000 m, can be installed under the environment that could satisfy the requirement of the overvoltage level II, while using at an altitude of less than 2000 m, can be installed in conditions that could satisfy the requirement of overvoltage level III worse environment.
	Vibrati	ions	Vibration below 5.9m/s ² (0.6G).
	Grade of pi	rotection	Frame A, B, C, IP20 / NEMA TYPE 1, Frame D and above IP00 / UL OPEN TYPE(IP20 option can be selected).
	The degreenvironmenta	ree of	2
-	Class of pr		Class I
	mational cer		CE

Wiring Diagram

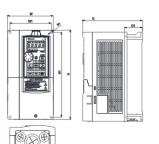


NOTE

- 1. R1, S1 terminal is only D ~ H framework, specific wiring please refer to the section 3.7.5.
- 2. RFI filter Settings, please refer to section 3.7.4.
- 3. The brake resistor connection approach between +/P and PR is for Frame A, B and C only. For connecting the brake unit of Frame D, E, F, G and H to between +/P and -/N, please refer to the Section 3.7.1 for details.
- 4. The DC resistor between +/P and P1 is optional. Please short +/P and P1 when AC resistor is not used.
- 5. When adding DC reactors, please remove the short circuit piece between P1 and +/P. Please refer to the Section 3.6.4 for the reactor type.
- 6. Please refer to the Section 5.3.9 for wiring of HDO.

Dimensions

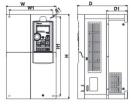
Frame A



900

Frame A								
Model type	W (mm)	W1 (mm)	H (mm)	H1 (mm)	D (mm)	D1 (mm)	S1 (mm)	S2 (mm)
SA3-043-0.75K/1.5KF								
SA3-043-1.5K/2.2KF]							
SA3-043-2.2K/3.7KF]							
SA3-043-3.7K/5.5KF]							
SA3-043-5.5K/7.5KF	130.0	116.0	250.0	236.0	170.0	51.3	6.2	6.2
SA3-023-0.75K/1.5KF	1							
SA3-023-1.5K/2.2KF	1							
SA3-023-2.2K/3.7KF	1							
SA3-023-3.7K/5.5KF	1							

Frame B

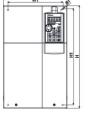


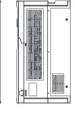




Frame B								
Model type	W (mm)	W1 (mm)	H (mm)	H1 (mm)	D (mm)	D1 (mm)	S1 (mm)	S2 (mm)
SA3-043-7.5K/11KF								
SA3-043-11K/15KF]							
SA3-043-15K/18.5KF	190.0	173.0	320.0	303.0	190.0	80.5	8.5	8.5
SA3-023-5.5K/7.5KF	190.0	1/3.0	320.0	303.0	190.0	60.5	0.5	8.5
SA3-023-7.5K/11KF	1							
SA3-023-11K/15KF	1							







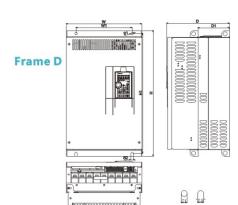




Frame C								
Model type	W (mm)	W1 (mm)	H (mm)	H1 (mm)	D (mm)	D1 (mm)	S1 (mm)	S2 (mm)
SA3-043-18.5K/22KF								
SA3-043-22K/30KF								
SA3-043-30K/37KF	250.0	231.0	400.0	381.0	210.0	89.5	8.5	8.5
SA3-023-15K/18.5KF						1.000000000		29 29 3
SA3-023-18.5K/22KF								

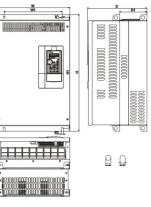
SA3 s

Dimensions



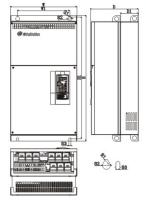
Frame D								
Model type	W (mm)	W1 (mm)	H (mm)	H1 (mm)	D (mm)	D1 (mm)	S1 (mm)	S2 (mm)
SA3-043-37K/45KF								
SA3-043-45K/55KF								
SA3-043-55K/75KF								
SA3-043-75K/90KF	330.0	245.0	550.0	525.0	275.0	137.5	11.0	11.0
SA3-023-22K/30KF								
SA3-023-30K/37KF	1							
SA3-023-37K/45KF								

Frame E



	W	W1	н	H1	D	D1	S1	S2
Model type	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm
SA3-043-90K/110KF								
SA3-043-110K/132KF	370.0	295.0	589.0	560.0	300.0	137.5	11.0	11.0
SA3-023-45K/55KF	370.0	295.0	569.0	360.0	300.0	137.3	11.0	11.0
SA3-023-55K/75KF								

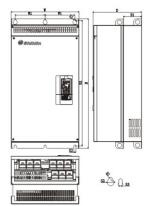
Frame F



Frame F									
Model type	W (mm)	W1 (mm)	H (mm)	H1 (mm)	D (mm)	D1 (mm)	S1 (mm)	S2 (mm)	S3 (mm)
SA3-043-132K/160KF	420.0	340.0	800 O	770.0	300.0	1/55	120	25.0	13.0
SA3-023-75K/90KF	420.0	340.0	800.0	770.0	300.0	143.3	13.0	23.0	13.0

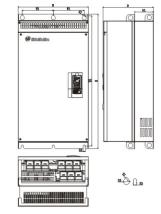
Dimensions

Frame G



Model type	(mm)	W1 (mm)	H (mm)	H1 (mm)	D (mm)	D1 (mm)	S1 (mm)	S2 (mm)	S3 (mm)
SA3-043-160K/185KF									
SA3-043-185K/220KF	E00.0	1000	870.0	950.0	260.0	1500	13.0	25.0	13.0
SA3-043-220K/250KF	500.0	180.0	870.0	850.0	360.0	150.0	13.0	25.0	13.0
SA3-043-250K/280KF									
SA3-023-90K/110KF									
SA3-023-110K/132KF	1								ĺ

Frame H

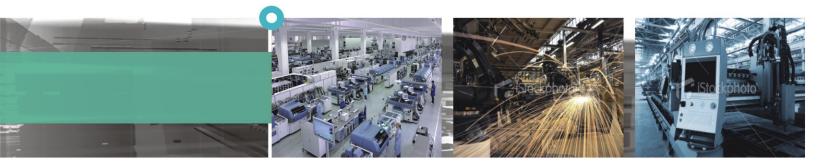


Frame H										
Model type	W (mm)	W1 (mm)	H (mm)	H1 (mm)	D (mm)	D1 (mm)	S1 (mm)	S2 (mm)	S3 (mm)	
SA3-043-280K/315KF SA3-043-315K/355KF	600.0	230.0	1000.0	980.0	400.0	181.5	13.0	25.0	13.0	

SE3 Series

High Performance Vector Control AC Drive





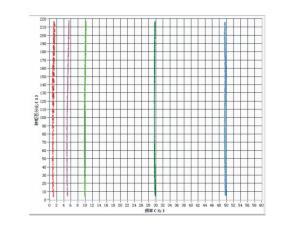
Product Range

Mo	odel	KW (HP)	0.4 (0.5)	0.75 (1)	1.5 (2)	2.2 (3)	3.7 (5)	5.5 (7.5)	7.5 (10)	11 (15)	15 (20)	18.5 (25)	22 (30)
	021	1-Phase 220V											
SE3	023	3-Phase 220V											
	043	3-Phase 440V											

Product Features

High Performance Vector Control Technology

· High starting torque: Sensorless vector control (SVC)200% 0.5Hz,and closed-loop vector control (FOC + PG) 180% 0Hz.



High output frequency 0~1500Hz

Support high speed spindle function, which can be applied to complicated and precise machining process. The application includes high-speed drilling machine, engraving machine, centrifuge equipment.



High Performance Synchronous Motor Control Technology

· Supports induction motor (IM) and synchronous motor (IPM and SPM) control.



Support multiple high-speed bus connections

 $\cdot \mbox{ Equipped with high-speed communications:} \mbox{CANopen} \ \mbox{ Profibus}, \\ \mbox{ DeviceNet} \ \mbox{ EtherCAT} \ \mbox{ MODBUS TCP}; \\$



High Performance Vector Control AC Drive

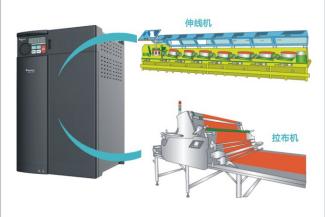
Product Features

Supports Multiple Control Modes for Different Applications

Built in position control, speed control, and tension control functions.

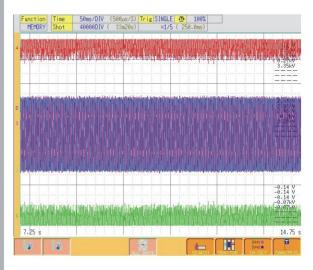
Through IO switching, multiple control functions can be applied to speed, torque, and position controls.

Position control function supports home position return mode, zero servo control, and Pr/Pt modes. (Selective options: PG301C, PG301L, PG302L)A



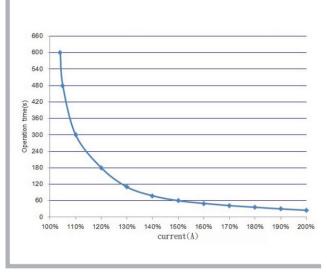
Low-noise Carrier Wave Control (Soft-PWM)

- \cdot Motor noise is controlled so that the metallic sound is transformed into a more pleasing buzz.
- Low noise operations to reduce the interference exerted upon external radio frequencies



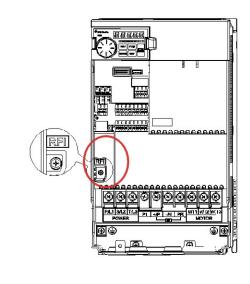
High Overload Capacity

· Significantly improved overload capacity to 150% for 60 seconds and 200% for 3 seconds, making it suitable for tooling machinery applications that requires the ability to handle sudden load changes.



RFI filter has been built in all the products

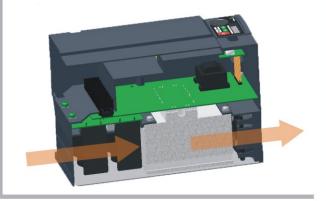
 \cdot Built in RFI filter in SE3 series, which reduces electromagnetic interference effectively.



Product Features

Isolated Air Channel

· Fan wind channels are sealed and isolated from the heat dissipation system and electrical parts. Dust will not be able to infiltrate the interior of the machine through the fans.



Protection System Improvement

 Output phase failure protection, Over-current protection, overvoltage protection, under-voltage protection, motor over-heat protection, IGBT module over-heat protection, communication abnormality protection.

Parameter	Name	Factory Value	Setting Range	Content
06-18	Short circuit	0	0	No Short circuit detection when starting
P.280	when starting	U	1	Short circuit detection when starting
06-19 P.282	Short circuit detection when in the operation	50.0%	0~100.0%	

(Above : Short circuit protection , Control the startor end of the short circuit detection and set the detection level.)

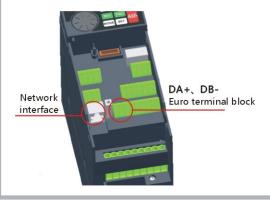
LED Operation Interface

- 1. 5 Digit LED display
- 2. 7 Digit LED display light
- 3. Subsided shuttle knob
- 4. Easy for operation



Easy for communication wiring

· Standard RJ45 network and DA+, DB EU terminals are equipped, which allows communication wiring by multiple devices.



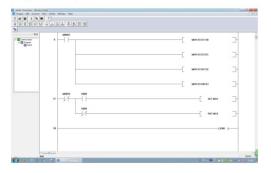
12 Sets of Alarm Records

Complete alarm system for recording the output frequency, output current, output voltage, accumulated count of temperature increase, PN voltage, total AC drive operation time, AC drive operational status, alarm output time. A total of 12 alarm code, 12 groups of alarm code.

P.288	06-40	Alarm code query	0~12	0	176
P.289	06-41	Alarm code display	Read	Read	176
P.290	06-42	Alarm code query	0~10	0	176
P.291	06-43	Alarm code display	Read	Read	176

Built-in PLC Functions

- · Provides PLC programming software, easy for editing.
- Applicable for programming small number of points, and support multiple functions.



SE3

Product Features

Parameter grouping, easy for debug

· Parameter grouping, easy for debug

Parameter NO.	Parameter Name	Setting Range	Factory	User setting
P.60	2-5filter time	0~2000ms	30ms	
P.139	The bias rate og 2-5 voltage signal	0~100.0%	0	
P.192	The minimum input positive voltage of 2-5	0~10.00V	0	
P.193	The maximum input positive voltage of 2-5	0~10.00V	10.00V	
P.194	The percentage corresponding to the The minimum input positive voltage of terminal 2-5	-100.0%~100.0%	0%	
P.195	The percentage corresponding to the The maximum input positive voltage of terminal 2-5	-100.0%~100.0%	100.0%	
	P.60 P.139 P.192 P.193 P.194	Parameter Name P.60 2-5filter time P.139 The bias rate og 2-5 voltage signal P.192 The minimum input positive voltage of 2-5 P.193 The maximum input positive voltage of 2-5 P.194 The percentage corresponding to the The minimum input positive voltage of terminal 2-5 The percentage corresponding to the The maximum	Parameter Name Parameter Name P.60 2-5filter time 0~2000ms P.139 The bias rate og 2-5 voltage signal 0~100.0% P.192 The minimum input positive voltage of 2-5 0~10.00V P.193 The maximum input positive voltage of 2-5 0~10.00V P.194 The percentage corresponding to the The minimum input positive voltage of terminal 2-5 The percentage corresponding to the The maximum 100.0% 100.0%	Parameter Name Parameter Name Parameter Name P.60 2-5filter time 0~2000ms 30ms P.139 The bias rate og 2-5 voltage signal 0~100.0% 0 P.192 The minimum input positive voltage of 2-5 P.193 The maximum input positive voltage of 2-5 P.194 The percentage corresponding to the The minimum input positive voltage of terminal 2-5 P.195 The percentage corresponding to the The maximum Too.0%~100.0% 100.0%

- Previous design: It is inconvenient for set up while parameters are not in order.
- SE3 model: After grouping relative functions, it is easier for set up.

Easy to disassemble the fan

- · The fan design of AC drive is on the top of SE3 which can reduce dusts effectively.
- The screwless wiring will not affect daily maintenance of the fan.





Applicable Industries



Air Compressor



Injection molding machine



Toolroom machine



Engraving Machine



PCB High speed drilling Machine



Centrifugal Machine

Electrical Specifications

	Frame	A	\	В						
Mod	elSE3-021-【】- xy	0.4K	0.75K	1.5K	2.2K					
	Rated output capacity (kVA)	1	1.5	3.2	4.2					
	Rated outputcurrent (A)	2.7	4.5	8	11					
Ι.	Applicable motor capacity (HP)	0.5	1	2	3					
'	Applicable motor capacity (kW)	0.4	0.75	1.5						
Overload current rating		150	150% 60 seconds 200% 3seconds (inverse time characteristics)							
	Carrier frequency (kHz)		1~1	5KHz						
ind	Rated outputcapacity (kVA)	1.2	2	3.4	4.8					
	Rated outputcurrent (A)	3	5	8.5	12.5					
Ι,	Applicable motor capacity (HP)	0.5	1	2	3					
"	Applicable motor capacity (kW)	0.4	0.75	1.5	2.2					
	Overload current rating		120% 60seconds (inve	erse time characteristics)						
	Carrier frequency (kHz)		1~1	5KHz						
M	axim um output voltage		Three-phas	e 200-240V						
Ra	ated power voltage		One-phase 200-2	40V 50Hz / 60Hz						
Ra Po	ower voltage permissiblefluctuation		One -phase 170-2	64V 50Hz / 60Hz						
	ower frequency permissible fluctuation		±!	5%						
Po	ower source capacity (kVA)	1.5	2.5	4.5	6.9					
Cooli	ng method	Self cooling		Forced air cooling						
Invert	ter weight (kg)	1.0	1.0	1.5	1.5					

		Frame		Α			3	()		
М	odelSI	E3-023-【】- xy	0.4K	0.75K	1.5K	2.2K	3.7 K	5.5 K	7.5K	11K	15K		
		Rated output capacity (kVA)	1.2	2	3.2	4.2	6.7	9.5	12.5	18.3	24.7		
		Rated outputcurrent (A)	3	5	8	11	17.5	25	33	49	65		
	HD	Applicable motor capacity (HP)	0.5	1	2	3	5	7.5	10	15	20		
	""	Applicable motor capacity (kW)	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15		
		Overload current rating			150% 60 sec	onds 200%	3 seconds (in	verse time ch	aracteristics)				
=		Carrier frequency (kHz)					1~15KHz						
Output		Rated outputcapacity (kVA)	1.3	2.1	3.4	4.8	7.4	10.3	13.7	19.4	26.3		
0	ND	Rated outputcurrent (A)	3.2	5.5	8.5	12.5	19.5	27	36	51	69		
		Applicable motor capacity (HP)	0.5	1	2	3	5	7.5	10	15	20		
	IND	Applicable motor capacity (kW)	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15		
		Overload current rating		120% 60seconds 150% 3seconds (inverse time characteristics)									
		Carrier frequency (kHz)		1~15KHz									
	Maxim u	ım output voltage				Thre	e-phase 200-	240V					
ply	Rated p	ower voltage				Three-phase	200-240V	50Hz / 60Hz					
supply	Power v	oltage permissiblefluctuation				Three-phase	= 170-264V	50Hz / 60Hz					
Power	Power fr	requency permissible fluctuation		20			±5%	2			26		
- g	Power s	ource capacity (kVA)	1.5	2.5	4.5	6.4	10	12	17	20	28		
Со	oling	method				Fo	rced air cooli	ng					
Inv	erter	weight (kg)	1.0	1.0	1.0	1.5	1.5	4.0	4.1	5.7	5.8		

Note:The test conditions of rated output current, rated output capacity and frequency converter inverter power consumption are: the carrier frequency (P.72) is at the set value; the frequency converter/inverter output voltage is at 220V; the output frequency is at 60Hz, and the ambient temperature is 40°C.

Electrical Specifications

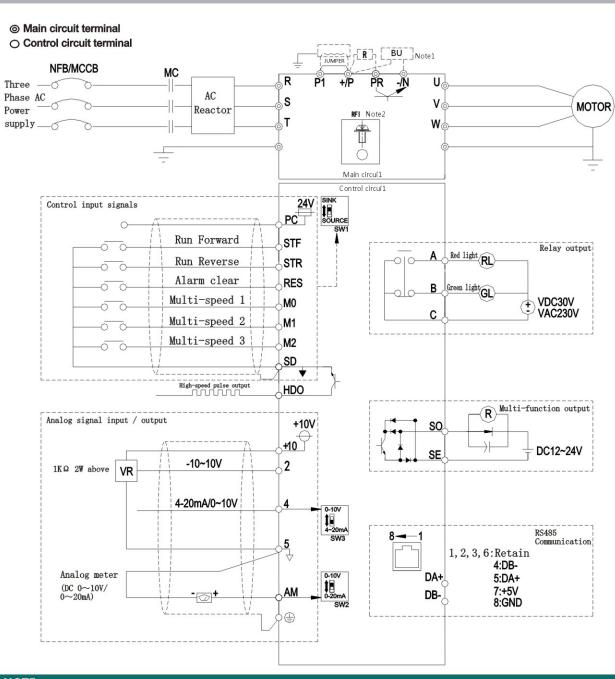
	44	0V series thr	ee-phase	е										
		Frame		Α			3		С			D		
Мс	delS	E3-043-【】- xy	0.4K	0.75K	1.5K	2.2K	3.7 K	5.5 K	7.5 K	11 K	15K	18.5K	22K	
		Rated output capacity (kVA)	1	2	3	4.6	6.9	10	14	18	25	29	34	
		Rated outputcurrent (A)	1.5	2.7	4.2	6	9	12	17	24	32	38	45	
	HD	Applicable motor capacity (HP)	0.5	1	2	3	5	7.5	10	15	20	25	30	
	טח	Applicable motor capacity (kW)	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	
		Overload current rating			150%	60 secon	ds 200% 3	seconds (i	nverse time	character	istics)			
+		Carrier frequency (kHz)						1~15KHz						
Output		Rated outputcapacity (kVA)	1.4	2.3	3.5	5	8	12	15.6	21.3	27.4	31.6	37.3	
ō		Rated outputcurrent (A)	1.8	3	4.6	6.5	10.5	15.7	20.5	28	36	41.5	49	
		Applicable motor capacity (HP)	0.5	1	2	3	5	7.5	10	15	20	25	30	
	ND	Applicable motor capacity (kW)	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	
		Overload current rating 120% 60seconds (inverse time characteristics)												
		Carrier frequency (kHz)						1 ~ 15KHz					10	
	Maximu	m output voltage					Three	phase 380	-480V					
ylc	Rated po	ower voltag e				Th	ree-phase	380-480V	50Hz / 60	Hz				
ldns	Power vo	oltag e permissib lefluctuation				Th	ree-phase	323-528V	50Hz / 60	Hz				
Power supply	Power fr	equency permissible fluctuation				±5%								
Po	Power source capacity (kVA) 1.5 2.5 4.5					6.9	10.4	11.5	16	20	27	32	41	
Co	oling ı	method	Self cooling					Forced a	ir cooling					
Inv	erter \	weight (kg)	1.0	1.0	1.0	1.5	1.5	3.9	4.0	4.0	5.7	5.8	5.8	

Note:The test conditions of rated output current, rated output capacity and frequency converter inverter power consumption are: the carrier frequency (P.72) is at the set value; the frequency converter/inverter output voltage is at 440V; the output frequency is at 60Hz, and the ambient temperature is 40℃.

Common Specifications

Control r	nethod	SVPWM control, V/F control, close-loop V/F control (VF+PG), general flux vector control, sensorless vector control (SVC), close-loop vector control (FOC+PG), torque control (TQC+PG).							
Output fr	requency range	0~1500.00Hz							
	Digital setting	The resolution is 0.01Hz.							
Frequent setting resolutio	1	0.01Hz/60Hz(terminal 2: -10 ~ +10V / 13bit) 0.15Hz/60Hz(terminal 2: 0 ~ ±10V / 12bit) 0.03Hz/60Hz(terminal 2: 0 ~ 5V / 11bit) 0.06Hz/60Hz(terminal 4: 0~10V, 4-20mA / 12bit) 0.12Hz/60Hz(terminal 4: 0 ~ 5V / 11bit)							
Output	Digital setting	Maximum target frequency±0.01%.							
frequency accuracy		Maximum target frequency±0.1%.							
Speed co	ontrol range	IM: WhenSVC, 1:200; when FOC+PG, 1:1000. PM: When SVC, 1:20; when FOC+PG, 1:1000.							
Start tord	que	200% 0.5 Hz							
V/Fchara	cteristics	Constant torque curve, variable torquecurve, five-point curve, VF separation							
Accelerati	on / deceleration curve characteristics	Linear acceleration /deceleration curve, S pattern acceleration /deceleration curve							
Drive mo	otor	Induction motor(IM), permanent magnet motor(SPM, IPM)							
Stalling p	protection	The stalling protection level can be set to 0~250%							
Target fre	equency setting	Parameter unit setting, DC $0\sim5V/10V$ signal, DC $-10\sim+10V$ signal, DC $4\sim20$ mA signal, multiple speed stage level setting, communication setting, HDI setting.							
PID conti	rol	Please refer to parameter description							
Built-in s	imple PLC	Supports 21 basic instructions and 14 application instructions, including PC editing software;							
Parameter unit	eration monitoring	Output frequency, output current, output voltage, PN voltage, output torque, electronic thermal accumulation rate, temperature rising accumulation rate, output power, Analog value input signal, digital input and output terminal status; alarm signal and alarm history 12 groups at most							
Parame	indication lamp (7)	Forward rotation indication lamp, reverse rotation indication lamp, frequency monitoring indication lamp, mode switch lindication lamp ,PUcontro lindication lamp, PLCindication lamp andwork lindication lamp							
Commun	nication function	Built-in Shihlin/Modbus communication protocol, can select MODBUS TCP , CANopen、Profibus、 DeviceNet、EtherCAT,high speed card							
Protectio	n mechanism / alarm function	Output short circuit protection, Over-current protection, over-voltage protection, under-voltage protection, motor over-heat protection, IGBT module over-heat protection, communication abnormality protection,							
Am	bient temperature	Heavy load : $-10 \sim +50^{\circ}$ C (non-freezing) , Light load : $-10 \sim +40^{\circ}$ C (non-freezing), please refer to 3.4.2 Class of protection and operation temperature for details.							
Am	bient humidity	Below 90%Rh (non-condensing).							
Sto	rage temperature	-20 ~ +65°C.							
t Sur	rounding environment	Indoor, no corrosive gas, no flammable gas, no flammable powder.							
Alti Nionment Alti	tude	Altitude below 2000 meters, when altitude is above 1,000 m, derate the rated current 2% per 100 m							
Vib	ration	Vibration below 5.9m/s2 (0.6G).							
Gra	de of protection	IP20							
The	degree of environmental pollution	2							
Cla	ss of protection	Class I							
Internation	onal certification	CE							

Wiring Diagram

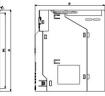


NOTE

- 1. Please refer to the Section 5.4.1 for the applications of external thermal overload relay.
- 2. Make sure that 10, SD, SE, 5 and PC are not shorted each other.
- 3. The DC reactor between +/P and P1 is optional. Please short +/P and P1 when DC reactor is not used.
- 4. For connecting the brake unit of Frame C and D to between +/P and -/N, please refer to the Section 3.7.1 for details.
- 5.When frame C and D adding DC reactors, please remove the short circuit piece between P1 and +/P. Please refer to the Section 3.6.4 for the reactor type.
- 6. Please refer to the Section 5.3.9 for wiring of HDO.

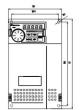
Dimensions

Frame A





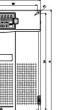
Frame B

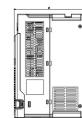






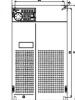














单位:mm

SE3-021-0.4~0.75K

Frame A						
Model type	W (mm)	W1 (mm)	H (mm)	H1 (mm)	D (mm)	S1 (mm)
SE3-043-0.4~1.5K						
SE3-023-0.4~1.5K	62.0	74.0	167.0	155.0	144.0	5.2

Frame B						
Model type	W (mm)	W1 (mm)	H (mm)	H1 (mm)	D (mm)	S1 (mm)
SE3-043-2.2~3.7K						
SE3-023-2.2~3.7K	105.0	93.0	178.0	166.0	146.0	5.2
SE3-021-1.5~2.2K						

Frame C						
Model type	W (mm)	W1 (mm)	H (mm)	H1 (mm)	D (mm)	S1 (mm)
SE3-043-5.5~11K	141.0	123.6	270.0	252.6	185.0	6.5
SE3-023-5.5~7.5K	141.0	123.6	270.0	232.6	165.0	0.5

Frame D						
Model type	W (mm)	W1 (mm)	H (mm)	H1 (mm)	D (mm)	S1 (mm)
SE3-043-15~22K	175.0	156.4	300.0	281.4	191.8	6.2
SE3-023-11~15K	1/5.0	156.4	300.0	201.4	191.6	6.2

SC3 Series Compact AC Drive



Product Range

М	odel	KW (HP)	0.2 (0.25)	0.4 (0.5)	0.75 (1)	1.5 (2)	2.2 (3)	3.7 (5)	5.5 (7.5)
	021	1-phase 220V							
SC3	023	3-phase 220V							
	043	3-phase 440V							

Main Features

- * Frequency output: 0 ~ 650Hz
- * Starting torque: 180%/3Hz
- * Reasonable abosorb circuit and element match, and effectively decrease the low induction voltage by 50%.
- * Built-in RFI filter
- * Excellent vibration resistant ability
- * Reduce 20% low-frequency noise comparing with SS2
- * Easy to operate with optimized knob

Applications





Band-sawing Machine







Pressure Fan

Noodle Machine

Slicer

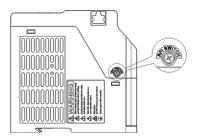


SC3 Ser

Product Features

RFI filter has been built in all the products

· Built in RFI filter in SE3 series, which controls electromagnetic interference effectively.



Note: For conforming to the CE specifications, please refer to the operation manual to finish the installation and distribtion.

Easy to install -- wiring communication

- · Easy to connect the operator
- · Convenient for multi-machine wiring communication



Note: Pulling operator can not be used at the same time with RS485.

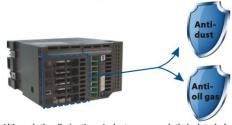
Update the operability of Jog dial

 Update the structure of Jog dial: The jog dial do not protrude from the surface of the product, It is difficult to demage and is easy to manipulate during quick spinning adjusting.



Coating& Isolated air duct

- · Each circuit board has with insulating liquids coatings.
- Dissipation air duct was completly isolated, which forces the air current only flows through the surface of the radiator, and will not blow dust and oil gas into the inverter.



Note: Although the dissipation air duct was completly isolated, dust and oil gas would still blow into the converter with natural air current if the converter was installed in a heavy dust and oil gas environment without any protection for a long time.

Easy to disassemble the fan.

- The fan design of AC drive is on the top of SC3 which can reduce dusts effectively.
- The screwless wiring will not affect daily maintenance of the fan.



Parameter grouped - easier to debug

Parameter Group	Parameter NO.	Parameter Name	Setting Range	Factory	
01-00	P.1	Upper limit frequency	0~120.00Hz	120.00Hz	
01-01	-01 P.2 Lower limit frequency 0 ~ 120.00Hz		0Hz		
01-02	P.18	High speed upper limit frequency	120.00 ~ 650.00Hz	120.00Hz	
01-03	P.3	Base	50Hz System set : 0 ~ 650.00Hz	50Hz	
01-03	P.3	frequency	60Hz System set : 0 ~ 650.00Hz	60Hz	
01-04 P19		Base	0~1000.0V	99999	
01-04	F.19	Voltage	99999 : Change with input voltage		

 Previous Product: Parameter numbers were not in order and it was difficult to set.

 SC3 system: Similar functions were put in the same group, which make it easier to set.

Electrical Specifications

22	OV Series single-phase								
	Frame		Α		В				
N	ModelS SC3-021-□□□K-□□	0.2	0.4	0.75	1.5	2.2			
	Rated output capacity (kVA)	0.6	1	1.5	2.5	4.2			
	Rated output current (A)	1.8	2.7	4.5	8	11			
0	Applicable motor capacity (HP)	0.25	0.5	1	2	3			
Output	Applicable motor capacity (kW)	0.2	0.4	0.75	1.5	2.2			
≒	Overload current rating	150% 60seconds 200% 1second (inverse time characteristics)							
	Carrier frequency (kHz)	1~15kHz							
	Maximum output voltage	Three-phase 200-240V							
Ро	Rated power voltage	Single-phase 200-240V 50Hz / 60Hz							
Power supply	Power voltage permissible fluctuation		Sing	le-phase 170-	264V 50Hz / 60Hz				
ldns	Power frequency permissible fluctuation			±5	5%				
상	Power source capacity (kVA)	0.75	1.5	2.5	3.5	6.4			
	Cooling method	Self cooling		F	orced air cooling	·			
	Weight (kg)	0.66	0.68	0.73	1.38	1.4			

22	0V Series three-phase									
	Frame			Ą		В				
N	1odelS SC3-023-□□□K- □□	0.2	0.4	0.75	1.5	2.2	3.7			
	Rated output capacity (kVA)	0.6	1.2	2	3.2	4.2	6.7			
	Rated output current (A)	1.8	3	5	8	11	17.5			
0	Applicable motor capacity (HP)	0.25	0.5	1	2	3	5			
Output	Applicable motor capacity (kW)	0.2	0.4	0.75	1.5	2.2	3.7			
≒	Overload current rating	150% 60seconds 200% 1second (inverse time characteristics)								
	Carrier frequency (kHz)	1~15kHz								
	Maximum output voltage	Three-phase 200-240V								
Ро	Rated power voltage		Thr	ee-phase 200-2	240V 50Hz/6	50Hz				
Power supply	Power voltage permissible fluctuation	Three-phase 170-264V 50Hz / 60Hz								
ldns	Power frequency permissible fluctuation			±5	5%					
황	Power source capacity (kVA)	0.75	1.5	2.5	4.5	6.4	10			
	Cooling method	Self cooling Forced air cooling								
	Weight (kg)	0.69	0.69	0.70	0.73	1.32	1.4			

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Electrical Specifications

OV Series three-phase									
Frame		Α		В					
1odelS SC3-043-□□□K- □□	0.4	0.75	1.5	2.2	3.7	5.5			
Rated output capacity (kVA)	1	2	3	4.6	6.9	9.2			
Rated output current (A)	1.5	2.6	4.2	6	9	12			
Applicable motor capacity (HP)	0.5	1	2	3	5	7.5			
Applicable motor capacity (kW)	0.4 0.75	0.75	1.5	2.2	3.7	5.5			
Overload current rating	150% 60seconds 200% 1second (inverse time characteristics)								
Carrier frequency (kHz)	1~15kHz								
Maximum output voltage	Three-phase 380-480V								
Rated power voltage	Three-phase 380-480V 50Hz / 60Hz								
Power voltage permissible fluctuation	Three-phase 323-528V 50Hz / 60Hz								
Power voltage Power voltage Power frequency permissible fluctuation Power frequency permissible fluctuation ±5%									
Power source capacity (kVA)	1.5	2.5	4.5	6.9	10.4	11.5			
Cooling method	Self cooling Forced air cooling								
Weight (kg)	0.74	0.74	0.81	1.37	1.37	1.42			
	Rated output capacity (kVA) Rated output current (A) Applicable motor capacity (HP) Applicable motor capacity (kW) Overload current rating Carrier frequency (kHz) Maximum output voltage Rated power voltage Power voltage permissible fluctuation Power frequency permissible fluctuation Power source capacity (kVA) Cooling method	Frame **ModelS SC3-043-□□K-□□ 0.4 Rated output capacity (kVA) 1 Rated output current (A) 1.5 Applicable motor capacity (HP) 0.5 Applicable motor capacity (kW) 0.4 Overload current rating 1 Carrier frequency (kHz) Maximum output voltage Rated power voltage Power voltage permissible fluctuation Power frequency permissible fluctuation Power source capacity (kVA) 1.5 Cooling method Self cooling	Frame A ModelS SC3-043-□□K-□□ 0.4 0.75 Rated output capacity (kVA) 1 2 Rated output current (A) 1.5 2.6 Applicable motor capacity (HP) 0.5 1 Applicable motor capacity (kW) 0.4 0.75 Overload current rating 150% 60second Carrier frequency (kHz) Maximum output voltage Rated power voltage Thr Power voltage permissible fluctuation Thr Power frequency permissible fluctuation Power source capacity (kVA) 1.5 2.5 Cooling method Self cooling Self cooling	Frame A ModelS SC3-043-□□K-□□ 0.4 0.75 1.5 Rated output capacity (kVA) 1 2 3 Rated output current (A) 1.5 2.6 4.2 Applicable motor capacity (HP) 0.5 1 2 Applicable motor capacity (kW) 0.4 0.75 1.5 Overload current rating 150% 60seconds 200% 1seconds 200% 1s	Frame A ModelS SC3-043-□□□K-□□ 0.4 0.75 1.5 2.2 Rated output capacity (kVA) 1 2 3 4.6 Rated output current (A) 1.5 2.6 4.2 6 Applicable motor capacity (HP) 0.5 1 2 3 Applicable motor capacity (kW) 0.4 0.75 1.5 2.2 Overload current rating 150% 60seconds 200% 1second (inverse timester timester) Carrier frequency (kHz) 1~15kHz Maximum output voltage Three-phase 380-480V Rated power voltage Three-phase 380-480V 50Hz / 6 Power voltage permissible fluctuation ±5% Power frequency permissible fluctuation ±5% Power source capacity (kVA) 1.5 2.5 4.5 6.9 Cooling method Self cooling Forced air cooling	Frame A B ModelS SC3-043-□□K-□□ 0.4 0.75 1.5 2.2 3.7 Rated output capacity (kVA) 1 2 3 4.6 6.9 Rated output current (A) 1.5 2.6 4.2 6 9 Applicable motor capacity (HP) 0.5 1 2 3 5 Applicable motor capacity (kW) 0.4 0.75 1.5 2.2 3.7 Overload current rating 150% 60seconds 200% 1second (inverse time characteristi Carrier frequency (kHz) 1~15kHz Maximum output voltage Three-phase 380-480V 50Hz / 60Hz Rated power voltage permissible fluctuation Three-phase 323-528V 50Hz / 60Hz Power frequency permissible fluctuation ±5% Power source capacity (kVA) 1.5 2.5 4.5 6.9 10.4 Cooling method Self cooling Forced air cooling			

Common Specifications

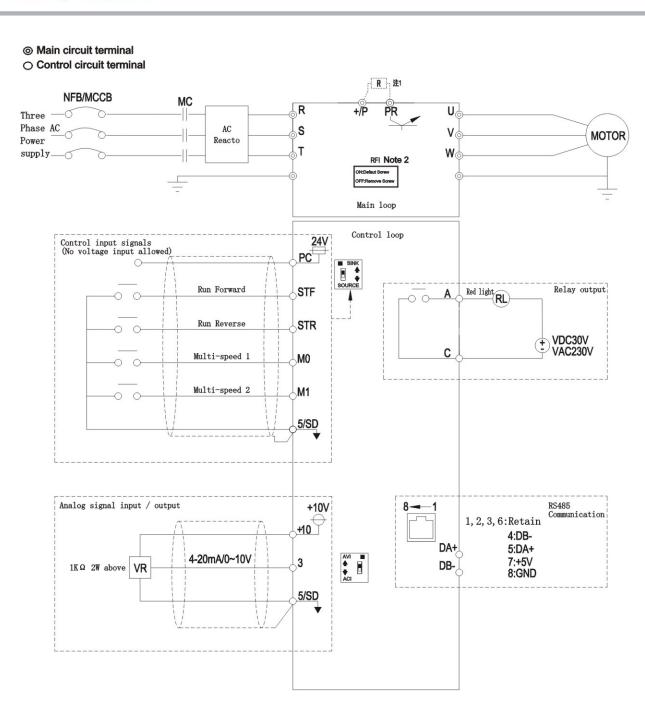
Contro	ol method		SVPWM control,V/F control,General magnetic vector control						
Outpu	t frequency r	ange	0~650.00Hz						
		Digital setting	The frequence is set within 100Hz, the resolution is 0.01Hz.						
	quency etting	Digital setting	The frequence is set more than 100 Hz, the resolution is 0.1 Hz.						
	olution	Analog setting	DC 0~5V or 4~20mA signal, 11 bit						
	, water getting		DC 0~10V signal, 12 bit						
	output quency	Digital setting	Maximum target frequency±0.01%.						
	accuracy Analog setting		Maximum target frequency±0.1%.						
Start t	orque		180% 3Hz,200% 5Hz:Under the condition of general magnetic vector control						
V/Fcha	aracteristics		Constant torque curve, variable torquecurve, five-point curve						
	eration / dece		Linear acceleration /deceleration curve, S pattern acceleration /deceleration curve1 & 2 & 3						
Drive	motor		Induction motor(IM)						
Stall c	urrent protec	tion	The stalling protection level can be set to 0~250%(06-01(P.22)). The default value is 200%.						
Target	Target frequency setting		Operation panel setting, DC 0~5V/10V signal, DC 4~20 mA signal, multiple speed stage level setting, communication setting.						
Operation pane	Operation monitoring LED indication lamp (6)		Output frequency, output current, output voltage, PN voltage, electronic of accumulation rate, temperature rising accumulation rate, output power, a value input signal, output terminal status; alarm history 12 groups at molecular terminal status at molecular termi						
on panel			frequency monitoring indication lamp, voltage monitoring indication lamp, current monitoring indication lamp, motor operation lamp, mode switching lamp PU control indication lamp.						
Commu	nication func	tion	RS-485 communication can select Shihlin/Modbus communication protocol, communication speed115200bps or lower.						
Protection	on mechanisr	m / alarm function	Output short circuit protection, Over-current protection, over-voltage protection, under-voltage protection, motor over-heat protection (06-00(P.9)), IGBT module over-heat protection, communication abnormality protection,						
	Ambient te	mperature	-10 ~ +50°C (non-freezing)						
	Ambient h	umidity	Below 90%Rh (non-condensing).						
	Storage ter	mperature	-20 ~ +65℃.						
<u>m</u>	Surroundin	g environment	Indoor, no corrosive gas, no flammable gas, no flammable powder.						
vironm	Altitude Vibration Grade of protection The degree of environmental pollution		Altitude is below 2000 meters. When altitude is above 1,000 m, derate the rated current 2% per 100 m $$						
ent			Vibration below 5.9m/ s² (0.6G).						
			IP20						
			п						
	Class of pro	otection	Class I						
Internat	ional certifica	tion	C€						

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SC3

Wiring Diagram

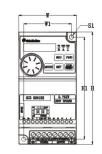


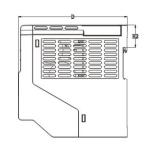
NOTE

- $1: SC3-043-0.4K\sim 1.5K$, $SC3-023-0.2\sim 1.5K$, $SC3-021-0.2\sim 0.75K$ don't have + / P and PR terminals.
- 2 : Full range of built-in RFI filter to suppress electromagnetic interference, but if you want to meet CE standard, please refer to the instructions in the operating manual for installation.

Dimensions

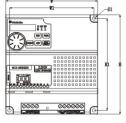
Frame A



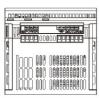


Frame A							
Model type	W (mm)	W1 (mm)	H (mm)	H1 (mm)	H2 (mm)	D (mm)	S1 (mm)
SC3-021-0.2K							
SC3-021-0.4K							
SC3-021-0.75K		56	132	120	26.5	128	5
SC3-023-0.2K							
SC3-023-0.4K	68						
SC3-023-0.75K	00	50					
SC3-023-1.5K							
SC3-043-0.4K							
SC3-043-0.75K							
SC3-043-1.5K							

Frame B







Frame A							
Model type	W (mm)	W1 (mm)	H (mm)	H1 (mm)	H2 (mm)	D (mm)	S1 (mm)
SC3-021-1.5K							
SC3-021-2.2K							
SC3-023-2.2K							
SC3-023-3.7K	136	125	147	136	26.5	128	5
SC3-043-2.2K							
SC3-043-3.7K	1						
SC3-043-5.5K	1						

SS2 Series

Compact Design Vector Control AC Drive



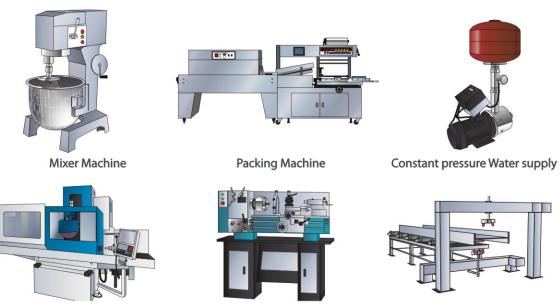
Product Range

Мо	del	KW (HP)	0.4 (0.5)	0.75 (1)	1.5 (2)	2.2 (3)	3.7 (5)	5.5 (7.5)
	021	1-phase 220V						
SS2	023	3-phase 220V						
	043	3-phase 440V						

Main Features

- * Built-in shuttle knop to adjust output frequency and set parameters easily
- * Built-in RS-485 communication interface
- * Support MODBUS and Shihlin communication protocol
- * Built-in proportion linkage control function to support multi inverters connection
- * Maximum 650Hz frequency output
- * Support DIN rail mount
- * The resolution of frequency setting: digital 0.01Hz; analog 1/1000
- *The accuracy of output frequency: 0.01%
- * Multi-function input/output terminals
- * Support 2 analog setting types: 0-10V and 4-20mA

Application



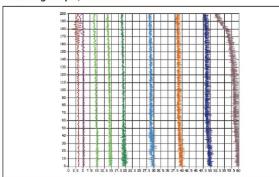


Compact Design Vector Control AC Drive

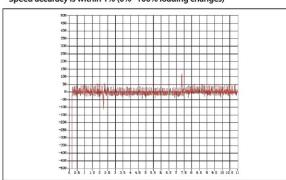
Product Features

General flux vector control technique

- General flux vector control technique
- · A 32-bit RISC CPU for high-speed computation.
- Starting torque, 150%3Hz



Speed accuracy is within 1% (0%~100% loading changes)

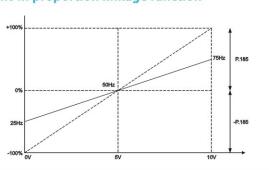


- Motor parameter auto-tuning function
- Stalling protection level reaches to 250%.

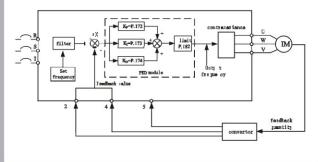
High performance and function

- The maximum output frequency up to 650Hz
- · Soft-PWM functions for eliminating motor noises and preventing the temperature of AC drive module too high.
- · Built-in energy-saving control function, the AC drive will control the output voltage automatically in order to reduce the output power losses when the AC drive is running.
- · Cooling fan operation method is selectable.

Built-in proportion linkage function

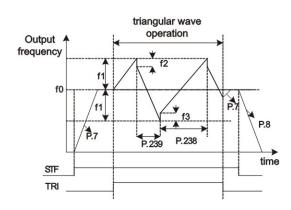


PID feedback control function



Triangular wave function (traverse)

• This is suitable for operations that need traversing and winding movements such as textile operations.



- f0: Setting value of frequency
- f1: Generated amplitude for setting frequency (f0×P.235)
- f2: Compensation from acceleration to deceleration (f1×P.236)
- f3: Compensation from deceleration to acceleration (f1×P.237)

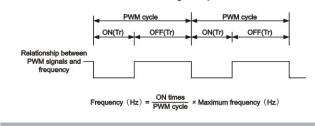
Built-in frequency and parameter setting knob



Product Features

PWM control function

- The operating frequency can be controlled with the PWM signals output from PLC.
- The terminal M2 can be set as PWM signal input.

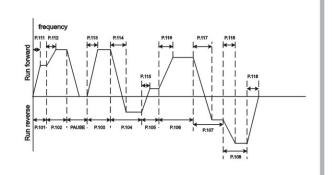


Easy to install design

• Din rail design-Multiple AC drives can be mounted side-by-side in



Programmed operation mode with manually operated



- Built-in standard RJ45 port for RS485 communication.
- Screwless terminal blocks designed

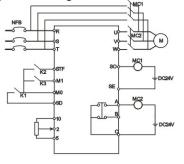


• The cooling fan is removable and easy to clean.



Equipped with grid power frequency switching mechanism

- · It provides automatic switch between the grid power and frequency conversion.
- · If the motor is running at rated frequency, using grid power frequency has a much better efficiency.
- In order to prevent the motor from stopping for a long time during the maintenance of AC drive, it is recommended AC drive to have grid power switching function.



Electric Specifications

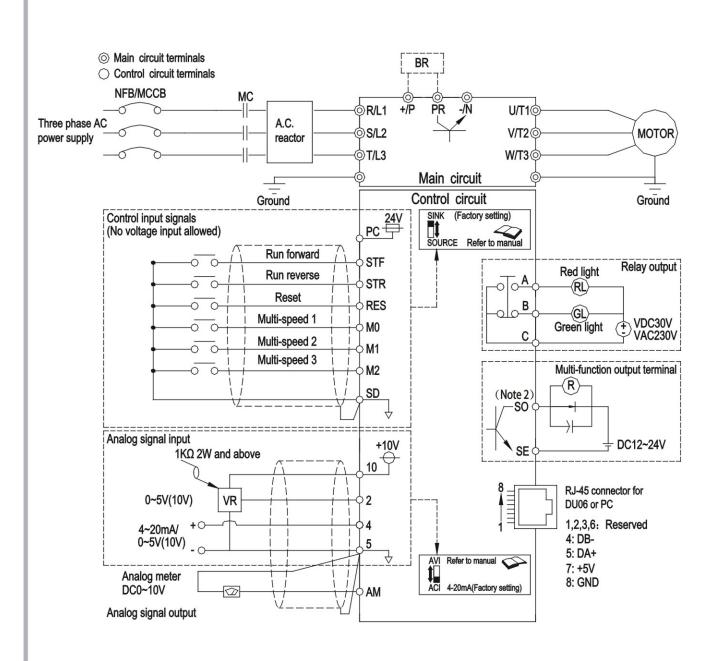
	Model SS <i>2-021</i> -□□		0.4K		<i>0.75</i> K		.5K	2.2K			
	Model 532-021-LL	HP	0.41		1		2	3			
Appl	icable Motor Capacity	kW	0.3		0.75		1.5	2.2			
	Rated output capacity kVA	1	0.4		1.5		2.5	4.2			
0			2.7		4.5	<u> </u>	8	11			
Output	Rated output current A (No	ote)	(27000)	E004 60 socone	2000 MA	cond (invorc	e time character	200006			
≒	Maximum output voltage		13	50% 60 Second	Amoral Control	200~240V A		istics)			
	Rated power voltage			Cir	igle phase 20						
Pow	Power voltage permissible	fluctuation		Single phase 170~264V 50Hz / 60Hz							
Power Supply				±5%							
홪	Power frequency permissible fluctuation Power source capacity kVA		1.5		2.5		3.5	6.4			
Cooli		Self-cool	ina	2.3		air cooling	0.4				
Cooling Method Weight (kg)			1.1	iiig	1.2		1.6	1.7			
			1.1		1.2		1.0	1.7			
220	V Series Three-Phase										
	Model SS2-023-□□	l□K	0.4	0.75	5	1.5	2.2	3.7			
Applicable Motor Capacity		HP	0.5	1		2	3	5			
\ppi	icable Motor Capacity	kW	0.4	0.75	5	1.5	2.2	3.7			
	Rated output capacity kVA (Note)		1.2	2		3.2	4.2	6.7			
Output	Rated output current A (Note)		3	5		8	11	17.5			
put	Overload current rating		1:	50% 60 secon	ds; 200% 1 se	cond (inverse	e time characteri	stics)			
	Maximum output voltage				3 Phase	200~240V A	С				
20	Rated power voltage				3 Phase 200~	240V 50Hz	/ 60Hz				
)Wer	Power voltage permissible	fluctuation	3 Phase 170~264V 50Hz / 60Hz								
Power Supply	Power frequency permissi	ble fluctuation	±5%								
<u> </u>	Power source capacity kVA	\	1.5	2.5		4.5	6.4	10			
Cooli	ing Method		Self-cooling	g		Forced air	air cooling				
Weig	ht (kg)	10	1.1	1.2		1.2	1.6	1.7			
440	V Series Three-Phase				·						
	Model SS <i>2-043</i> -□□	ΠK	0.4	0.75	1.5	2.2	3.7	5.5			
	Model 332-043-1111	HP	0.5	1	2	3	5	7.5			
Appl	icable Motor Capacity	kW	0.4	0.75	1.5	2.2	3.7	5.5			
	Rated output capacity kVA		1	2	3	4.6	6.9	9.2			
Q	Rated output current A (No		1.5	2.6	4.2	6	9	12			
Output	Overload current rating					10000	e time characteri				
4	(reverse time characteristics)					ase 380~480					
	Rated power voltage				3 Phase 380~						
Powe	Power voltage permissible	fluctuation				/ 50Hz / 60H					
Power Supp	Power frequency permissi					±5%					
<u>ŏ</u>	Power source capacity kVA		1.5	2.5	4.5	6.9	10.4	13.8			
Cooli	ing Method		Self-cooling	Self-cooling			ed air cooling	.5.0			
20011			Jen cooming	Jen cooming		1010					

Note: The test conditions of rated output current, rated output capacity and inverter power consumption are: the carrier frequency (P.72) is at factory setting value; the inverter output voltage is at 220V/440V; the output frequency is at 60Hz, and the ambient temperature is 50°C

Common Specifications

Cartif	ication		CE						
	Class of protection		Class I						
tion	The degree of enviro		2						
Condi	Grade of protect		IP20						
ental	Ambient humidity Storage temperature Surrounding environment Altitude and vibration Grade of protection The degree of environmental pollution			de: below 1000 meters, Vibration: below 5.9m/s² (0.6G).					
mme				r, no corrosive gas, no flammable gas, no flammable dust					
viro			-20 ~ +						
ш	Ambient humidi		_	90%Rh (non-condensing)					
	Ambient temper	rature		unication abnormality protection, etc. +50°C (non-freezing), installation side by side -10~ +40°C.					
	ction Mechanism /	'Alarm	under-	t short circuit protection,Over-current protection, (+/P)-(-/N)over-voltage protection, -voltage protection, motor over heat protection (P.9), IGBT module over-heat protection,					
Comn Funct	nunication ion	RS485		n RS485 communication, RJ-45 connector.					
Operation Panel	LED indication la	amp(6)	Run indication lamp, frequency monitoring indication lamp, voltage monitoring indication lamp, current monitoring indication lamp, mode switching indication lamp, and PU control indication lamp.						
Ope	HELP mode		Alarm	history monitoring.					
	Running status r	monitoring	Output	t frequency monitoring, output current monitoring, and output voltage monitoring, alarm reco					
Ĕ	Analog output	AM,5	Multi-function DC (0~10V) Output: output frequency, output current (P.54).						
Multiple Output Terminals	Multi-function output relay	A,B,C	detection (PO1), Periodical detection (PO2), and Pause detection (PO3), Inverte output (BP), Commercial power-supply output (GP).						
Multip	Multi-function output terminals	SO , SE	P.40	Inverter running (RUN), output frequency detection (FU), Up to output frequency(SU overload detection (OL), zero current detection (OMD), alarm (ALARM), Section					
Multif	function Control Te	erminals		starting (STF, STR), the second function (RT), '16-speed operation' (RL, RM, RH, REX), al thermal relay (OH), reset (RES), etc. (can be set by the user (P.80~P.84, P.86))					
PID Control		Please	refer to P.170~P.183 in Chapter 5.						
Targe	Target Frequency Setting			Operation panel setting, DC 0~5V signal setting, DC 0~10V signal setting, DC 4~20mA signal setting, Multi-speed stage levels setting, communication setting, pulse frequency setting.					
Stall c	current protection		The sta	alling protection level can be set between 0 and 250% (P.22).					
DC Br	aking		0~60 5	C braking action frequency range between 0 and 120Hz (P.10); the DC braking time is Seconds (P.11); and the DC braking voltage is 0~30% (P.12). Linear braking and idling g selection (P.71).					
	eration / Decelerat Characteristics	ion	setting	solution (0.01s/0.1s) of acceleration/deceleration time (P.7, P.8) is switched by P.21. The grange has $0\sim360s$ or $0\sim360s$ for selection. And different acceleration/deceleration model can be selected by P.29.					
Torqu	e Boost		The to	rque boost setting range between 0 and 30% (P.O), auto boost, slip compensation.					
	tart Torque			3Hz, 200% 5Hz: when using the general flux vector control.					
	ge / Frequency at Characteristics	Setting		oltage (P.19), base frequency (P.3) can be arbitrarily set. ant torque model and applicable load model can be selected (P.14).					
Accur		Analog setting	Maxim	num target frequency ± 0.5%.					
Outpu	ut Frequency	Digital setting		num target frequency ± 0.01%.					
Frequ	ency Resolution	Analog setting	When	setting the signal DC 0~5V, the resolution will be 1/500; setting the signal DC 0~10V or 4~20mA, the resolution will be 1/1000.					
		Digital setting	1	requency value is set below 100Hz, the resolution will be 0.01Hz. requency value is set above 100Hz, the resolution will be 0.1Hz.					
Outpu	ut Frequency Rang	je	0.1~6	50Hz (The starting frequency setting range is betwee 0 and 60Hz).					

Wiring Diagram

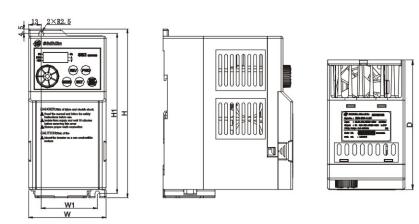


NOTE

- 1. For the usage of the external thermal relay, please refer to P.80~P.84, P.86 in Chapter 5 (OH)on the manual.
- 2. Make sure not to short circuit the PC and SD.
- 3. In the above figure, dotted line area, please refer to 3.5.7on the manual.
- 4. The SO terminal can select to FM or 10X function, please refer to P.64, P.74.
- 5. For single-phase series inverters, there is no T/L3 terminal, and the corresponding wiring(dotted line) doesn't need to be connected.

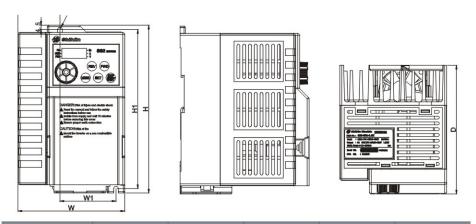
Dimensions

Frame A



Model	H(mm)	H1(mm)	W(mm)	W1(mm)	D(mm)
SS2-021-0.4K	174	165	80		
SS2-021-0.75K					
SS2-023-0.4K				58	134
SS2-023-0.75K					
SS2-023-1.5K					
SS2-043-0.4K					
SS2-043-0.75K					
SS2-043-1.5K					

Frame B



Model	H(mm)	H1(mm)	W(mm)	W1(mm)	D(mm)
SS2-021-1.5K					
SS2-021-2.2K	174	165	110.5		134
SS2-023-2.2K				58	
SS2-023-3.7K					
SS2-043-2.2K					
SS2-043-3.7K					
SS2-043-5.5K					

SE2 Series

High Performance Vector Control AC Drive



Product Range

Model		KW (HP)	0.4 (0.5)	0.75 (1)	1.5 (2)	2.2 (3)	3.7 (5)	5.5 (7.5)	7.5 (10)	11 (15)
	021	1-phase 220V								
SE2	023	3-phase 220V								
	043	3-phase 440V								

Main Features

- * High starting torque, 150%/1Hz and 200% /3Hz
- * With auto-tuning function
- * Output frequency from 0.2Hz to 1000Hz
- * Speed accuracy:less than 1% with 0~100% load variation
- * High-precision static motor parameter autotuning function
- * Excellent performance with load capacity of 200%/1s,150% 60S

- * Built-in RS-485 communication interface
- * Support MODBUS and Shihlin communication protocol
- * Built-in brake transistor
- * A build in EMC input filter is available
- * Energy saving function realizes power-saving control
- * Constant pressure setting for water pump
- * Support various expansion card: I/O card, RS-485/422 card, 4-20mA power card

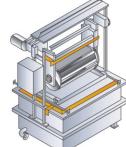
Applications



Lathe



Wood processing Machine



Plating Machine





Printing Machine



Grinding Machine



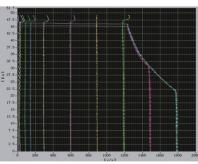
Chamfer Machine

SE2

Product Features

High-performance sensorless vector control technique

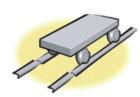
- A 32-bit RISC CPU for high-speed computation.
- Starting torque, 150% / 1Hz
- · High-precision motor parameter auto-tuning function.
- Speed accuracy is within 1% (0%~100% loading change)
- Speed control ratio is up to 1:100



Torque-Speed Curve

Excellent performance with load capacity of 200% 1s

 For impact load, safe to use (punch/trolley/injector/screw machinery/machine tool, and so on).

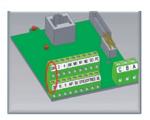


Built-in brake transistor

- The entire series have a built-in brake transistor (0.4KW~11KW).
- The brake resistor connection enhances the brake torque capacity.

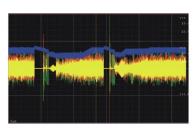
Built-in RS-485 interface

- Additional two communication terminals on the control board.
- Capable of simultaneous connections resulting a HMI,PLC and other devices.



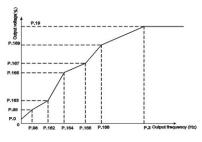
Tracking compensation mechanism

 The enhanced tracking mechanism can detect the rotation speed and direction of motor in idle state, resulting a smooth machine start without jittering.



5-point V/F free setting

 It is more adaptable to various complicated load environment, such as multiple working frequencies.



Equipped with Soft-PWM mechanism

- Soft-PWM controls the motor noises, transforming the metal sound into a delightful complex tone.
- It provides low noise operation and reduces interference to external RF, ensuring stable operations of nearby PLC and encoder devices.

Product Features

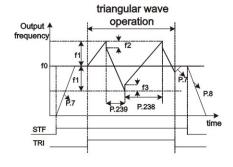
The range of the output frequency is expanded to 0 – 1,000 Hz

 It is good choice for high-speed motor applications, such as engraving machines, grinders, centrifuges, etc.

Parameter No.	Parameter Name	Setting Range		
P.4-P.6				
P.24-P.27	Multiple frequencies	0-1000Hz		
P.142-P.149				
P.3/P.47	Base frequency	0-1000Hz		
P.18	High-speed upper limit frequency	120-1000Hz		
P.38-P.39	The highest frequency of the module	1-1000Hz		

Triangular wave mechanism (traverse)

 This is suitable for traversing and winding movements such as textile operations.

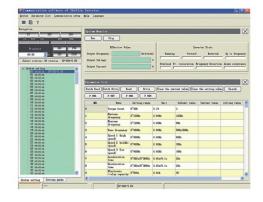


Operating time accumulation and parameters protection

- Time accumulation: the accumulated operating time of the AC drive can be displayed.
- Password protection: It provide 4-digital password to restrict the read and write of parameters, and prevent operative mistakes.

PC client communication software

 This provides remote control of multiple frequency AC drives for parameters setup, copy and monitoring.



Support various expansion boards.

- SE2-PD01: Profibus communication module
- SE2-DN01: Device-NET communication module
- SE-IB01: 4-20 mA current output expansion board.
- SE-CB01: terminal-type communication expansion board
- SE-EB01: I/O expansion board (Relay output)



Built-in EMC input filter

 There is a built-in EMC input filter design. It qualifies the EN61800-3 specifications and it can reduce electromagnetic interruption effectively.



High Performance Vector Control AC Drive

Electric Specifications

	Model SE2-021-□	IDDK	0.4	K .	0.7	75K	1.	.5K	2	.2K		
		HP	0	5		1		2		3		
App	licable Motor Capacity	kW	0.4	4	0.	75	1	.5	1	2.2		
	Rated Output Capacity kVA		1.3	2	1	.9	3	3.0	4	1.2		
ou.	Rated Output Current A	<i>3</i> 5	3.0	0	5	.0	8	3.0	1	1.0		
Output	Overload current rating		1.	150% 60 seconds; 200% 1 second (inverse time characteristics)								
	Maximum Output Voltage				3	3 Phase 20	0~240V A	C				
	Rated Power Voltage			single phase 200~240V 50Hz / 60Hz								
Po	Permitted Power and Voltag	e Range			single pl	nase 180~	264V 50	Hz / 60Hz				
Power	Adjustable Power and Frequ	iency Range				±	5%		ii.			
	Power supply capacity kVA	,	1.8	8	:	3	4	l.5	(5.4		
Coo	ling Method		Self-co	oling			Forced A	ir cooling	9			
We	ight (Kg)	A	1.3	2	1	.2	1	.9	1	1.9		
220	OV Three-phase Series											
22(13 0 2 0											
	Model SE2-023-□		0.4K	0.75K				3.7K	5.5K	7.5K		
App	Applicable Motor Capacity	HP	0.5	1	2	_	3	5	7.5	10		
	D-4- d O-44 Cit13/A	kW	1.2	0.75	1.5		2.2	3.7	5.5	7.5		
0	Rated Output Capacity kVA	Rated Output Capacity KVA Rated Output Current A		1.9	3.0		1.2	6.7	9.2	12.6		
Output	-		3.0	5.0	8.0		1.0	17.5	24	33		
Ħ	Overload current rating	<u> </u>	1.	50% 60 SE					aracteristic	S)		
	Maximum Output Voltage			3 Phase 200~240V AC 3 Phase 200~240V 50Hz / 60Hz								
ъ	Rated Power Voltage Permitted Power and Voltage Range				-							
Power		Permitted Power and Voltage Range Adjustable Power and Frequency Range			3 Phas		4V 50Hz	/ bunz				
4		іенсу капде	1.8	3	4.5		5%	10	13.8	19		
<u></u>	Power supply capacity kVA		Self-	3	4.3			red Air cooling				
C00	ling Method		cooling		-	го	rcea Air co	oling				
We	ight (Kg)		1.2	1.2	1.2	: 1	.9	1.9	3.8	3.8		
44(OV Three-phase Series											
	Model SE2-043-□	IПП к	0.4K	<i>0.75</i> K	1.5K	2.2K	<i>3.7</i> K	<i>5.5</i> K	<i>7.5</i> K	11K		
	Model SEE 013 E	HP	0.5	1	2	3	5	7.5	10	15		
App	licable Motor Capacity	kW	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11		
	Rated Output Capacity kVA		1.2	2.0	3.2	4.6	6.9	9.2	13	18		
Q	Rated Output Current A		1.5	2.6	4.2	6.0	9.0	12	17	23		
Output	Overload current rating			1.5 2.6 4.2 6.0 9.0 12 17 23 150% 60 Seconds; 200% 1 Second (inverse time characteristics)								
-	Maximum Output Voltage	-					se 380~48					
	Rated Power Voltage				Three-p	hase 380-	-480V 50H	łz / 60Hz	§	-		
РС	Permitted Power and Voltage	e Range		7			50Hz / 60	The same of the sa	1.0			
Power	Adjustable Power and Frequ						5%					
	Power supply capacity kVA		1.8	3	4.8	6.9	10.4	13.8	19.5	27		
Coo	ling Method		Self- cooling				ced Air co					
			2009					_		_		

Common Specifications

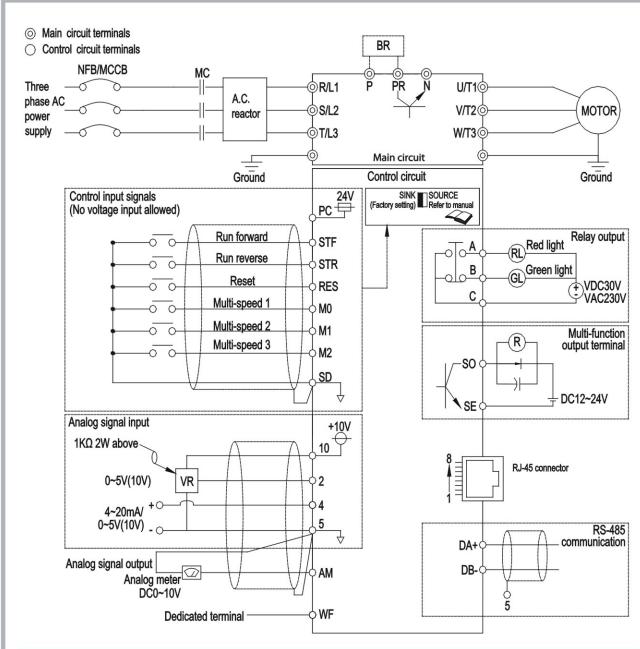
_									
	ol method	2000000		control, V/F control, vector control, sensorless vector control.					
Outpu	ut frequency ra	ange 		00Hz (The starting frequency setting range is 0~600Hz). Please refer to P.187 in Chapter 4					
	ution for g frequency	Digital setting	frequen	.187=0, if the frequency set value is below 100Hz, the resolution will be 0.01Hz. If the icy set value is above 100Hz, the resolution will be 0.1Hz. When P.187=1, the resolution of icy will be 0.1Hz.					
Jettin	girequency	Analog setting		When setting DC 0~5V signals, the resolution will be 1/500; When setting DC 0~10V or 4~20mA signals, the resolution will be 1/1000.					
Outpu	ut frequency a	ccuracy	0.01Hz	0.01Hz					
_	ge / frequency cteristics	output		quency voltage (P.19), base frequency (P.3) can be arbitrarily set in available range. nt torque model, applicable load model can be selected (P.14).					
Start t	orque		150% (1	Hz): When the sensorless vector control is started.					
Torqu	e boost		The tord	The torque boost setting range is 0~30% (P.O), auto boost, slip compensation.					
	Acceleration/deceleration curve characteristics		setting	olution (0.01s/0.1s) of acceleration/deceleration time (P.7, P.8) is switched by P.21. The range has 0~360s or 0~360os for selection. And different acceleration/deceleration nodel can be selected by P.29.					
DC bra	C braking			braking action frequency is $0\sim120$ Hz (P.10); the DC braking time is $0\sim60$ Seconds (P.11); DC braking voltage is $0\sim30\%$ (P.12). Linear braking and Idling braking selection (P.71).					
Stall cu	all current protection		The stal	ling protection level can be set to 0~400% (P.22).					
Target	Target frequency setting			Operation panel setting; DC 0~5V signal setting, DC 0~10V signal setting and DC 4~20mA signal setting, 2 voltage input or one voltage and one current input can be selected; Multi-speed stage levels setting; Communication setting.					
PID co	ontrol		Please r	efer to P.170~P.183 and P.223 ~ P.225 in Chapter 4.					
Multi-	function cont	rol terminals		tarting (STF, STR), the second function (RT), the 16-speed operation (RL, RM, RH, REX), I thermal relay (OH), reset (RES), etc. (they can be set by the user with P.80~P.84, P.86)					
func	Multi-function output terminals (SO, SE)		P.40	Inverter running (RUN), output frequency detection (FU), Up to output frequency (SU), overload alarm (OL), zero current detection (OMD), zero current detection (ALARM					
Multi- function output	Multi-function	Multi-function output relay		Section detection (PO1), Periodical detection (PO2), and Pause detection (PO3), Inverter output (BP), Commercial power-supply output (GP),ready signal output(RY).					
out	Multi function	on analogy output	Multi-function DC (0~10V)(AM) Output: output frequency, output current (P.54).						
	Running star	tus monitoring	Output frequency monitoring, output current monitoring, and output voltage monitoring.						
Operation panel	HELP mode		Alarm history monitoring, alarm history clear, all parameters clear, and firmware version read.						
ation nel	LED indication	on lamp(6)	Run indication lamp, frequency monitoring indication lamp, voltage monitoring indication lamp, current monitoring indication lamp, mode switching indication lamp, and PU/external terminals control indication lamp.						
C		RS485	Build in	RS485 communication.					
functi	nunication on	Communication expansion board		al accesssories: Terminal type, RJ11, RJ-45, Profibus or Device Net communication on board (Note 2,3,4).					
	ction mechani m function	sm	voltage	short circuit protection, Over-current protection, P-N over-voltage protection, under- protection, motor over heat protection (P.9), IGBT module over heat protection, nication abnormality protection, etc.					
	Ambient ten	nperature	-10 ~ +5	50°C (non-freezing)					
Environmental	Ambient hu	midity	Below 9	0%Rh (non-condensing)					
vironmen condition	Storage tem	perature	-20 ~ +€	55°C					
enta on	Surrounding	environment	In room	, no corrosive gas, no flammable gas, no flammable dust					
_	Altitude and	vibration	Altitude	e: below 1000 meters, Vibration: below 5.9m/s² (0.6G).					
Certifi	cation		Meet th	e requirements of CE certification standards (the –DL type).					
Note: 1	If several mu	ti-function output re	lavs are ne	eded, you can choose the I/O expansion board, on which there are 2 multi-function output					

Note: 1. If several multi-function output relays are needed, you can choose the I/O expansion board, on which there are 2 multi-function output relays. For detailed instruction, please refer to appendix 5.

- 2. Communications expansion board option details, please refer to Appendix 5.
- Profibus is the registered trademark of Profibus international.
 Device Net is the registered trademark of ODVA (Open Device Vendor Association).

SE2

Wiring Diagram

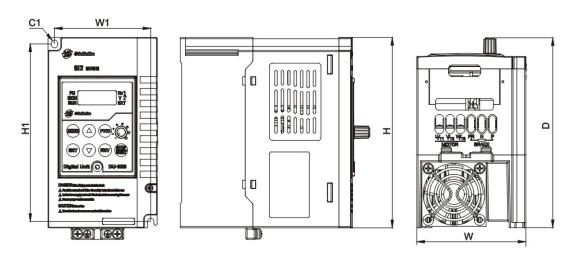


NOTE

- 1. For the usage of external thermal relay, please refer to P.80~P.84, P.86 (OH) in Chapter 4.
- 2. Make sure do not to short PC and SD.
- 3. In the above figure, Dotted line metal, please refer to 2.5.7on the manual.
- 4. The SE2-TYPE inverter have internal RS485 communication, and can also uses pluggable communications expansion boards CB01, CB02, CB03, PD01, DN01; For detailed instructions, please refer to the manual.

Dimensions

Frame



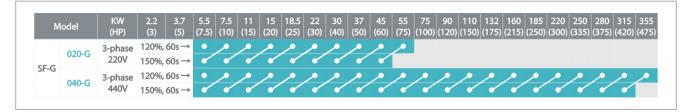
Model	H(mm)	W(mm)	D(mm)	W1(mm)	H1(mm)	C1(mm)
SE2-021-0.4K	148	85	148	75	138	Ф 5
SE2-021-0.75K	148	85	148	75	138	Ф 5
SE2-021-1.5K	186	100	157	90	176	Ф 5
SE2-021-2.2K	186	100	157	90	176	Ф 5
SE2-023-0.4K	148	85	148	75	138	Ф 5
SE2-023-0.75K	148	85	148	75	138	Ф 5
SE2-023-1.5K	148	85	148	75	138	Ф 5
SE2-023-2.2K	186	100	157	90	176	Ф 5
SE2-023-3.7K	186	100	157	90	176	Ф 5
SE2-023-5.5K	266	141	201.5	126	244	Ф 6
SE2-023-7.5K	266	141	201.5	126	244	Ф 6
SE2-043-0.4K	148	85	148	75	138	Ф 5
SE2-043-0.75K	148	85	148	75	138	Ф 5
SE2-043-1.5K	148	85	148	75	138	Ф 5
SE2-043-2.2K	186	100	157	90	176	Ф 5
SE2-043-3.7K	186	100	157	90	176	Ф 5
SE2-043-5.5K	266	141	201.5	126	244	Ф 6
SE2-043-7.5K	266	141	201.5	126	244	Ф 6
SE2-043-11K	266	141	201.5	126	244	Ф 6

SF-G Series

Dual-load, High Performance Vector Control AC Drive



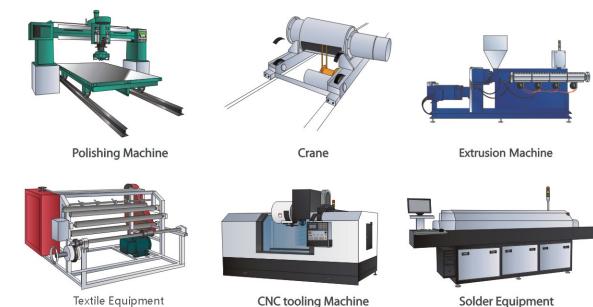
Product Range



Main Features

- * Dual specifications with HD: 150% 60s / LD: 120% 60s
- * V/F control, general purpose magnetic flux vector control, SVC sensor-less vector control, FOC+PG closed loop vector control, high torque output at low speed, and the best power saving control mode.
- * Increased load capacity to 200% / s
- * Embedded regeneration brake transistor(22kW or below)
- * Strengthened PID function, Multi-channel control function for fan and pump
- * RS-485 interface, selection between Shihlin protocol/standard Modbus protocol
- * Strengthened speed tracking compensation capability
- * Soft PWM function
- * Multiple function pulse output
- * Remote control panel through RJ45
- * Support various expansion boards: injection molding machine specific expansion boards, Multichannel control function for fan and pump

Application





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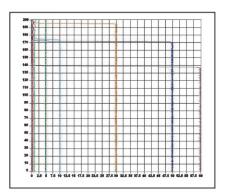
Product Features

Dual-load specifications

- Light load 120% 60s / heavy load (-G) 150% 60s.
- The default capacity is light load for air conditioners, pumps, air compressors, conveyors and other machines using light loads.
- The parameters can be adjusted to heavy load by inner parameter setting for punches, cranes, trolleys,screw machinery, machine tools, and injection devices (by PM01 injector expansion card).

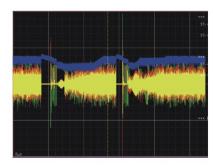
High-performance vector control technology

- A 32-bit RISC CPU for high-speed computation.
- SVC sensor1ess vector control with high starting torque of 1Hz150%, and FOC+PG closed loop vector control of 0Hz 150%.
- Speed accuracy: less than 1% with 0-100% load variation.
- An exclusive pioneer of high-precision motor parameter autotuning function.



Tracking compensation mechanism

 The enhanced tracking mechanism can detect the rotation speed and direction of motor in idle state, resulting a smooth machine start without jittering.

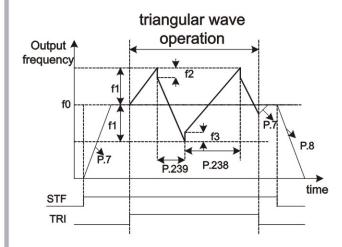


Built-in brake transistor (under 22kw)

- · Built-in brake transistor (under 22kw).
- Its connection with the brake resistor to improve the braking torque capability.

Equipped with Soft-PWM mechanism

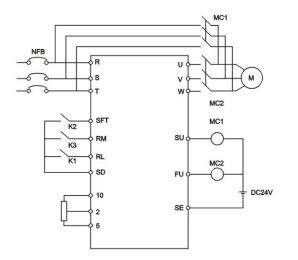
- Soft-PWM controls the motor noises, transforming the metal sound into a delightful complex tone.
- It provides low noise operation and reduces interference to external RF, ensuring stable operations of nearby PLC and encoder devices.



Product Features

Equipped with grid power frequency switching mechanism

- It provides automatic switch between the grid power and frequency conversion.
- If the motor is running at rated frequency, using grid power frequency has a much better efficiency.
- In order to prevent the motor from stopping for a long time during the maintenance of AC drive, it is recommended AC drive to have bypass loop.



Operating time accumulation and parameters protection

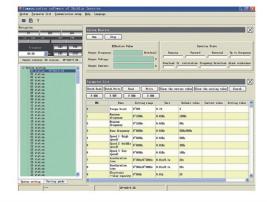
- Time accumulation: the accumulated operating time of the AC drive can be displayed.
- Password protection: It provide 4-digital password to restrict the read and write of parameters, and prevent operative mistakes.

Built-in RS-485 interface

- Support for MODBUS and Shihlin protocol.
- Capable of simultaneous connections to HMI, PLC and other devices.

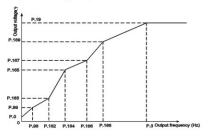
PC communication software

 This provides remote control of multiple frequency AC drive for parameters setup, copy and monitoring.



5-point V/F free setting

 It is more adaptable to various complicated load environment, such as multiple working frequencies.



Containing with 12 sets of abnormality alarm records

- The 12 sets of alarm records can be easily accessed .
- The system can record abnormal side power input(phase failure), short circuit of side output, over current, over voltage, module overheating, motor overheating, fan abnormalities, communication abnormalities, and so on.

Excellent performance with load capacity of 200% 1 s (-G)

 For impact load, safe to use (punch/trolley/injector/ screw machinery/machine tool, and so on).



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SF-G Series Dual-load, High Performance Vector Control AC Drive

Electric Specifications

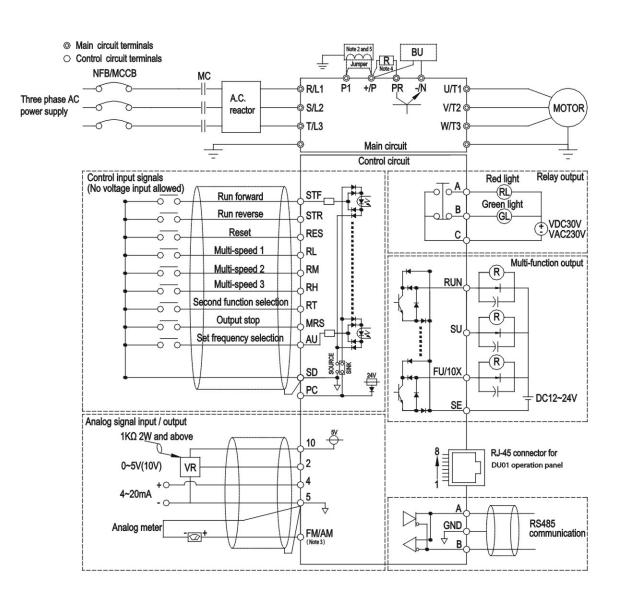
	V Series Three-phase						_			40 8/48	
	Model SF-020- □□□ / □□□ K-G	5.5		7.5/5.5		11/7		15/1		18.5/15	
Appli	cable motor capacity	7.5		10/7.5		15/1		20/1		25/20	
-	kw	5.5		7.5/5.5		11/7		15/1		18.5/15	
0	Rated output capacity kVA	9.5		12.5/9.5		18.3/1		24.7/1		28.6/24.7	
Output	Rated output current A	25	1000	33/25	1 (1 = 0.0)	49/3		65/4		75/65	
₽	Overload current rating		120% 60 seconds /150% 60 seconds (inverse time characteristics)								
	Maximum output voltage		Three-phase 200 - 240V								
S P	Rated power voltage		Three-phase 200 - 240V 50Hz / 60Hz Three-phase 180- 264V 50Hz / 60Hz								
Power	Power voltage permissible fluctuation			Three-phase				6UHZ			
⋛ӵ	Power frequency permissible fluctuation	12		17/10		±59		20/2	•	24/20	
C1	Power source capacity kVA	12		17/12		20/1		28/2	0	34/28	
	ing method				FC	orced air					
weig	iht (kg)	5.6		5.6		7.0		8.3		9.0	
	Model SF-020- 🗆 🗆 / 🗆 🗆 K-G	22/18.		30/22		37/3		45/3		55/45	
Appli	icable motor capacity	30/25		40/30		50/4		60/5		75/60	
	kw kw	22/18.		30/22		37/3		45/3		55/45	
_	Rated output capacity kVA	34.3/28		45.7/34.3		55/45		65/5		81/65	
돌	Rated output current A	90/75		120/90		145/1		170/1		212/170	
Output	Overload current rating		1209	6 60 secon			ls (inverse t	ime charac	teristics)		
	Maximum output voltage					•	200 - 240V		19		
–	Rated power voltage				•		40V 50Hz /		4		
Power	Power voltage permissible fluctuation			Т	Three-pha	se 180- 2	64V 50Hz/	60Hz			
b yer	Power frequency permissible fluctuation	1				±59					
	Power source capacity kVA	41/34		52/41		65/5	2	79/6	5	99/79	
Cooli	ing method				Fo	orced air	cooling				
weig	ht (kg)	20		21		37		37		67	
440	V Series Three-phase										
110				44/5-5						07/0	
	Model SF-040- □□□ / □□□ K-G	5.5	7.5/5.5	11/7.5		/11	18.5/15	22/18.		37/3	
Appli	cable motor capacity HP	7.5	10/7.5	15/10		/15	25/20	30/25	40/30	50/4	
	kw	5.5	7.5/5.5	11/7.5	_	/11	18.5/15	22/18.5		37/3	
0	Rated output capacity kVA	10	14/10	18/14		/18	29/25	34/29	46/34	56/4	
Output	Rated output current A	13	18/13	24/18		/24	38/32	45/38	60/45	73/6	
Ĕ	Overload current rating		1209	6 60 secon			ls (inverse t	ime charac	teristics)		
	Maximum output voltage					•	380 - 480V				
· -	Rated power voltage	Three-phase380 - 480V 50Hz / 60Hz									
Power	Power voltage permissible fluctuation	Three-phase 342- 528V 50Hz / 60Hz									
는 후	Power frequency permissible fluctuation					±59					
	Power source capacity kVA	11.5	16/11.5	20/16	_	/20	32/27	41/32	52/41	65/5	
Cool	ing method					rced air					
weig	ht (kg)	5.6	5.6	5.6	5	.6	8.3	8.3	25	25	
	Model SF- <i>040</i> - □□□ / □□□ K-G	45/37	55/45	7.	5/55	90/7	5	110/90	132/110	160/13	
	HP	60/50	75/60		00/75	120/1		50/120	175/150	215/17	
Appli	cable motor capacity kw	45/37	55/45	_	5/55	90/7		110/90	132/110	160/13	
	Rated output capacity kVA	69/56	84/69	_	14/84	137/1		68/137	198/168	236/19	
9	Rated output current A	91/73	110/91	_	0/110	180/1		20/180	260/220	310/26	
rtput	Overload current rating	1 22	_				ds (inverse t				
7	Maximum output voltage	1	1207	22 230011	-		380 - 480V	Sizuide			
	Rated power voltage		1	7		-	80V 50Hz /	60Hz		-	
SI PC	Power voltage permissible fluctuation						28V 50Hz /				
Power	Power frequency permissible fluctuation				cc pila	±59					
< 4	Power source capacity kVA	79/65	100/79	11	0/100	137/1		65/137	198/165	247/19	
Cooli	ing method	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	100/79	11		orced air		-5, 15,	1,70,103	2-7//13	
	ht (kg)	25	37		37	37	Cooming	67	67	67	
ug											
	Model SF-040- □□□ / □□□ K-G	185/160		/185	250/2.		280/250		315/280	355/315	
Appli	icable motor capacity	250/215		/250	335/3		375/335		420/375	475/420	
T-P-11	kw	185/160		/185	250/2		280/250		315/280	355/315	
0	Rated output capacity kVA	295/236		/295	402/3		438/402		491/438	544/491	
Output	Rated output current A	340/310		/340	480/4		530/480		520/530	683/620	
T.	Overload current rating		120%	60 second			ds (inverse	time chara	cteristics)		
	Maximum output voltage						80 ~ 480 V				
	Rated power voltage			T	hree-phas	e 380 ~ 4	80V 50Hz /	60Hz			
Power	Power voltage permissible fluctuation		Three-phase 342 ~ 528V 50Hz / 60Hz								
p ver	Power frequency permissible fluctuation					±59	6	-			
8	Power source capacity kVA	295/247	367	/295	402/3	67	438/402	2 4	491/438	544/491	
Cooli	ing method				Fo	orced air	cooling				

Common Specifications

Contr	ol method			I control , V/F control, close-loop V/F control (VF+PG), general flux vector control, ess vector control (SVC), close-loop vector control (FOC+PG)					
Outpu	ut frequency range		0.2-400	Hz (The starting frequency setting range is 0-60Hz)					
Resol	ution for setting	Digital setting		equency set value is below 100Hz, the resolution will be 0.01 Hz; If the frequency set above 100Hz, the resolution will be 0.1 Hz					
frequ	ency	Analog setting		etting DC 0-5V signals, the resolution will be 1/500 ; etting DC 0-10V or 4-20mA signals, the resolution will be 1/1000					
Outp	ut frequency	Digital setting	Maximu	um target frequency :±0.01 %					
accura		Analog setting	Maximu	um target frequency :±0.5%					
	ge I frequency out cteristics	put		oltage (P.19), base frequency (P.3) can be arbitrarily set ; Constant torque and applicable load model can be selected (P.14)					
Start t	torque		150% 1	Hz: When the sensorless vector control is started					
Torqu	e boost		The tor	que boost setting range is 0-30% (P.0), auto boost, slip compensation					
	Acceleration / deceleration curve characteristics DC braking		setting	olution (0.01s/0.1s) of acceleration/deceleration time (P.7, P.8) is switched by P.21. The range has 0~360s or 0~3600s for selection. And different acceleration/deceleration be selected by P.29.					
DC br				braking action frequency is 0-120Hz (P.10); the DC braking time is 0-60s (P.11) The DC voltage is 0-30% (P.12).Linear braking and idling braking selection (P.71)					
Stall	tall current protection		The sta	ling protection level can be set to 0-400% (P.22)					
Targe	Target frequency setting			on panel setting; DC 0-5V signal, DC 0-10V signal, DC 4-20 mA signal, multiple speed evel setting, communication setting					
PID co	ontrol		Please r	efer to manual P.170-P.182 in Chapter 5					
Multi-	Aulti-function control terminals			Motor starting (STF, STR), the second function (RT), 16-speed operation (RH, RM, RL, RE) external thermal relay (OH), reset (RES),etc.(they can be set by the user with P.80~P.84, P.86 and P.126~P.128).					
	Multi-function	SU, SE	P.40						
o	output	RUN, SE	P.129	Inverter running (RUN), output frequency detection (FU), Up to output frequency (SU), overload alarm (OL), zero current detection (OMD), alarm					
utpu	terminals	FU/10X,SE	P.130	(ALARM), section detection (PO1), periodical detection (PO2), and pause					
Output termins	Multi-function output relay	А,В,С	P.85	detection (PO3).					
nsl	Analog output	AM,5	Multi-fu	ınction DC (0-10V) output: output frequency, current (P.54)					
	Pulse output	FM,SD	Output	the pulse of 0-2300Hz					
0	Operation monito	oring	Output frequency monitoring, output current monitoring, and output voltage monitoring abnormality record (Maximum 12 sets)						
Operation Panel	LED indication la	mp(8)	Forward rotation indication lamp, reverse rotation indication lamp, frequency monitoring indication lamp, voltage monitoring indication lamp, current monitoring indication lamp mode switching indication lamp, PU terminals control indi cation lamp, and external terminals control indication lamp						
Comn	nunication functior	า	RS-485	communication, can select Shihlin/Modbus protocol communication protocol					
Protec	ction mechanism /	alarm function	Output short circuit protection, Over-current protection, (+/P)-(-/N) over-voltage protection under-voltage protection, motor over-heat protection (P.9), IGBT module over-heat protection, communication abnormality protection, etc						
	Ambient tempera	ature	-10~+4	0°C (non-freezing)					
	Ambient humidit	у	Below 9	90%Rh (non-condensing)					
	Storage tempera	ture	-20 ~ +4	55℃					
_ F	Surrounding env	ironmen	Indoor,	no corrosive gas, no flammable gas, no flammable powder					
Environmental Condition	Altitude and vibr	ation	Altitude: below 1000 meters, Vibration: below 5.9m/s² (0.6G).						
enta	Grade of protecti	on	IP20						
_	The degree of		2						
	environmental pollution								
	Class of protection		Class I						

SF-G Series Dual-load, High Performance Vector Control AC Drive

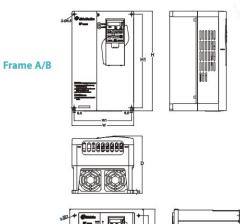
Wiring Diagram

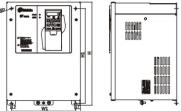


NOTE

- 1. Please refer to P.80~P.84, P.86 and P.126~P.128 (OH) of Chapter 5 for the applications of external thermal overload relay.
- 2. Make sure not to short PC and SD.
- 3. The DC reactor between +/P and P1 is optional. Please short +/P and P1 when DC reactor is not used.
- 4. When selecting FM function for the FM/AM output terminal, the reference ground is SD. For more details, please refer
- 5. The brake resistor connection approach between +/P and PR is for frames A and B only. For connecting the brake unit of frame C, D, E, F to between +/P and -/N, please refer to terminal arrangement in 3.4.5
- 6. Inverters corresponding to frame C、E、F have build-in DC reactors, you can also refer to DC reactor specification on the manual before adding DC reactors in addition.(When adding DC reactors, please remove the short circuit piece between P1 and +/P.)

Dimensions

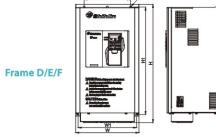




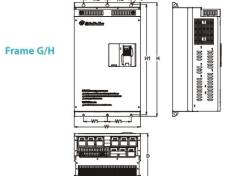




Frame C







	_	н	H1	W	W1	D
Model	Frame	(mm)	(mm)	(mm)	(mm)	(mm)
SF-020-5.5K		323		200	186	
SF-020-7.5K/5.5K-G						186
SF-040-5.5K	Α .		303			
SF-040-7.5K/5.5K-G			303	200	100	
SF-040-11K/7.5K-G						
SF-040-15K/11K-G						
SF-020-11K/7.5K-G						
SF-020-15K-11K-G						
SF-020-18.5K/15K-G	_	350	220	220	214	105
SF-040-18.5K/15K-G	В	350	330	230	214	195
SF-040-22K-18.5K-G						
SF-040-30K/22K-GS	1					

Frame C										
Model	Frame	H (mm)	H1 (mm)	W (mm)	W1 (mm)	D (mm)				
SF-020-22K-18.5K-G	_	379	348	271	236	248				
SF-020-30K/22K-G		3/9	348	2/1	230	246				

Frame D/E/F								
Model	Frame	H (mm)	H1 (mm)	W (mm)	W1 (mm)	W2 (mm)	D (mm)	d (mm)
SF-040-30K/22K-G			510	300				
SF-040-37K/30K-G	D	561			277	220	270	9
SF-040-45K-37K-G								
SF-020-37K/30K-G		595	566	370	336	336	286	
SF-020-45K-37K-G								
SF-040-55K/45K-G	E							13
SF-040-75K/55K-G								
SF-040-90K/75K-G								
SF-020-55K/45K-G								
SF-040-110K/90K-G	F	050	004	425	201	201	200	42
SF-040-132K/110K-G	F	850	821	425	381	381	286	13
SF040-160K/132K-G								

Frame G/H								***************************************
Model	Frame	H (mm)	H1 (mm)	W (mm)	W1 (mm)	W2 (mm)	D (mm)	d (mm)
SF-040-185K/160K-G	G	870	850	500	180	180	360	13
SF-040-220K/185K-G								
SF-040-250K/220K-G								
SF-040-280K/250K-G								
SF-040-315K/280K-G	н	1000	980	600	230	230	400	13
SF-040-355K/315K-G								

SA3/SE3 Series

PD301

Profibus communication expansion board



DN301

DeviceNet communication expansion board



EP301 CANopen communication

Ethernet communication expansion board



EB362R

I/O expansion board



EB308R

I/O expansion board



PG301C

CP301

expansion board

open collector type output)



PG301L

Speed feedback board (supports Speed feedback board (supports differential type output)



PG302L

Speed feedback board (supports Resolver signal)



EC301

EtherCAT communication expansion board



Select card rack (SE3 special)

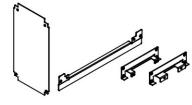
Cooperate with SE3 series to select expansion card



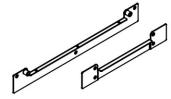
*Expected launch before 2018/Q1

Flange mounting kit

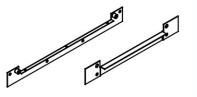
Frame A FMK301



Frame B **FMK302**

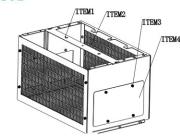


Frame C **FMK303**



SA3_{Series}

Floor mounting kit

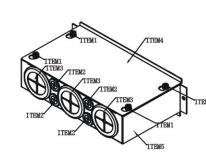


Installation package

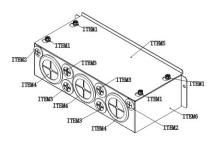
SMK301 (PU301, PU301C)
pan head screw мз×5

Conduit box kit

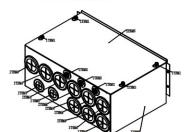
Frame D D:WBK301



Frame E/F E:WBK302 F:WBK303



Frame G/H **G:WBK304** H:WBK305



SE2 Series

SE2-PD01

Profibus communication expansion board



SE2-DN01

Device-Net communication expansion board



SE-EB01

I/O expansion board



SE-IB01

4-20mA current expansion board



SF-G Series

PG01

PG01 expansion board



PM01

Injection modeling machine specific expansion board



WS01

Fan and water pump Multi-channel control board



Common



Keypad

DU01



DU03B



DU03C-S



DU05

DU06



DU07



DU08S



SET REV STOP

DU10



PU301C



PU301



PU302



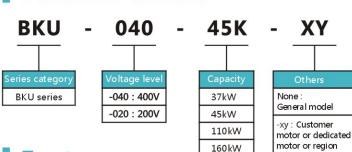




	NO.	Туре	Controller					
	1	SA3	PU301	PU301C	\	\		
	2	SE3	PU301	PU302	\	\		
	3	SC3	PU301	DU06	DU08S	DU10		
	4	SS2	DU06	DU08S	DU10	\		
	5	SE2	DU03B	DU03C-S	DU05	DU07		
Γ	6	SF-G	DU01	DU09S	\	\		

Braking Unit (BKU)

Product Model

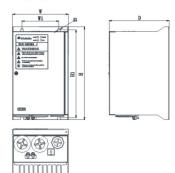


Features

External sturdy and durable, modular design with fast heat dissipation, single/multiple unit.

Convenient to connect wiring, matching inverter made by all brands with good compatibility.

Appearance and Dimensions





Model	W	W1	Н	H1	D	S
J-020-37K	121	80	200	189.5	130	6
	121	٥0	200	109.5	130	6.4

BKU SERIES

Model	W	W1	I	H1	D	S1
BKU-020-37K	121	80	200	189.5	130	6.4
BKU-040-45K	121					
BKU-020-110K	233.5	193.5	343	329	190	6.4
BKU-040-160K	235.3	193.5	543	329	190	0.4

Braking Resistors & Braking Units Selection

difference

Voltage	Motor	Braking Resistor specifications	Braking Unit		
voitage	Motor	braking Resistor specifications	Model	Quantity	
	22K	10800W 6.8Ω	BKU-020-37K	1	
	30K	13500W 5Ω	BKU-020-37K	1	
	37K	21600W 4Ω	BKU-020-37K	1	
200V	45K	21600W 3.4Ω	BKU-020-37K	2	
2007	55K	27000W 2.5Ω	BKU-020-37K	2	
	75K	19200W 2Ω	BKU-020-37K	2	
	90KW	25000W_2R	BKU-020-110K	1	
	110KW	24000W_1.6R	BKU-020-110K	1	
	37KW	21600W 16Ω	BKU-040-45K	1	
	45KW	21600W 13.6Ω	BKU-040-45K	1	
	55KW	27000W 10Ω	BKU-040-45K	2	
	75KW	43200W 6.8Ω	BKU-040-45K	2	
	90KW	43200W 6.8Ω	BKU-040-45K	2	
	110KW	40500W 5Ω	BKU-040-45K	3	
4001/	132KW	54000W 4.4Ω	BKU-040-45K	3	
400V	160KW	38400W 4Ω	BKU-040-160K	1	
	185KW	38400W 3.4Ω	BKU-040-160K	2	
	220KW	57600W 2.7Ω	BKU-040-160K	2	
	250KW	48000W 2.5Ω	BKU-040-160K	2	
	280KW	67200W 2.3Ω	BKU-040-160K	2	
	315KW	67200W 1.9Ω	BKU-040-160K	2	
	355KW	72000W 1.7Ω	BKU-040-160K	3	