



SB70 series High-performance Vector Control Inverter

200V class 0.55~5.5KW, 400V class 4~1100KW

690V class 18.5~1000KW, 1140V 55~1000KW



Products Characteristics

- λ Integrated high-precision rotor field-oriented vector control algorithm makes SB70G the ability of controlling 290% instantaneous torque.
- λ The unique multi-mode PLC operation function is especially suitable for concrete pipe pile making and industrial washing machines.
- λ The practical multi-speed selection function which includes binary code mode、 direct selection mode、 sum mode and number mode is particularly applicable to heating & ventilation industry.
- λ The powerful process PID function includes two sets of PID parameters, and the parameters adopt multiple smooth transition modes. Its multiple correction modes for tension and synchronous control enable SB70G to satisfy the requirements of various industries such as draw benches, textile, paper making and printing & dying etc. Its free PID function is also able to perform as a substitute for exterior PID controller.
- λ SB70G inverter can satisfy various customer needs with its powerful user programmable module.
- λ Abundance of extension options.



Common specifications for SB70G series

Item		Description
Input	Rated voltage and frequency	3-phase: 380V, 50/60Hz
	Allowable range	Voltage: 320~420V; voltage imbalance <3%; frequency: 47~63 Hz
output	Output voltage	3-phase, 0V~input voltage, with the error less than 5%.
	Output frequency range	V/F control: 0.00~650.00Hz Vector control: 0.00~200.00Hz
Basic specifications	Motor control mode	V/F control without PG, V/F control with PG, vector control without PG, vector control with PG, V/F separate control
	Steady-state speed precision	Vector control without PG: ≤1% Vector control with PG: ≤0.02%
	Starting torque	Not less than 150% of rated torque at 0.50Hz
	Overload capacity	150% of rated current for 1 minute
	Frequency resolution	Digital reference: 0.01Hz Analog reference: 0.1% of max. frequency
	Output frequency precision	Analog reference: ±0.2% of max. frequency (25±10°C) Digital reference: 0.01Hz (-10~+40°C)
	Command source	Keypad, terminal and communication. They can be switched over by terminals
	Frequency reference source	Keypad, communication, UP/DOWN value, AI1, AI2, PFI and arithmetic unit
	Auxiliary frequency reference	Achieves flexible frequency setting
	Torque boost	Auto or manual torque boost
	V/F curve	User defined V/F, linear V/F and 5 reduced-torque curves
	Accel/decel	Linear or S-curve acceleration/deceleration
	Jog	Jog frequency: 0.10~50.00Hz Jog accel/decel time: 0.1~60.0s
	Auto energy saving	V/F curve is optimized automatically based on the load condition, achieving auto energy-saving run
	AVR	Keeps the output voltage constant automatically when the voltage of power grid fluctuates
	Auto carrier regulation	Carrier frequency is regulated automatically based on the load characteristic and ambient temperature
	Random PWM	Regulates the tone of the motor noise
	Droop control	Applicable to cases where multiple inverters drive the same load
Momentary power failure	Ensures uninterrupted operation by controlling the DC link voltage	
Dynamic braking	Built-in braking unit and external braking resistor for models of 15kW or less	
DC braking	Braking time: 0.0~60.0s Braking current: 0.0~100.0% of rated current	
PFI	Highest input frequency: 50kHz	



	PFO	Open-collector pulse(square wave) output of 0 ~ 50kHz, programmable
	Analog input	2 channels of analog input, voltage or current type, positive or negative
	Analog output	2 channels of analog output, 0/4 ~ 20mA or 0/2 ~ 10V, programmable
	Digital input	8 channels of optional multi-function digital input(leakage/source type)
	Digital output	2 channels of optional multi-function digital output(leakage/source type); 2 channels of multi-function relay output
	Communication	Bulti-in RS485 port, supporting Modbus protocol and USS commands
Characteristic functions	Process PID	Two sets of PID parameters; multiple correction modes; free PID function
	Multiple PLC modes	User can set 8 PLC run modes, with each having up to 48 stages. The mode can be selected by terminals. PLC status can be saved at power failure.
	Multi-speed select mode	4 selection modes. Refer to F4-17
	User defined menu	30 user parameters can be defined
	Parameter display change	Can display parameters different from the default ones
	Torque control	Torque/speed control can be switched by terminals. Multiple torque setting modes.
	Zero-servo	Zero-speed position can be locked
	High-speed UP/DOWN counter	Synchronous control, counting in production, stop control by count and precise position control can be realized
	High-speed meter counter	Stop control by length and length indication can be achieved
	Wobble	Ensures even winding of textiles
	Programmable unit	Comparator, logic unit, trigger, arithmetic unit, filter, multiple-way switch, timer
		kWh meter timer
Protection functions		Overcurrent, overvoltage, undervoltage, input/output phase loss, output short-circuit, overheating, motor overload, external fault, analog input disconnection, stall prevention, etc.
Options		Braking unit, remote control box, digital I/O expansion board, encoder interface board, analog input expansion board, keypad with copying function or potentiometer, keypad mounting box, keypad extension line,I/O reactor, EMI filter, Profibus-DP module, etc.
Ambient	Service site	Altitude less than 1000 meters; indoor; no direct sunlight; free of dust,corrosive gases, inflammable gases, oil mist, water vapor, water drops, salt mist, etc.
	Temperature/humid	-10~ +40°C/20~90%RH, no condensation

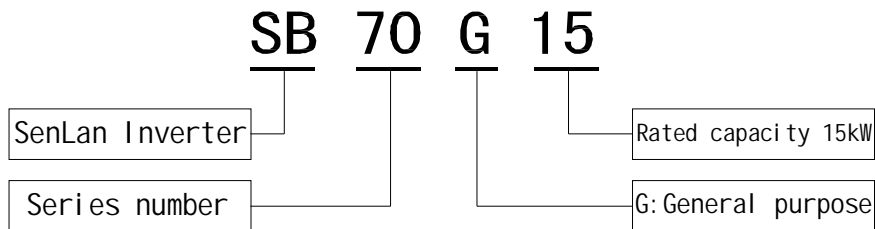


	Storage temperature	-20~+60°C
	Vibration	Less than 5.9m/s ² (0.6g)
Structure	Protection degree	IP20
	Cooling method	Forced air cooling, with fan control

λ Applicable domains

The products can be extensively applicable to Metallurgy, Petro, Chemical industry, Waving, Eletro-power, Structure building, Medichinery, Food, Papermaking, Plastics, Printing & Dying, Hoist, Cable, Washing, water supply, heating ventilation, Wasted Water treatment and so on. The products can also be used to various equipments such as draw benches, mixers, extruders, winding machines, compressors, fans, pumps, grinding machines, belt conveyors, hoists and centrifuges.

λ Description of inverter type



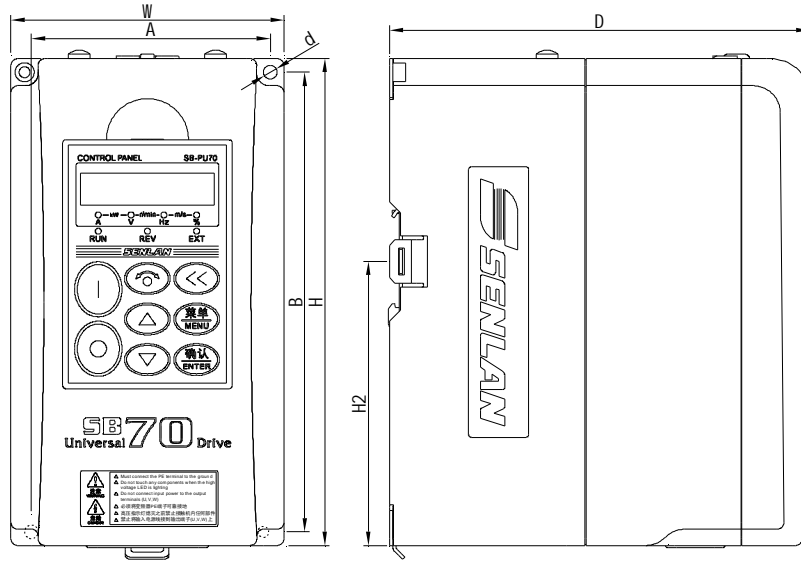
We also provide inverters of 400~1000kW as required.

SB 70 series related parameters

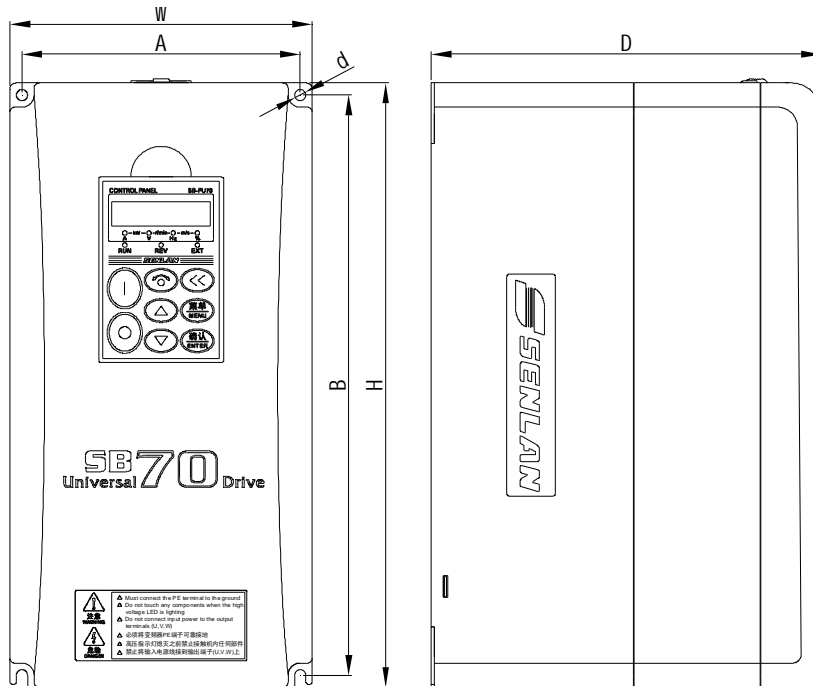
Model	Rated capacity (kVA)	Rated output current (A)	Applicable motor (kW)	model	Rated capacity (kVA)	Rated output current (A)	Applicable motor (kW)
SB70G0.4	1.1	1.5	0.4	SB70G45	60	91	45
SB70G0.75	1.6	2.5	0.75	SB70G55	74	112	55
SB70G1.5	2.4	3.7	1.5	SB70G75	99	150	75
SB70G2.2	3.6	5.5	2.2	SB70G90	116	176	90
SB70G4	6.4	9.7	4	SB70G110	138	210	110
SB70G5.5	8.5	13	5.5	SB70G132	167	253	132
SB70G7.5	12	18	7.5	SB70G160	200	304	160
SB70G11	16	24	11	SB70G200	248	377	200
SB70G15	20	30	15	SB70G220	273	415	220
SB70G18.5	25	38	18.5	SB70G250	310	475	250
SB70G22	30	45	22	SB70G280	342	520	280
SB70G30	40	60	30	SB70G315	389	590	315
SB70G37	49	75	37	SB70G375	460	705	375



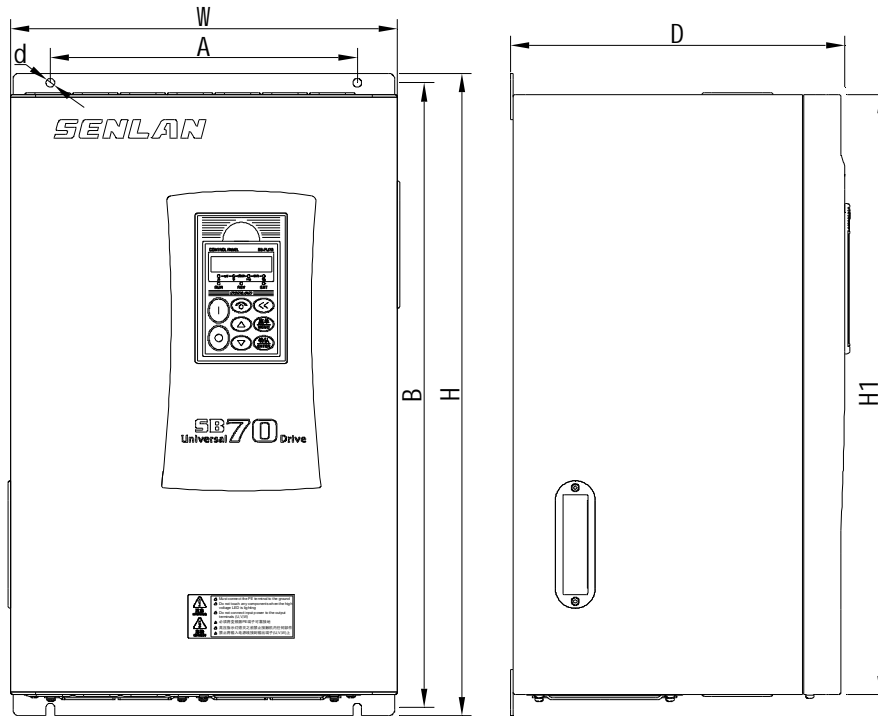
λ Outline drawings of SB70G0.4~SB70G1.5 models(can be DIN rail mounted):



Outline drawings of SB70G2.2~SB70G15 models:



Outline drawing of SB70G18.5(or more) models:



λ Outline dimensions and weights of SB70G series inverters:

Model	W (mm)	H (mm)	H1 (mm)	H2 (mm)	D (mm)	A (mm)	B (mm)	d (mm)	Weight (kg)
SB70G0.4	100	180	—	105	157	87.5	170	Φ4.5	2
SB70G0.75									
SB70G1.5									
SB70G2.2	135	240	—	140	170	125	230	Φ4.5	3
SB70G4									
SB70G5.5	150	300	—	—	195	138	288	Φ5.5	7
SB70G7.5									
SB70G11	200	380	—	—	225	185	367	Φ7	10
SB70G15									
SB70G18.5	290	460	430	—	265	200	448	Φ7	23
SB70G22									
SB70G30	310	514	480	—	265	246	500	Φ7	33
SB70G37	370	570	530	—	288	300	554	Φ9	48
SB70G45									
SB70G55	380	610	560	—	300	250	590	Φ10	58
SB70G75	440	686	650	—	320	300	670	Φ10	82
SB70G90	480	780	730	—	345	350	760	Φ10	113



Model	W (mm)	H (mm)	H1 (mm)	H2 (mm)	D (mm)	A (mm)	B (mm)	d (mm)	Weight (kg)
SB70G110									
SB70G132	520	810	760	—	360	350	788	Φ12	130
SB70G160	590	980	920	—	370	350	955	Φ14	200
SB70G200									
SB70G220	640	1020	960	—	380	430	995	Φ14	230
SB70G250									
SB70G280	720	1100	1030	—	405	450	1068	Φ17	268
SB70G315									
SB70G375	820	1250	1180	—	405	500	1218	Φ17	300