



Compact & Powerful Inverter  
**STARVERT iG5A**

0.4~1.5kW 1phase 200~230Volts  
0.4~22kW 3Phase 200~230Volts  
0.4~22kW 3Phase 380~480Volts

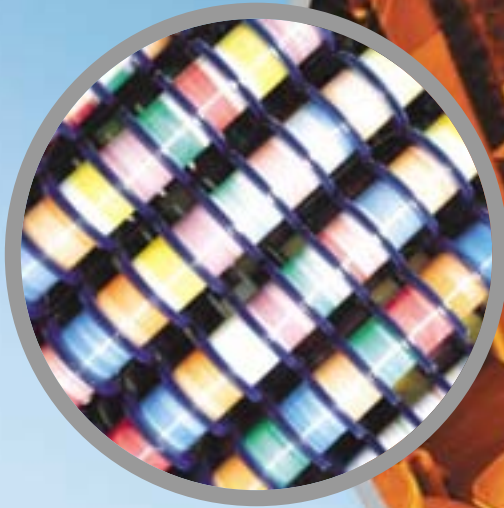


# Inverter STARVERT iG5A

LS Starvert iG5A is very competitive in its price and shows an upgraded functional strength. User-friendly interface, extended inverter ranges up to 22kW, superb torque competence and small size of iG5A provides an optimum use environment.







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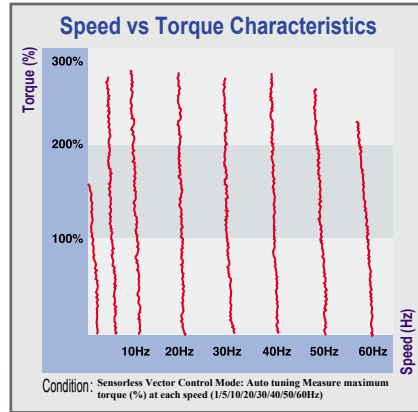
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## Powerful & Upgraded Performance

iG5A provides sensorless vector control, PID control, and ground-fault protection through powerful built-in functions.

### ■ Sensorless vector control

The built-in sensorless vector control provides the superb speed control and powerful high torque.

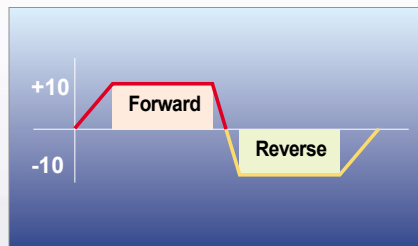


### ■ Ground-fault protection during running

The ground-fault protection of output terminal is possible during running.

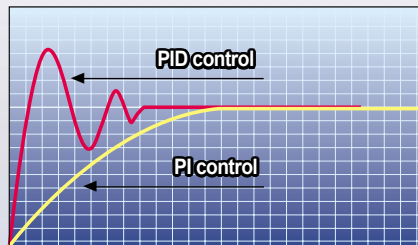
### ■ Analog control from -10V to 10V

Inputting analog signals from -10V to 10V provides user-friendly operation.



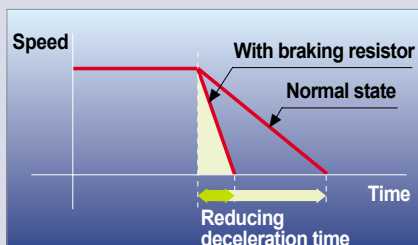
### ■ Built-in PID control

The built-in PID function enables to control flow-rate, oil-pressure, temperature, etc without any extra controller.



### ■ Built-in dynamic braking circuit

The built-in dynamic braking circuit minimizes deceleration time via braking resistors.



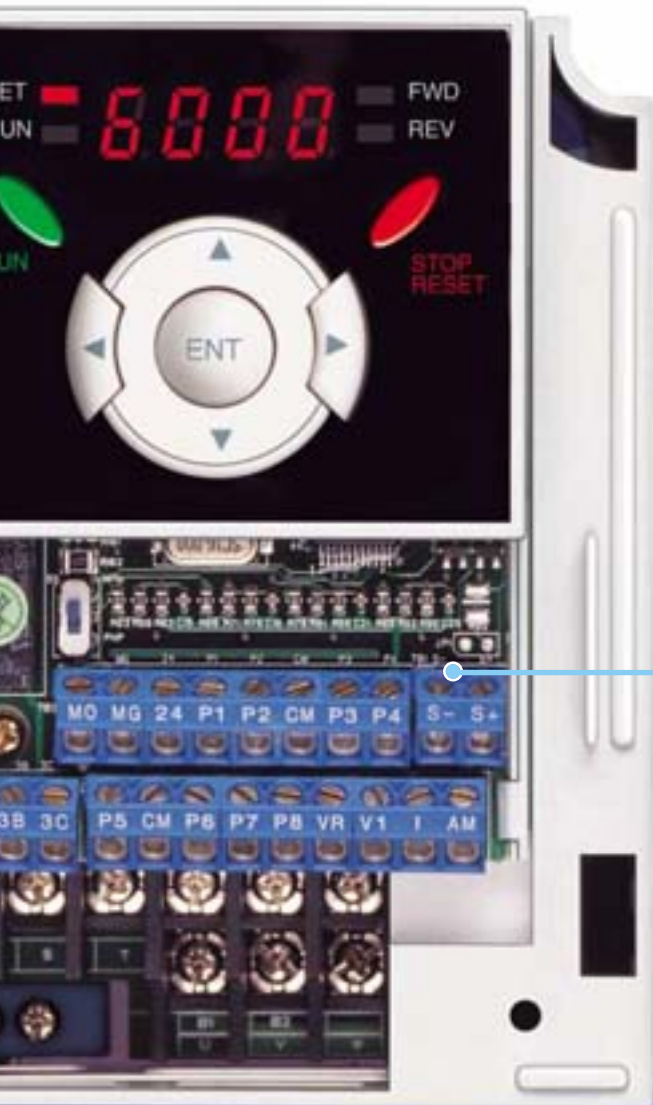
### ■ Built-in 485 communication

The built-in RS-485 communication supports remote control and monitoring between iG5A and other equipment.

### ■ Wide product range

iG5A consists of the product range from 0.4 to 22KW.





## RS-485 communication

### Connected to PC



RS-485 - 232C converter

#### Monitoring

- Checking operation status (Voltage, Current, Frequency, etc)
- Checking modified parameters
- Windows support

#### Remote Control

- Convenient remote control to modify operation status (Forward/Reverse operation, Frequency, etc)
- Easy parameter setting
- Available to control up to 31 Inverters
- RS-485, Modbus communication

### Connected to XGT panel



#### Monitoring

- Checking operation time
- Automatic list-up of trip record
- Language support (Korean, English, Chinese)

#### Remote Control

- Convenient remote control to modify operation status (Forward/Reverse operation, Frequency, etc)
- Easy parameter setting
- Available to control up to 31 Inverters
- RS-485, Modbus communication



## User-friendly Interface & Easy Maintenance

The parameter setting becomes easier by adopting the 4 directions key. And iG5A supports easy maintenance via diagnosis and fan changeable structure.

### ■ Diagnosis of output module

Through easy parameter setting, iG5A can diagnose the status of output module.

### ■ Easy change of fan

iG5A is designed to be the fan changeable structure in preparation for a fan breakdown.



### ■ Cooling fan control

By controlling the cooling fan, iG5A provides a virtually quiet environment according to the status of operation.

### ■ User-friendly interface

The 4 directions key provides easy handling and monitoring.

### ■ External loader (Optional)

The external loader away from a panel enables to control and monitor conveniently. And the parameters made by external loader can be copied and applicable to other Inverters.



Model name	Remarks
INV, REMOTE KPD 2M (SV-iG5A)	2m
INV, REMOTE KPD 3M (SV-iG5A)	3m
INV, REMOTE KPD 5M (SV-iG5A)	5m



## Compact Size

The compact size achieves cost-efficiency and various applications.

- Same height from 0.4 to 4.0kW (128mm)

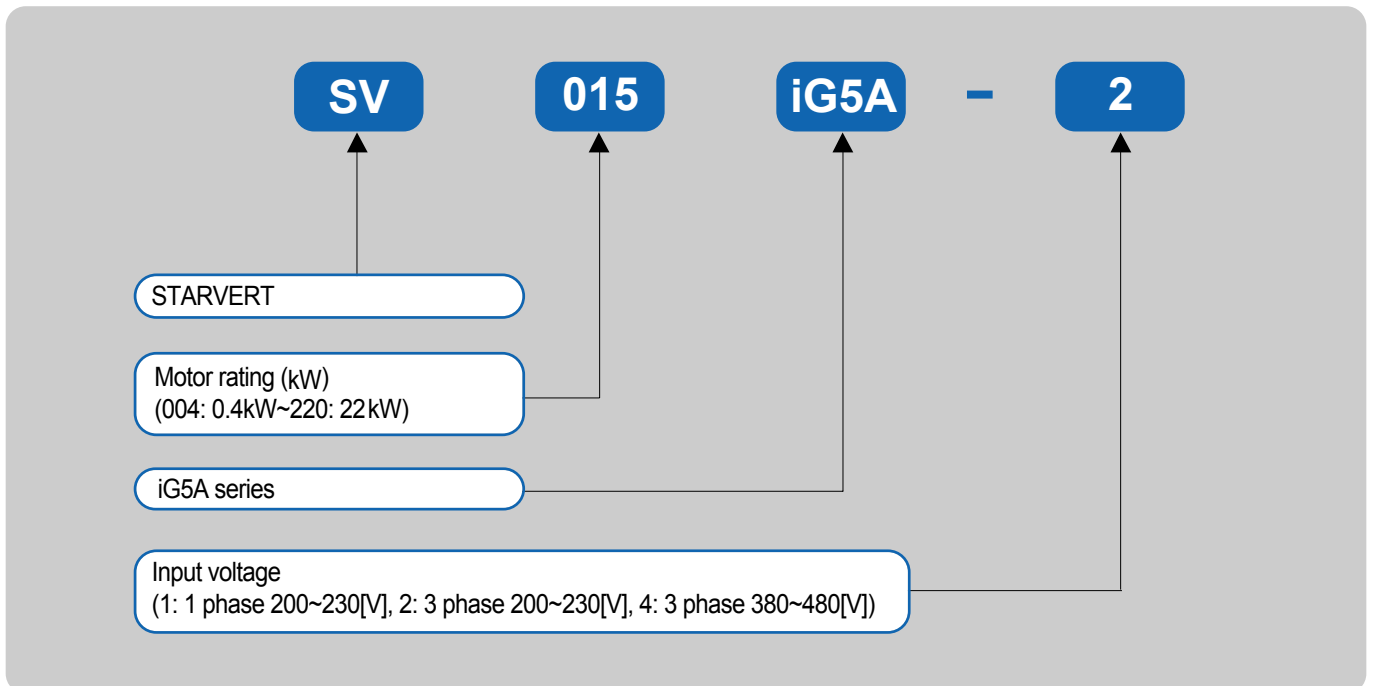


## Global standard compliance CE UL

- **Global standard**  
iG5A series complies with CE and UL standards.
- **PNP/NPN input**  
Both PNP and NPN inputs become possible and these enable to use the outer power.  
To do so, users will be given wider choices of selecting the controller.

# Model & Type

Applicable motor ranges	1 Phase 200V	3 Phase 200V	3 Phase 400V
0.4kW (0.5HP)	SV004iG5A-1	SV004iG5A-2	SV004iG5A-4
0.75kW (1HP)	SV008iG5A-1	SV008iG5A-2	SV008iG5A-4
1.5kW (2HP)	SV015iG5A-1	SV015iG5A-2	SV015iG5A-4
2.2kW (3HP)		SV022iG5A-2	SV022iG5A-4
3.7kW (5HP)		SV037iG5A-2	SV037iG5A-4
4.0kW (5.4HP)		SV040iG5A-2	SV040iG5A-4
5.5kW (7.5HP)		SV055iG5A-2	SV055iG5A-4
7.5kW (10HP)		SV075iG5A-2	SV075iG5A-4
11.0kW (15HP)		SV110iG5A-2	SV110iG5A-4
15.0kW (20HP)		SV150iG5A-2	SV150iG5A-4
18.5kW (25HP)		SV185iG5A-2	SV185iG5A-4
22.0kW (30HP)		SV220iG5A-2	SV220iG5A-4





# Standard Specifications

## ●● 1 Phase 200V

SV □□□ iG5A-1 □□		004	008	015
Max. capacity <sup>1)</sup>	(HP)	0.5	1	2
	(kW)	0.4	0.75	1.5
Output rating	Capacity (kVA) <sup>2)</sup>	0.95	1.9	3.0
	FLA (A) <sup>3)</sup>	2.5	5	8
	Max frequency	400 [Hz] <sup>4)</sup>		
	Max voltage	3 phase 200~230V <sup>5)</sup>		
Input rating	Rated voltage	1phase 200~230 VAC (+10%, -15%)		
	Rated frequency	50~60 [Hz] (±5%)		
Cooling method		Forced air cooling		
Weight (kg)		0.76	1.12	1.84

## ●● 3 Phase 200V

SV □□□ iG5A-2 □□		004	008	015	022	037	040	055	075	110	150	185	220
Max. capacity <sup>1)</sup>	(HP)	0.5	1	2	3	5	5.4	7.5	10	15	20	25	30
	(kW)	0.4	0.75	1.5	2.2	3.7	4.0	5.5	7.5	11	15	18.5	22
Output rating	Capacity (kVA) <sup>2)</sup>	0.95	1.9	3.0	4.5	6.1	6.5	9.1	12.2	17.5	22.9	28.2	33.5
	FLA (A) <sup>3)</sup>	2.5	5	8	12	16	17	24	32	46	60	74	88
	Max frequency	400 [Hz] <sup>4)</sup>											
	Max voltage	3 phase 200~230V <sup>5)</sup>											
Input rating	Rated voltage	3 phase 200~230 (+10%, -15%)											
	Rated frequency	50~60 [Hz] (±5%)											
Cooling method		N/C <sup>6)</sup>	Forced air cooling										
Weight (kg)		0.76	0.77	1.12	1.84	1.89	1.89	3.66	3.66	9.0	9.0	13.3	13.3

## ●● 3 Phase 400V

SV □□□ iG5A-4 □□		004	008	015	022	037	040	055	075	110	150	185	220
Max. capacity <sup>1)</sup>	(HP)	0.5	1	2	3	5	5.4	7.5	10	15	20	25	30
	(kW)	0.4	0.75	1.5	2.2	3.7	4.0	5.5	7.5	11	15	18.5	22
Output rating	Capacity (kVA) <sup>2)</sup>	0.95	1.9	3.0	4.5	6.1	6.5	9.1	12.2	18.3	22.9	29.7	34.3
	FLA (A) <sup>3)</sup>	1.25	2.5	4	6	8	9	12	16	24	30	39	45
	Max frequency	400 [Hz] <sup>4)</sup>											
	Max voltage	3 phase 380~480V <sup>5)</sup>											
Input rating	Rated voltage	3 phase 380~480 VAC (+10%, -15%)											
	Rated frequency	50~60 [Hz] (±5%)											
Cooling method		N/C <sup>6)</sup>	Forced air cooling										
Weight (kg)		0.76	0.77	1.12	1.84	1.89	1.89	3.66	3.66	9.0	9.0	13.3	13.3

1) Indicate the maximum applicable motor capacity when using 4 pole LS standard motor.

2) Rated capacity is based on 220V for 200V series and 440V for 400V series.

3) Refer to 15-3 of user's manual when carrier frequency setting (39) is above 3kHz.

4) Max. frequency setting range is extended to 300Hz when H40 (Control mode select) is set to 3 (Sensorless vector control).

5) Max. output voltage cannot be higher than the input voltage. It can be programmable below input voltage.

6) Self-Cooling

# Standard Specifications

Control	Control method		V/F, Sensorless vector control	
	Frequency setting resolution		Digital command: 0.01Hz Analog command: 0.06Hz (Max. freq.: 60Hz)	
	Frequency accuracy		Digital command: 0.01% of Max. output frequency Analog command: 0.1% of Max. output frequency	
	V/F pattern		Linear, Squared, User V/F	
	Overload capacity		150% per 1 min.	
	Torque boost		Manual/Auto torque boost	
	Dynamic braking	Max. braking torque	20% <sup>1)</sup>	
Max. Duty		150% when using optional DB resistor <sup>2)</sup>		
Operation	Operation mode		Keypad/ Terminal/ Communication option/ Remote keypad selectable	
	Frequency setting		Analog: 0~10V, -10~10V, 0~20mA Digital: Keypad	
	Operation features		PID, Up-down, 3-wire	
	Input	Multi-function terminal P1~P8	NPN/PNP selectable	
			FWD/REV RUN, Emergency stop, Fault reset, Jog operation, Multi-step Frequency-High, Mid, Low, Multi-step Accel/Decel-High, Mid, Low, DC braking at stop, 2nd motor select, Frequency UP/Down, 3-wire operation, External trip A, B, PID-Inverter (V/F) operation bypass, Option-inverter (V/F) operation bypass, Analog Hold, Accel/Decel stop	
	Output	Open collector terminal	Fault output and inverter status output	Less than DC 24V, 50mA
		Multi-function relay		(N.O., N.C.) Less than AC 250V, 1A; Less than DC 30V, 1A
	Analog output (AM)	0~10Vdc (less than 10mA): Output freq, Output current, Output voltage, DC link selectable		
Protective function	Trip		Over voltage, Under voltage, Over current, Ground fault current detection, Inverter overheat, Motor overheat, Output phase open, Overload protection, Communication error, Loss of speed command, Hardware fault, Fan trip	
	Alarm		Stall prevention, Overload	
	Momentary power loss		Below 15 msec.: Continuous operation (Should be within rated input voltage, rated output power.) Above 15 msec.: Auto restart enable	
Environment	Protection degree		IP 20, NEMA1 (Optional)	
	Ambient temp		-10°C ~50°C	
	Storage temp		-20°C ~65°C	
	Humidity		Below 90% RH (No condensation)	
	Altitude/Vibration		Below 1,000m, 5.9m/sec <sup>2</sup> (0.6G)	
	Atmospheric pressure		70~106 kPa	
	Location		Protected from corrosive gas, Combustible gas, Oil mist or dust	

<sup>1)</sup> Means average braking torque during Decel to stop of a motor.

<sup>2)</sup> Refer to Chapter 16 of user's manual for DB resistor specification.