

Variable Frequency Drive / Inverter **STARVERT Series**

IC5 / IG5 / IS5 / IH / IG5A / IP5A : 0.4~220kW



Automation Equipment



良譽有限公司
D'De TRADE CO., LTD.

TEL: 04-23160121

Fax: 04-23160140

Address: 台中市西屯區天水東一街40號



Take another look!

Simplicity-Precision, Flexibility-Standardization and Easy to use-Diversity are the spiritual foundations of LS Starvert variable frequency drives.

As an one-stop drive solution provider LS is ready to offer its own competitive solutions into the general power transmission industry.



STARVERT series

Contents

- Starvert iC5 4
- Starvert iG5 5
- Starvert iS5 6
- Starvert iH 7
- Starvert iG5A 8
- Starvert iP5A 9
- Standard features & Configuration comparison 10



Starvert *iC5*

- Volts / hertz & sensorless vector control
- Motor parameter auto-tuning
- 150% torque at 0.5Hz
- 0 ~ 400Hz output frequency
- 1 ~ 15kHz carrier frequency
- Built-in process PID control
- Ground fault protection
- Built-in RFI filter (class A)
- Built-in potentiometer
- Programmable I / O
- PNP / NPN selectable signal input
- 0 ~ 10Vdc Analog output
- Optional ModBus communication board

Dynamic & Micro single phase inverter

0.4 ~ 2.2 kW, 1 ϕ



Specifications

Model		SV004iC5-1	SV008iC5-1	SV015iC5-1	SV022iC5-1	SV004iC5-1F	SV008iC5-1F	SV015iC5-1F	SV022iC5-1F	
Motor rating	[HP]	0.5	1	2	3	0.5	1	2	3	
	[kW]	0.4	0.75	1.5	2.2	0.4	0.75	1.5	2.2	
Output ratings	Capacity [kVA]	0.95	1.9	3	4.5	0.95	1.9	3	4.5	
	FLA [A]	2.5	5	8	12	2.5	5	8	12	
	Voltage [V]	Three phase, 200~230V								
	Frequency [Hz]	0~400Hz								
Input ratings	Voltage [V]	Single phase, 200~230V ($\pm 10\%$)								
	Frequency [Hz]	50~60Hz ($\pm 5\%$)								

Control method	• Sensorless vector • V/F
Frequency setting resolution	• Digital reference: 0.01Hz • Analog reference: 0.06Hz at 60Hz
Frequency setting accuracy	• Digital: 0.01% of Maximum output frequency • Analog: 0.1% of Maximum output frequency
V/F ratio	• Linear • Square • User V/F
Overload capacity	• 1 minute at 150% • 30 seconds at 200% (with inverse characteristic proportional to time)
Torque boost	• Auto • Manual
RFI filter	None Built-in (class A)
Multi-function input terminals	Total 5 inputs (programmable)
Analog output	0~10Vdc

Input signal	Operator control	• 3 digits LED keypad • Terminals • ModBus communication(option)
	Frequency setting	• Analog: 0~10V, 4~20mA • Digital: Keypad • Communication: ModBus • Built-in potentiometer
	Start signal	• Forward • Reverse
	Multi-step operation	Setting up to 8 speeds (using multi-function terminal)
	Multi-step Accel./Decel. time	0.1~6000 seconds. Maximum 8 pre-defined steps using multi-function terminals
	Operational functions	• PID control • Up-Down operation • 3-wire operation • Frequency limit • Frequency jump • Second motor function • Slip compensation • Reverse rotation prevention • Auto restart
	Emergency stop	Interrupting output from inverter
	Jog	Jog operation
	Fault reset	Resets fault signal when protective function is active
	Output signal	Operational status
Indicator		• Output frequency • Output current • Output voltage • DC bus voltage

Protective functions	Trip	• Overvoltage • Undervoltage • Overcurrent • Inverter overheat • Motor overheat • I/O phase loss • I/O miss wiring • Overload • External device fault 1 & 2 • Speed command loss • Hardware fault • Communication error • CPU error
	Alarm	• Stall • Overload

User friendly compact inverter

0.4 ~ 4.0 kW, 3 ϕ

0.4 ~ 1.5 kW, 1 ϕ



Starvert iG5

- Space vector control technology
- Volts / hertz control
- 150% torque at 0.5Hz
- 1 ~ 10kHz carrier frequency
- Trip-free operation algorithm
- Auto & manual torque boost
- 8 preset speeds
- Built-in process PID
- Built-in braking IGBT
- Built-in ModBus / RS485 communication
- PNP / NPN selectable signal
- 4 digits detachable display (keypad)
- Parameter upload & download

Specifications

Model		SV004IG5-1U	SV008IG5-1U	SV015IG5-1U	SV004IG5-2U	SV008IG5-2U	SV015IG5-2U	SV022IG5-2U	SV037IG5-2U	SV040IG5-2U	
Motor rating	[HP]	0.5	1	2	0.5	1	2	3	5	5.4	
	[kW]	0.4	0.75	1.5	0.4	0.75	1.5	2.2	3.7	4	
Output ratings	Capacity [kVA]	1.1	1.9	3	1.1	1.9	3	4.5	6.1	6.5	
	FLA [A]	3	5	8	3	5	8	12	16	17	
	Voltage [V]	Three phase, 200~230V									
Input ratings	Frequency [Hz]	0~400Hz									
	Voltage [V]	Single phase, 200~230V ($\pm 10\%$)					Three phase, 200~230V ($\pm 10\%$)				
	Frequency [Hz]	50~60Hz ($\pm 5\%$)					50~60Hz ($\pm 5\%$)				

Model		SV004IG5-4U	SV008IG5-4U	SV015IG5-4U	SV022IG5-4U	SV037IG5-4U	SV040IG5-4U
Motor rating	[HP]	0.5	1	2	3	5	5.4
	[kW]	0.4	0.75	1.5	2.2	3.7	4
Output ratings	Capacity [kVA]	1.1	1.9	3	4.5	6.1	6.5
	FLA [A]	1.1	2.5	4	6	8	9
	Voltage [V]	Three phase, 380~480V					
Input ratings	Frequency [Hz]	0~400Hz					
	Voltage [V]	Three phase, 380~480V ($\pm 10\%$)					
	Frequency [Hz]	50~60Hz ($\pm 5\%$)					

Control method	• V/F Control (Space-Vector PWM)	
Frequency setting resolution	• Digital reference: 0.01Hz (below 99Hz) & 0.1Hz (100Hz and over) • Analog reference: 0.03Hz at 50Hz	
Frequency setting accuracy	• Digital: 0.01% of Maximum output frequency • Analog: 0.1 % of Maximum output frequency	
V/F ratio	• Linear • Square • User V/F	
Overload capacity	• 1 minute at 150% • 30 seconds at 200% (with inverse characteristic proportional to time)	
Torque boost	• Auto • Manual (0~15%)	
Assigned terminals	• FX (forward) • RX (reverse) • BX (inverter gate blocking) • RST (reset) • JOG (Jog)	
Multi-function input terminals	Total 3 inputs (programmable)	
Analog output	0~10Vdc	
Input signal	Operator control	• 4 digits LED keypad • Terminals • ModBus communication
	Frequency setting	• Analog: 0~10V, 4~20mA • Digital: Keypad • Communication: ModBus
	Start signal	• Forward • Reverse
	Multi-step operation	Setting up to 8 speeds (using multi-function terminal)
	Multi-step Accel./Decel. time	0.1~6000 seconds, Maximum 8 pre-defined steps using multi-function terminals
	Operational functions	• DC braking • Frequency limit • Frequency jump • Second motor function • Slip compensation
		• Reverse rotation prevention • Auto restart • PID controls
	Emergency stop	Interrupting output from inverter
	Jog	Jog operation
	Fault reset	Resets fault signal when protective function is active
Output signal	Operational status	• Frequency detection • Overload alarm • Stall • Overvoltage • Undervoltage • Inverter overheat • Run • Stop
	Indicator	• Constant speed • Speed search • Fault output (Relay and Open collector output)
		• Output frequency • Output current • Output voltage • DC voltage • rpm
Protective functions	Trip	• Overvoltage • Undervoltage • Overcurrent • Inverter overheat • Motor overheat • I/O phase loss • I/O miss wiring
	Alarm	• Overload • Speed command loss • Hardware fault • Communication error
		• Stall • Overload

Starvert *iS5*

Precise high torque full vector control inverter

0.75 ~ 75 kW

- Sensorless & sensed vector control
- Full vector, 150% torque in overall range (continuous torque & speed control)
- Motor parameter auto-tuning
- 1 ~ 15kHz carrier frequency
- Auto speed search
- Built-in process PID control
- Optional multi-motor control (up to 4)
- 32 characters LCD & 7-segment display keypad
- Parameter upload & download (LCD Loader only)
- Extendable optional I / O sub-boards
- Optional communication boards:
RS485, ModBus, ProfiBus-DP, DeviceNet
- Built-in braking IGBT (up to 7.5kW)
- Built-in keypad over 30kW



Specifications

Model		SV008 iS5-2NU	SV015 iS5-2NU	SV022 iS5-2NU	SV037 iS5-2NU	SV055 iS5-2NU	SV075 iS5-2NU	SV110 iS5-2NU	SV150 iS5-2NU	SV185 iS5-2NU	SV220 iS5-2NU	SV300 iS5-2U	SV370 iS5-2U	SV450 iS5-2U	SV550 iS5-2U	
Motor rating	[HP]	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	
	[kW]	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	
Output ratings	Capacity [kVA]	1.9	3	4.5	6.1	9.1	12.2	17.5	22.9	28.2	33.5	46	55	68	84	
	FLA [A]	5	8	12	16	24	32	46	60	74	88	122	146	180	220	
	Voltage [V]	Three phase, 200~230V														
Input ratings	Frequency [Hz]	0~400Hz (Sensorless vector Control: 0~300Hz, Sensed Vector Control: 0~120Hz)														
	Voltage [V]	Three phase, 200~230V (±10%)														
	Frequency [Hz]	50~60Hz (±5%)														

Model		SV008 iS5-4NU	SV015 iS5-4NU	SV022 iS5-4NU	SV037 iS5-4NU	SV055 iS5-4NU	SV075 iS5-4NU	SV110 iS5-4NU	SV150 iS5-4NU	SV185 iS5-4NU	SV220 iS5-4NU	SV300 iS5-4U	SV370 iS5-4U	SV450 iS5-4U	SV550 iS5-4U	SV750 iS5-4U	
Motor rating	[HP]	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	
	[kW]	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	
Output ratings	Capacity [kVA]	1.9	3	4.5	6.1	9.1	12.2	18.3	22.9	29.7	34.3	45	56	68	82	100	
	FLA [A]	2.5	4	6	8	12	16	24	30	39	45	61	75	91	110	152	
	Voltage [V]	Three phase, 380~480V															
Input ratings	Frequency [Hz]	0~400Hz (• Sensorless vector Control: 0~300Hz, • Sensed Vector Control: 0~120Hz)															
	Voltage [V]	Three phase, 380~480V (±10%)															
	Frequency [Hz]	50~60Hz (±5%)															

Control method	• V/F Control • Sensorless vector Control • Sensed Vector Control (Velocity, Torque) selectable	
Frequency setting resolution	• Digital reference: 0.01Hz (below 99Hz) & 0.1Hz (100Hz and over) • Analog reference: 0.03Hz at 60Hz	
Frequency setting accuracy	• Digital: 0.01% of Maximum output frequency • Analog: 0.1 % of Maximum output frequency	
V/F ratio	• Linear • Square • User V/F	
Overload capacity	• 1 minute at 150% • 30 seconds at 200% (with inverse characteristic proportional to time)	
Torque boost	• Auto • Manual (0~15%)	
Assigned terminals	• FX (forward) • RX (reverse) • BX (inverter gate blocking) • RST (reset) • JOG (Jog)	
Multi-function input terminals	Total 3 inputs (programmable)	
Analog output	0~10V linear	
Input signal	Operator control	• 32 character LCD keypad • 4 digits LED keypad • Terminals • Communication (ModBus-RTU, RS485, ProfiBus-DP, DeviceNet, F-Net)
	Frequency setting	• Analog: 0~10V, 4~20mA, additional port for Sub-Board (0~10V) • Digital: Keypad • Communication
	Start signal	• Forward • Reverse
	Multi-step operation	Setting up to 8 speeds (using multi-function terminal)
	Multi-step Accel/Decel. time	0.1~6000 seconds. Maximum 8 pre-defined steps using multi-function terminals
	Operational functions	• DC braking • Frequency limit • Frequency jump • Second motor function • Slip compensation • Reverse rotation prevention • Auto restart • Inverter by-pass • Auto-tuning • PID control
	Emergency stop	Interrupting output from inverter
Output signal	Auto operation	Operates from Internal Sequence by Setting Multi-Function Terminal (5Way × 8Step)
	Jog	Jog operation
	Fault reset	Resets fault signal when protective function is active
	Operational status	• Frequency detection • Overload alarm • Stall • Overvoltage • Undervoltage • Inverter overheat • Run • Stop • Constant speed • Speed search • Fault output (Relay and Open collector output) • Inverter by-pass • Auto-operation step • Auto-operation sequence
Protective functions	Indicator	• Output frequency • Output current • Output voltage • DC voltage • Output torque (output voltage: 0~10V)
	Trip	• Overvoltage • Undervoltage • Overcurrent • Inverter overheat • Motor overheat • I/O phase loss • I/O miss wiring • Fuse open
	Alarm	• Ground fault • External fault 1, 2 • Option fault • Overload • Speed command loss • Hardware fault • Communication error • Stall • Overload • Temperature sensor fault

Robust dual rated high power inverter

30 ~ 220 kW, (CT & VT)



Starvert *iH*

- Space vector control algorithm
- Volts / hertz control (PWM by IGBT)
- Constant / Variable torque dual rating
- 32bits DSP (Digital signal processor)
- 2 ~ 10kHz carrier frequency
- Built-in process PID control
- 32 characters LCD display
- Parameter upload & download
- 4 ~ 20mA analog output
- Optional communication boards: RS485

Specifications

Model		SV030 IH-2U	SV037 IH-2U	SV045 IH-2U	SV055 IH-2U	SV030 IH-4U	SV037 IH-4U	SV045 IH-4U	SV055 IH-4U	SV075 IH-4U	SV090 IH-4U	SV110 IH-4U	SV132 IH-4U	SV160 IH-4U	SV220 IH-4U
Motor rating	Constant Torque [HP]	40	50	60	75	40	50	60	75	100	125	150	175	215	300
	Constant Torque [kW]	30	37	45	55	30	37	45	55	75	90	110	132	160	220
	Variable Torque [HP]					50	60	75	100	125	150	175	215	250	350
	Variable Torque [kW]					37	45	55	75	90	110	132	160	185	280
Output ratings (380V based)	Constant Torque FLA [A]	122	146	180	220	61	75	91	110	152	183	223	264	325	432
	Constant Torque [kVA]	46	55	68	83	40	50	60	70	100	120	145	170	200	280
	Variable Torque FLA [A]					80	96	115	125	160	228	264	330	361	477
	Variable Torque [kVA]					52	62	74	80	103	147	170	213	233	307
Voltage	[V]	Three phase, 200~230V				Three phase, 380~460V									
	[Hz]	0~400Hz				0~400Hz									
Input ratings	Voltage [V]	Three phase, 200~230V (±10%)				Three phase, 380~460V (±10%)									
	Frequency [Hz]	50~60Hz (±5%)				50~60Hz (±5%)									

Control method	• V/F Control (Space Vector PWM)	
Frequency setting resolution	• Digital reference: 0.01Hz (below 99Hz) & 0.1Hz (100Hz and over) • Analog reference: 0.03Hz at 60Hz	
Frequency setting accuracy	• Digital: 0.01% of Maximum output frequency • Analog: 0.1 % of Maximum output frequency	
V/F ratio	• Linear • Non-linear • User V/F	
Overload capacity	Constant Torque	• 1 minute at 150% • 0.5 seconds at 200% (with inverse characteristic proportional to time)
	Variable Torque	• 1 minute at 110% • 0.5 seconds at 150% (with inverse characteristic proportional to time)
Torque boost	• Auto • Manual (0~20%)	
Assigned terminals	• FX (forward) • RX (reverse) • BX (inverter gate blocking) • RST (reset)	
Multi-function input terminals	Total 6 inputs (programmable)	
Analog output	• 0~10V pulse • 4~20mA linear	

Input signal	Operator control	• 32 character LCD keypad • Terminals • Communication (RS-485: LSBus)
	Frequency setting	• Analog: 0~10V, 4~20mA, additional port for Sub-Board (0~10V) • Digital: Keypad • Communication
	Start signal	• Forward • Reverse
	Multi-step operation	Setting up to 8 speeds (using multi-function terminal)
	Multi-step Accel./Decel. time	0.1~6000 seconds, Maximum 8 pre-defined steps using multi-function terminals
	Operational functions	• DC braking • Frequency limit • Frequency jump • Slip compensation • PI control • Stall prevention
	Emergency stop	Interrupting output from inverter
	Jog	Jog operation
Output signal	Fault reset	Resets fault signal when protective function is active
	Operational status	• Frequency detection • Overload alarm • Stall • Overvoltage • Undervoltage • Inverter overheat • Run • Stop
Indicator		• Constant speed • Speed search
		• Output frequency • Output current • Output voltage • rpm

Protective functions	Trip	• Overvoltage • Undervoltage • Overcurrent • Inverter overheat • Motor overheat • Fuse open • Ground fault • Overload
	Alarm	• Stall • Overload

Starvert iG5A

Powerful & compact sensorless vector control inverter

0.4 ~ 7.5 kW

- Extremely compact in its size
- Volts / hertz and sensorless vector control
- 150% torque in overall range
- Motor parameter auto-tuning at stop mode
- Changing carrier frequency as per Module temperature
- Ground fault detection during run
- Built-in process PID control
- Up / down & 3-wire operational function
- Optional remote keypad
- 0 ~ 10Vdc, -10 ~ +10Vdc Analog Input
- PNP / NPN selectable signal input
- Selectable configured I / O
- Built-in RS485 (LSBus, ModBus-RTU) communication
- Built-in braking IGBT
- Cooling fan On / Off control



Specifications

Model		SV004IG5A-2	SV008IG5A-2	SV015IG5A-2	SV022IG5A-2	SV037IG5A-2	SV040IG5A-2	SV055IG5A-2	SV075IG5A-2	
Motor rating	[HP]	0.5	1	2	3	5	5.4	7.5	10	
	[kW]	0.4	0.75	1.5	2.2	3.7	4	5.5	7.5	
Output ratings	Capacity [kVA]	0.95	1.9	3	4.5	6.1	6.5	9.1	12.2	
	FLA [A]	2.5	5	8	12	16	17	24	32	
	Voltage [V]	Three phase, 200~230V								
Input ratings	Frequency [Hz]	0~400Hz								
	Voltage [V]	Three phase, 200~230V (-15%, +10%)								
	Frequency [Hz]	50~60Hz (±5%)								

Model		SV004IG5A-4	SV008IG5A-4	SV015IG5A-4	SV022IG5A-4	SV037IG5A-4	SV040IG5A-4	SV055IG5A-4	SV075IG5A-4	
Motor rating	[HP]	0.5	1	2	3	5	5.4	7.5	10	
	[kW]	0.4	0.75	1.5	2.2	3.7	4	5.5	7.5	
Output ratings	Capacity [kVA]	0.95	1.9	3	4.5	6.1	6.9	9.1	12.2	
	FLA [A]	1.25	2.5	4	6	8	9	12	16	
	Voltage [V]	Three phase, 380~480V								
Input ratings	Frequency [Hz]	0~400Hz								
	Voltage [V]	Three phase, 380~480V (-15%, +10%)								
	Frequency [Hz]	50~60Hz (±5%)								

Control method	• V/F Control • Sensorless vector Control								
Frequency setting resolution	• Digital reference: 0.01Hz (below 99Hz) & 0.1Hz (100Hz and over) • Analog reference: 0.06Hz at 60Hz								
Frequency setting accuracy	• Digital: 0.01% of Maximum output frequency • Analog: 0.1 % of Maximum output frequency								
V/F ratio	• Linear • Square • User V/F								
Overload capacity	• 1 minute at 150% • 30 seconds at 200% (with inverse characteristic proportional to time)								
Torque boost	• Auto • Manual (0~15%)								
Multi-function input terminals	Total 8 inputs (programmable)								
Analog output	0~10V linear								

Input signal	Operator control	• 4 digits LED keypad • Terminals • Communication (LSBus, ModBus-RTU)								
	Frequency setting	• Analog: 0~10V, 0(4)~20mA • Digital: Keypad • Communication								
	Multi-step operation	Setting up to 8 speeds (using multi-function terminal)								
	Multi-step Accel./Decel. time	0.1~6000 seconds. Maximum 8 pre-defined steps using multi-function terminals								
	Operational functions	• DC braking • Frequency limit • Frequency jump • Second motor function • Slip compensation • Reverse rotation prevention								
	Emergency stop	• Auto restart • Inverter by-pass • Auto-tuning • PID control								
	Jog	Interrupting output from inverter								
Output signal	Fault reset	Jog operation								
	Operational status	Resets fault signal when protective function is active								
	Indicator	• Frequency detection • Overload alarm • Stall • Overvoltage • Undervoltage • Inverter overheat • Run • Stop • Constant speed								
Protective functions	Trip	• Speed search • Fault output (Relay and Open collector output) • Inverter by-pass • Auto-operation step • Auto-operation sequence								
	Alarm	• Output frequency • Output current • Output voltage • DC voltage • Output torque (output voltage: 0~10V)								
	Alarm	• Overvoltage • Undervoltage • Overcurrent • Inverter overheat • Motor overheat (I ² t) • Fan failure								
		• Overload • Speed command loss • Hardware fault • Communication error • Input/output phase loss • Power module failure								
		• Stall • Overload • Temperature sensor fault								

Fan & Pump exclusive use inverter

5.5 ~ 90 kW



Starvert *iP5A*

- Variable torque rating for HVAC and pump
- Volts / hertz and sensorless vector control
- 150% torque in overall range
- Motor parameter auto-tuning
- High speed 32 bits Digital signal processor
- 0.7 ~ 15kHz carrier frequency
- Built-in multi-motor control (up to 4)
- Built-in process PID control
- Up / Down & 3-wire operational function
- Built-in ModBus (RS485) communication
- 0 ~ 10Vdc, -10 ~ +10Vdc Analog Input
- PNP / NPN selectable signal input
- External (NTC/PTC) input
- Optional extendable sub-boards, ProfiBus & DeviceNet (Soon to be released)
- Optional braking unit
- Cooling fan On / Off control (above 37kW)

Specifications

Model			SV055 iP5A-2	SV075 iP5A-2	SV110 iP5A-2	SV150 iP5A-2	SV185 iP5A-2	SV220 iP5A-2	SV300 iP5A-2
Motor rating	Variable torque	[HP]	7.5	10	15	20	25	30	40
	Variable torque	[kW]	5.5	7.5	11	15	18.5	22	30
Output ratings	Variable torque	[kVA]	9.1	12.2	17.5	22.9	28.2	33.5	46
	Variable torque	FLA[A]	24	32	46	60	74	88	122
Voltage			Three phase, 200~230V						
Frequency			0~120Hz						
Input ratings	Voltage	[V]	Three phase, 200~230V (-15%, +10%)						
	Frequency	[Hz]	50~60Hz (±5%)						

Model			SV055 iP5A-4	SV075 iP5A-4	SV110 iP5A-4	SV150 iP5A-4	SV185 iP5A-4	SV220 iP5A-4	SV300 iP5A-4	SV370 iP5A-4	SV450 iP5A-4	SV550 iP5A-4	SV750 iP5A-4	SV900 iP5A-4
Motor rating	Variable torque	[HP]	7.5	10	15	20	25	30	40	50	60	75	100	125
	Variable torque	[kW]	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90
Output ratings	Variable torque	[kVA]	9.1	12.2	18.3	22.9	29.7	34.3	45	57.2	69.4	83.8	115.8	139.5
	Variable torque	FLA[A]	12	16	24	30	39	45	61	75	91	110	152	183
Voltage			Three phase, 380~480V											
Frequency			0~120Hz											
Input ratings	Voltage	[V]	Three phase, 380~480V (-15%, +10%)											
	Frequency	[Hz]	50~60Hz (±5%)											

Control method	• V/F Control • Sensorless vector Control	
Frequency setting resolution	• Digital reference: 0.01Hz (below 99Hz) & 0.1Hz (100Hz and over) • Analog reference: 0.06Hz at 60Hz	
Frequency setting accuracy	• Digital: 0.01% of Maximum output frequency • Analog: 0.1 % of Maximum output frequency	
V/F ratio	• Linear • Square • User V/F	
Overload capacity	• 1 minute at 110% • 4 seconds at 150% (with inverse characteristic proportional to time)	
Torque boost	• Auto • Manual (0~15%)	
Multi-function input terminals	Total 8 inputs (programmable)	
Analog output	0~10V linear	
Input signal	Operator control	• 32 character LCD keypad • 4 digits LED keypad • Terminals • Modbus-RTU communication • Optional ModBus-RTU, RS485, ProfiBus-DP, DeviceNet, F-Net (Soon to be released)
	Frequency setting	• Analog: 0~10V, 0(4)~20mA, additional port for Sub-Board (0~10V) • Digital: Keypad • Communication
	Start signal	• Forward • Reverse
	Multi-step operation	Setting up to 16 speeds (using multi-function terminal)
	Multi-step Accel./Decel. time	0.1~6000 seconds. Maximum 8 pre-defined steps using multi-function terminals
	Operational functions	• DC braking • Frequency limit • Frequency jump • Second motor function • Slip compensation • Reverse rotation prevention • Auto restart • Inverter by-pass • Auto-tuning • PID control
	Emergency stop	Interrupting output from inverter
	Jog	Jog operation
Output signal	Fault reset	Resets fault signal when protective function is active
	Operational status	• Frequency detection • Overload alarm • Stall • Overvoltage • Undervoltage • Inverter overheat • Run • Stop • Constant speed • Speed search • Fault output (Relay and Open collector output) • Inverter by-pass • Auto-operation step • Auto-operation sequence
	Indicator	• Output frequency • Output current • Output voltage • DC voltage • Output torque (output voltage: 0~10V)
Protective functions	Trip	• Overvoltage • Undervoltage • Overcurrent • Inverter overheat • Motor overheat • I/O phase loss • I/O miss wiring • Fuse open • Ground fault • External fault 1, 2 • Option fault • Overload • Speed command loss • Hardware fault • Communication error
	Alarm	• Stall • Overload • Temperature sensor fault

Standard features & Configuration comparison



Comparison Table		iC5	iG5	iS5
Enclosure	IP00			○
	IP20	●	●	●
	NEMA 1		Optional	
Rating	Single phase	0.4~2.2kW	0.4~1.5kW	
	Three phase		0.4~4kW	0.75~75kW
	Constant torque	●	●	●
	Variable torque			
Input voltage margin		-10~+10%	-10~+10%	-10~+10%
Carrier frequency		1~15kHz	1~10kHz	1~15kHz
Braking Torque	without optional resistor	20%	20%	100%
	with optional resistor		150%	150%
Output Frequency		0~400Hz	0~400Hz	0~400Hz
Control method	V/F	●	●	●
	Sensorless vector	●		●
	sensored vector			●
Keypad	Fixed	●		
	Removable		●	●
Operator control	LCD keypad			Optional
	4 digits 7-segment keypad		●	Optional
	3 digits 7-segment keypad	●		
Built-in potentiometer		●		
PNP / NPN selectable signal		●	●	
Communication	RS485		(built-in)	Optional
	Modbus-RTU	Optional	built-in	Optional
	Profibus DP			Optional
	DeviceNet			Optional
	F-Net (LS)			Optional
I/O extension	3 Sub-boards			●
	Encoder feedback			●
	Flexible I/O	●		●
Software features	Cooling fan On/Off control			
	Auto-tuning	●		●
	PI control			
	PID control	●	●	●
	Multi-motor control			●
Analog input	0~10V	●	●	●
	-10~+10V			
	0~20 mA, 4~20mA	●	●	●
Analog output	1 × 0~10V	●	●	●
	2 × 0~10V			
	4~20 mA			○ (Sub board)
Remote option	2 meter LS cable		●	●
	3 meter LS cable		●	●
	5 meter LS cable		●	●
Ambient temperature		-10~50°C	-10~40°C	-10~40°C

Leader in Electrics & Automation



Safety Instructions

- For your safety, please read user's manual thoroughly before operating.
- Contact the nearest authorized service facility for examination, repair, or adjustment.
- Please contact qualified service technician when you need maintenance. Do not disassemble or repair by yourself!
- Any maintenance and inspection shall be performed by the personnel having expertise concerned.

© 2003.4 LS Industrial Systems Co.,Ltd. All rights reserved.



良譽有限公司
De'De TRADE CO., LTD.

TEL: 04-23160121

Fax : 04-23160140

Address : 台中市西屯區天水東一街40號

■ HEAD OFFICE

Yonsei Jaedan Severance Bldg., 84-11, Namdaemunno 5ga,
Jung-gu, Seoul, 100-753, Korea

Tel. (82-2)2034-4870

Fax. (82-2)2034-4713

■ Global Network

- **LS Industrial Systems (Middle East) FZE >> Dubai, U.A.E.**
Address: P.O.Box-114216, API World Tower, 303B, Sheikh Zayed Road, Dubai, U.A.E.
Tel: 971-4-332-8289 Fax: 971-4-332-9444 e-mail: hwyim@lsis.biz
- **Dalian LS Industrial Systems Co., Ltd. >> Dalian, China**
Address: No.15, Liaohexi 3-Road, Economic and Technical Development zone, Dalian 116600, China
Tel: 86-411-8273-7777 Fax: 86-411-8730-7560 e-mail: lixx@lsis.com.cn
- **LS Industrial Systems (Wuxi) Co., Ltd. >> Wuxi, china**
Address: 102-A, National High & New Tech Industrial Development Area, Wuxi, Jiangsu,214028, P.R.China
Tel: 86-510-8534-6666 Fax: 86-510-522-4078 e-mail: xuhg@lsis.com.cn
- **LS-VINA Industrial Systems Co., Ltd. >> Hanoi, Vietnam**
Address: Nguyen Khe - Dong Anh - Ha Noi - Viet Nam
Tel: 84-4-882-0222 Fax: 84-4-882-0220 e-mail: srjo@lsisvina.com
- **LS Industrial Systems Tokyo Office >> Tokyo, Japan**
Address: 16FL, Higashi-Kan, Akasaka Twin Tower 17-22, 2-chome, Akasaka, Minato-ku Tokyo 107-8470, Japan
Tel: 81-3-3582-9128 Fax: 81-3-3582-2667 e-mail: jschuna@lsis.biz
- **LS Industrial Systems Shanghai Office >> Shanghai, China**
Address: Room E-G, 12th Floor Huamin Empire Plaza, No.726, West Yan'an Road Shanghai 200050, P.R. China
Tel: 86-21-5237-9977 (609) Fax: 89-21-5237-7191 e-mail: jinhk@lsis.com.cn
- **LS Industrial Systems Beijing Office >> Beijing, China**
Address: B-Tower 17FL,Beijing Global Trade Center B/D, No.36, BeiSanHuanDong-Lu, DongCheng-District, Beijing 100013, P.R. China
Tel: 86-10-5825-6025,7 Fax: 86-10-5825-6026 e-mail: cuixiaorong@lsis.com.cn
- **LS Industrial Systems Guangzhou Office >> Guangzhou, China**
Address: Room 1403,14F,New Poly Tower,2 Zhongshan Liu Road,Guangzhou, P.R. China
Tel: 86-20-8326-6764 Fax: 86-20-8326-6287 e-mail: linsz@lsis.com.cn
- **LS Industrial Systems Chengdu Office >> Chengdu, China**
Address: 12Floor, Guodong Buiding, No52 Jindun Road Chengdu, 610041, P.R. China
Tel: 86-28-8612-9151 Fax: 86-28-8612-9236 e-mail: yanggf@lsis.com.cn
- **LS Industrial Systems Qingdao Office >> Qingdao, China**
Address: 7B40,HaiXin Guangchang Shenye Building B, No.9, Shandong Road Qingdao 26600, P.R. China
Tel: 86-532-8501-6568 Fax: 86-532-583-3793 e-mail: lij@lsis.com.cn

Specifications in this catalog are subject to change without notice due to continuous product development and improvement.