



Variable Frequency Drive
LS Drive Series

IE5 / IC5 / IG5A / S100 / H100 / IS7 / IP5A / IV5



Take another look!

Simplicity-Precision, Flexibility-Standardization and Easy to use-Diversity are the inherent qualities of LS 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.





RoHS



Performance

iV5

3Ø 200V : 2.2kW~37kW
3Ø 400V : 2.2kW~800kW



iS7

3Ø 200V : 0.75kW~75kW
3Ø 400V : 0.75kW~375kW



iP5A

3Ø 200V : 5.5kW~30kW
3Ø 400V : 5.5kW~450kW
3Ø 575V : 5.5kW~280kW



H100

3Ø 200V : 5.5kW~18.5kW
3Ø 400V : 5.5kW~90kW



S100

1Ø 200V : 0.4kW~2.2kW
3Ø 200V : 0.4kW~15kW
3Ø 400V : 0.4kW~75kW



iG5A

1Ø 200V : 0.4kW~1.5kW
3Ø 200V : 0.4kW~22kW
3Ø 400V : 0.4kW~22kW



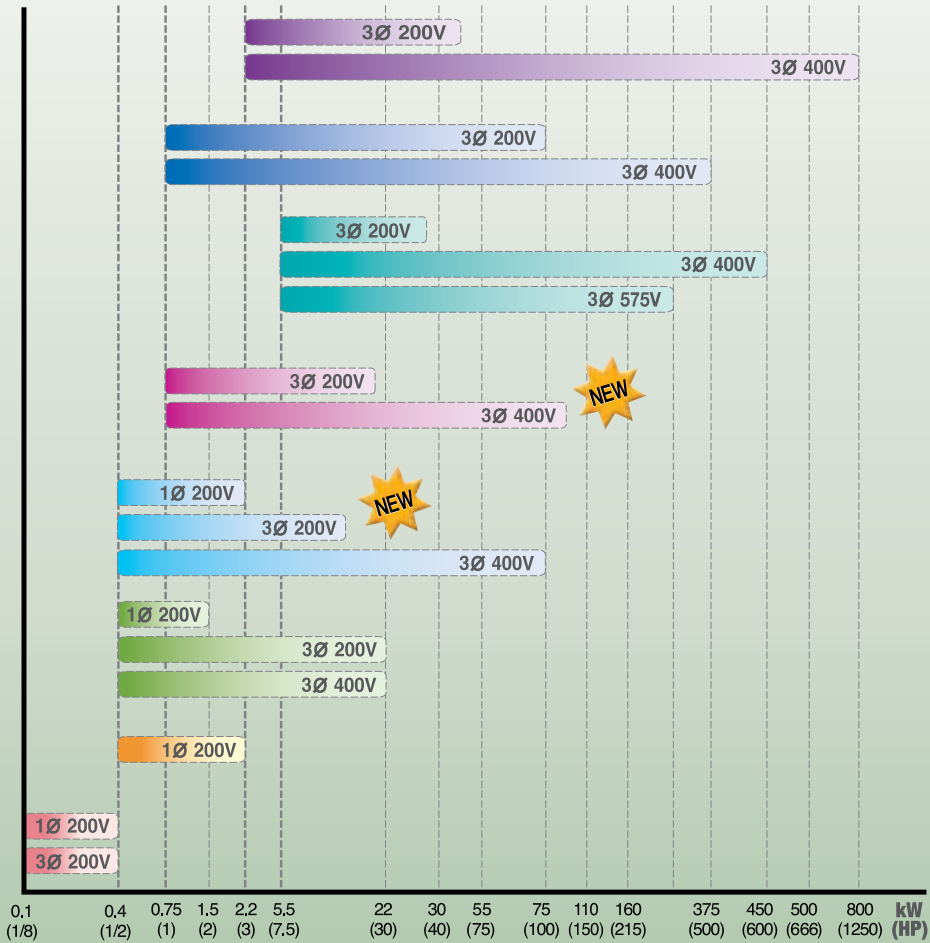
iC5

1Ø 200V : 0.4kW~2.2kW
3Ø 200V : 0.4kW~0.75kW



iE5

1Ø 200V : 0.1kW~0.4kW
3Ø 200V : 0.1kW~0.4kW



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S100

Variable Frequency Drive

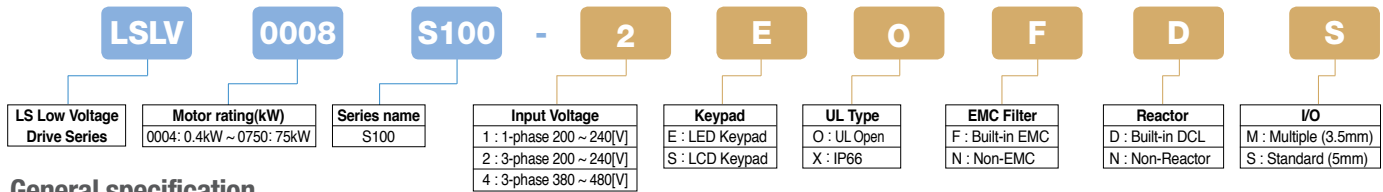
High Performance Standard VFD

1 phase 0.4~2.2kW(0.5~3HP), 200~240V
 3 phase 0.4~15kW(0.5~20HP), 200~240V
 3 phase 0.4~75kW(0.5~100HP), 380~480V



- Selectable V/f, Sensorless vector control
- Built-in EMC Filter
- Side by Side Installation
- Enhanced Size Competitiveness
- PLC Function(Simple Sequence Operation)
- Compliance with Open Field Networks
 - Profibus-DP, CANopen, EtherNet
- IP66 Enclosure (0.4~22kW)
- PM Sensorless Control
- P2P I/O Share Function
- Capacitor/Fan Life Cycle Management Function
- Smart Copier Option
(Able to copy parameter and download drive main OS)

Model Number



General specification

Model number: LSLV □□□□ S100-1 □□□□	0004	0008	0015	0022	Model number: LSLV □□□□ S100-2 □□□□	0004	0008	0015	0022	0037	0040	0055	0075	0110	0150
Motor rating	Heavy [HP] 0.5	1.0	2.0	3.0	Heavy [HP] 0.5	1.0	2.0	3.0	5.0	5.5	7.5	10.0	15.0	20.0	20.0
	Duty(HD) [kW] 0.4	0.75	1.5	2.2	Duty(HD) [kW] 0.4	0.75	1.5	2.2	3.7	4.0	5.5	7.5	11.0	15.0	15.0
	Normal [HP] 1.0	2.0	3.0	5.0	Normal [HP] 1.0	2.0	3.0	5.0	5.4	7.5	10.0	15.0	20.0	25.0	25.0
	Duty(HD) [kW] 0.75	1.5	2.2	3.7	Duty(HD) [kW] 0.75	1.5	2.2	3.7	4.0	5.5	7.5	11.0	15.0	15.0	18.5
Output rating	Capacity Heavy Duty(HD) [kVA] 1.0	1.9	3.0	4.2	Capacity Heavy Duty(HD) [kVA] 1.0	1.9	3.0	4.2	6.1	6.5	9.1	12.2	17.5	22.9	22.9
	Normal Duty(ND) 1.2	2.3	3.8	4.6	Normal Duty(ND) 1.2	2.3	3.8	4.6	6.9	6.9	11.4	15.2	21.3	26.3	26.3
	Rated Heavy Duty(HD) 2.5	5.0	8.0	11.0	Rated Heavy Duty(HD) 2.5	5.0	8.0	11.0	16.0	17.0	24.0	32.0	46.0	60.0	60.0
	Current Normal Duty(ND) 3.1	6.0	9.6	12.0	Current Normal Duty(ND) 3.1	6.0	9.6	12.0	18.0	18.0	30.0	40.0	56.0	69.0	69.0
	Frequency [Hz] 0~400Hz (IM Sensorless:0~120[Hz])				Frequency [Hz] 0~400Hz (IM Sensorless:0~120[Hz])										
	Voltage [V] 3-phase 200~240V				Voltage [V] 3-phase 200~240V										
Input rating	Voltage [V] 1-phase 200 ~ 240VAC (-15%~+10%)				Voltage [V] 3-phase 200 ~ 240VAC (-15%~+10%)										
	Frequency [Hz] 50 ~ 60Hz (±5%)				Frequency [Hz] 50 ~ 60Hz (±5%)										
	Rated Heavy Duty(HD) 4.4	9.3	15.6	21.7	Rated Heavy Duty(HD) 2.2	4.9	8.4	11.8	17.5	18.5	25.8	34.9	50.8	66.7	66.7
	Current(A) Normal Duty(ND) 5.8	11.7	19.7	24.0	Current(A) Normal Duty(ND) 3.0	6.3	10.8	13.1	19.4	19.4	32.7	44.2	62.3	77.2	77.2
Weight[kg] (Built-in EMC)	0.9(1.14)	1.3(1.76)	1.5(1.76)	2.0(2.22)	0.9	0.9	1.3	1.5	2.0	2.0	3.3	3.3	4.6	7.1	7.1

Model number: LSLV □□□□ S100-4 □□□□	0004	0008	0015	0022	0037	0040	0055	0075	0110	0150	0185	0220	0300	0370	0450	0550	0750
Motor rating	Heavy [HP] 0.5	1.0	2.0	3.0	5.0	5.5	7.5	10.0	15.0	20.0	25.0	30.0	40.0	50.0	60.0	75.0	100.0
	Duty(HD) [kW] 0.4	0.75	1.5	2.2	3.7	4.0	5.5	7.5	11.0	15.0	18.5	22.0	30.0	37.0	45.0	55.0	75.0
	Normal [HP] 1.0	2.0	3.0	5.0	5.4	7.5	10.0	15.0	20.0	25.0	30.0	40.0	50.0	60.0	75.0	100.0	120.0
	Duty(HD) [kW] 0.75	1.5	2.2	3.7	4.0	5.5	7.5	11.0	15.0	18.5	22.0	30.0	37.0	45.0	55.0	75.0	90.0
Output rating	Capacity Heavy Duty(HD) [kVA] 1.0	1.9	3.0	4.2	6.1	6.5	9.1	12.2	18.3	22.9	29.7	34.3	46.5	57.2	69.4	83.8	115.8
	Normal Duty(ND) 1.5	2.4	3.9	5.3	7.6	7.6	12.2	17.5	22.9	29.0	33.5	44.2	57.2	69.4	81.5	108.2	128.8
	Rated Heavy Duty(HD) 2.3	2.5	4.0	5.5	8.0	9.0	12.0	16.0	24.0	30.0	39.0	45.0	61.0	75.0	91.0	110.0	152.0
	Current Normal Duty(ND) 1.0	3.1	5.1	6.9	10.0	10.0	16.0	23.0	30.0	38.0	44.0	58.0	75.0	91.0	107.0	142.0	169.0
	Frequency [Hz] 0~400Hz (IM Sensorless:0~120[Hz])																
	Voltage [V] 3-phase 380 ~ 480V																
Input rating	Voltage [V] 3-phase 380 ~ 480VAC (-15%~+10%)																
	Frequency [Hz] 50 ~ 60Hz (±5%)																
	Rated Heavy Duty(HD) 1.1	2.4	4.2	5.9	8.7	9.8	12.9	17.5	26.5	33.4	43.6	50.7	56.0	69.0	85.0	103.0	143.0
	Current(A) Normal Duty(ND) 2.0	3.3	5.5	7.5	10.8	10.8	17.5	25.4	33.4	42.5	49.5	65.7	69.0	85.0	100.0	134.0	160.0
Weight[kg] (Built-in EMC)	0.9(1.18)	1.9(1.18)	1.3(1.77)	1.5(1.80)	2.0(2.23)	2.0(2.23)	3.3	3.4	4.6	4.8	7.5	7.5	25.8	34.4	34.4	41.8	43.8

Control spec	Control method	V/f, Slip compensation, Sensorless vector
	Speed reference resolution	Digital command: 0.01Hz / Analog command: 0.06Hz (Maximum frequency : 60Hz)
	Frequency accuracy	1% of the maximum output frequency
	V/f curve	Linear, Squared, User V/f
	Overload capacity	HD: 150% 1minute, ND: 120% 1minute
	Torque boost	Manual/Automatic torque boost
Operation	Keypad display	4 digit, 7 segment LED keypad
	Operation method	Keypad / Terminal / Communication option selectable
	Frequency setting	Analog: -10 ~ 10[V] / 0 ~ 10[V], 420[mA] / Digital: Keypad, Pulse train input
	Operation function	PID, Up/Down, 3-Wire, DC braking, Frequency limit, Frequency jump, 2nd function, Slip compensation, Anti reverse rotation, Automatic restart, Commercial power change, Auto-tuning, Flying start, Energy buffering operation, Power braking, Flux braking, Leakage reduction operation
Input signal	Multi-function terminal	NPN(Sink) / PNP(Source) selectable
	Standard I/O(5points)	Function: Forward run, Reverse run, Reset, External trip, Emergency stop, Jog operation, Multi-step frequency-high, middle, low, Multi-step acceleration/deceleration-high, middle, low, DC braking at stop, 2nd motor select, Frequency up/down, 3-wire operation, Change into normal operation during PID operation, Change into main body operation during option operation,
	Multiple I/O(7points)	Analog command frequency fixing, Acceleration/deceleration stop etc. selectable
Output signal	Pulse train	0Hz~32Hz, Low level: 0~0.8V, High level: 3.5~12V
	Open collector terminal	Fault output and drive operation status output
	Multi-function relay	(N.O., N.C.) less than AC 250V 1A, less than DC30V 1A
	Analog output	0 to 10Vdc (4~20mA): Frequency, Output current, Output voltage, DC stage voltage etc. selectable
	Pulse train	Maximum 32kHz, 10~12[V]
Protection	Drive trip	Overcurrent / Overvoltage / Undervoltage / External trip / Ground fault current detection / Drive overheat / Motor overheat / Input-Output phase open / Overload protection / Light load protection / Communication error / Frequency command loss / Hardware fault / Cooling fan fault / Pre-PID motion failure / No motor trip / External brake trip / Option fault / Safety contact fault / Drive temperature sensor fault / Parameter write error / IO board fault
	Drive alarm	Stall prevention / Overload / Light load / Cooling fan fault / Frequency command loss / DB duty cycle / Rotor time constant tuning fault / Capacitor / Fan life time up
Enclosure Option	Keypad	IP20, UL Type1, IP66
	Communication	Graphic LCD keypad(IS7) Profibus-DP, EtherNet-IP, Modbus-TCP, CANopen

H100

Variable Frequency Drive

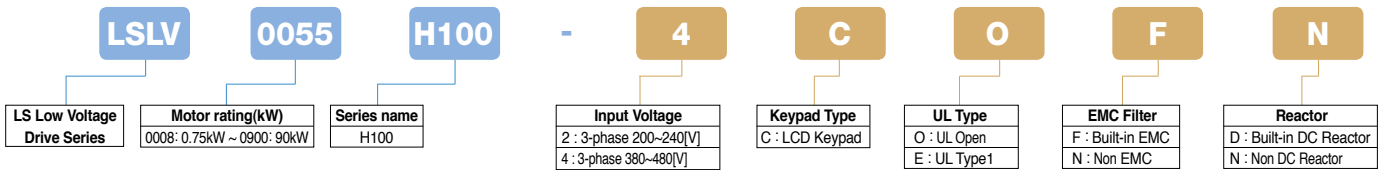
HVAC specialized VFD

3 phase 0.75~18.5kW(1.0~25HP), 200~240V
3 phase 0.75~90kW(1.0~120HP), 380~480V



- Specialized function for HVAC
 - Multi-motor control
 - Scheduling function (Time event: Real Time Clock)
 - Flow Compensation
 - Soft fill operation
 - Start Ramp & End Ramp
 - Dec Valve Ramp
 - Pump Clean
 - Load Tuning
 - Fire Mode
 - Energy-saving Display (Payback Counter)
 - Boost, Wake-up function
- V/f control
- Built-in BACnet communication
- LonWorks(Optional)
- Keypad Exclusive for HVAC
- Built-in EMC filter/DC Reactor
- Side by Side Installation
- Heatsink out the back installation (Flange Option)
- Enhanced Size Competitiveness
- Capacitor/Fan Life Cycle Management Function
- Smart Copier Option (Able to copy parameter and download drive main OS)

Model Number



General specification

Model number: LSLV □□□□ H100-2 □□□□		0008	0015	0022	0037	0055	0075	0110	0150	0185
Applied Motor	[HP]	1.0	12.0	3.0	5.0	7.5	10	15	20	25
	[kW]	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5
Rated Output	Rated Capacity [kVA]	1.9	3.0	4.5	6.1	8.4	11.4	16.0	21.3	26.3
	Rated Current	5	8	12	16	22	30	42	56	69
Rated Input	Output Frequency	0~400Hz								
	Output Voltage [V]	3-phase 200~240V								
	Service Voltage [V]	3-phase 200~240VAC (-15%~+10%)								
Weight	Input Frequency	50 ~ 60Hz (±5%)								
	Rated Current [A]	4.9	8.4	12.9	17.5	23.7	32.7	46.4	62.3	77.2
	[kg]	3.3	3.3	3.3	3.3	3.3	3.3	3.3	4.6	7.1

Model number: □□□□ H100-4 □□□□		0008	0015	0022	0037	0055	0075	0110	0150	0185	0220	0300	0370	0450	0550	0750	0900
Applied Motor	[HP]	1.0	2.0	3.0	5.0	7.5	10	15	20	25	30	40	50	60	75	100	120
	[kW]	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90
Rated Output	Rated Capacity [kVA]	1.9	3.0	4.5	6.1	9.1	12.2	18.3	23	29	34.3	46.5	57.1	69.4	82.0	108.2	128.8
	Rated Current	2.5	4	6	8	12	16	24	30	38	45	61	75	91	107	142	169
Rated Input	Output Frequency	0~400Hz															
	Output Voltage [V]	3-phase 380~480V															
	Service Voltage [V]	3-phase 380~480VAC (-15%~+10%)															
Weight	Input Frequency	50 ~ 60Hz (±5%)															
	Rated Current [A]	2.4	4.2	6.5	8.7	12.2	17.5	26.5	33.4	42.5	50.7	69.1	69.3	84.6	100.1	133.6	160.0
	[kg]	3.3	3.3	3.3	3.3	3.3	3.3	3.4	4.6	4.8	7.5	7.5	26	35	35	43	43

Control Spec	Control Method	V/F control, slip compensation
	Frequency Set Resolution	Digital command: 0.01Hz Analog command: 0.06Hz (based on 60Hz)
	Control Degree of Frequency	1% of the maximum output frequency
	V/f curve	Linear, squared overload reduction and user V/F
Operation	Overload Capacity	Rated Current: 120% 1 minute
	Torque Boost	Manual torque boost, automatic torque boost 1, automatic torque boost 2
Input signal	Operation Method	Optional: Keypad, terminal board or communication control
	Frequency Setting	Analog mode: -10~10V, 0~10V, 0~20mA Digital mode: Keypad and pulse train input
Output signal	Operation function	PID control, 3-Wire control, Frequency limitation, Secondary Functions, Forward/Reverse rotation prohibited, DC braking, Commercial power switching, Speed search, Power braking, Reduction of leakage, Up-Down control, DC braking Flux braking, Frequency pump, Slip compensation, Automatic restart, Automatic tuning, Energy buffering control, Energy-saving control
	Multifunctional Terminal(7points)	Forward Operation, Reset, Emergency stop, Multi-step frequency – High/Mid/Low, DC braking during stop, Pre-Heat, Frequency increase, 3-Wire, Optional: Acceleration, deceleration or stop, MMC interlock, Reverse Operation, Pump cleaning, External trip, Jog control, Multi-step acceleration/deceleration-High/Mid/Low, Secondary motor selection, RTC(Time event function), Frequency decrease, Analog command frequency fixation, Switching to normal operation during PID operation
Protection	Pulse Train	0~3kHz, Low Level: 0~0.8V, High Level: 3.5~12V
	Multifunctional Open Collector Terminal	DC 26V, 50mA or below
Enclosure	Failure [Fault] Relay Terminal	Failure output & drive control status output: N.O. : AC 250V, 5A or below, DC30V, 3A or below N.C. : AC 250V, 1A or below, DC30V, 1A or below AC 250V, 5A or below, DC30V, 5A or below
	Multifunctional Relay Terminal	
Option	Analog Output	0~12Vdc(0~20mA): Optional among frequency, output current, output voltage and DC voltage
	Pulse train	Maximum 32kHz, 0~12V
Others	Trip	Over-current trip, Trip caused by external signals, ARM short-circuit current trip, Overheat trip, Pipe broken trip, Input open-phase trip Ground trip, Motor overheat trip, IO board connection trip, No Motor trip, Parameter Write trip, Emergency stop trip, Command loss trip, External memory error, CPU watchdog trip, Motor under-load trip, Overvoltage trip, Temperature sensor trip, Drive overheat, Option trip, Output open-phase trip, Drive overload trip, Fan trip, Low voltage trip during operation, Low voltage input error, Motor overload trip, Keypad command loss trip, Damper trip, Level Detect trip, All auxiliary motor failure trip, Pump clean failure (fault)
	Warning	Command loss trip warning, overload warning, under-load warning, drive overload warning, fan operation warning, damping resistance brake percentage warning, capacitor life warning, pump clean warning, Fire Mode warning and LDT warning
Enclosure	Instant Power Interruption	Below 8 ms: Continuous operation [within the rated input voltage and rated output] 8 ms or above: Automatic restart operation
	Board	IP20/UL Open(default), UL Enclosed Type 1(option)
Option	Communication	Extension I/O (available soon) Lonworks
	Communication	Built-in BACnet, Modbus-RTU(RS485), Metasys N2

iE5

Variable Frequency Drive

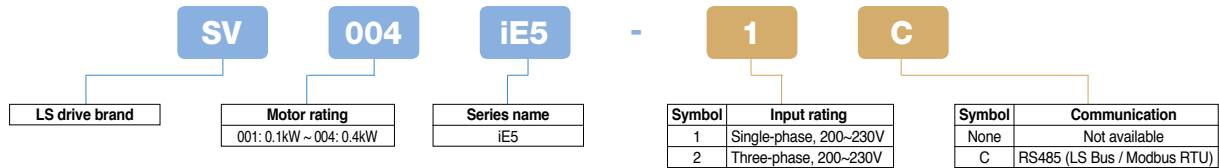
User friendly micro size slim VFD

1 phase 0.1~0.4kW(0.1~0.5HP), 200~230V
3 phase 0.1~0.4kW(0.1~0.5HP), 200~230V



- V/f control
- Compact size: 68×128×85mm (2.7×5×3.3 inch)
- 0.1 ~ 200Hz frequency output
- 1 ~ 10kHz carrier frequency
- Fault history: Last 3 faults
- IP20 enclosure
- RS485 (LS Bus / Modbus RTU) communication (Built-in option)
- DC Injection braking
- Selectable manual/automatic torque boost
- Selectable PNP/NPN input signal
- PI control
- Up-Down & 3-Wire operation
- Automatic restart after instantaneous power failure
- Built-in potentiometer
- Monitoring & commissioning PC based software tool (Drive View)
- Parameter copy unit

Model Number



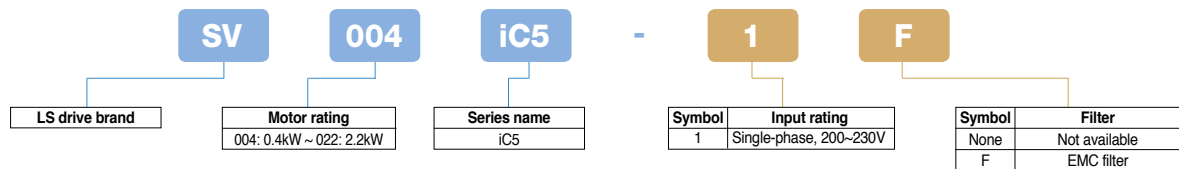
General specification

Model number: SV □□□ iE5-□		001-1	002-1	004-1	001-2	002-2	004-2
Motor rating	[HP]	0.13	0.25	0.5	0.13	0.25	0.5
	[kW]	0.1	0.2	0.4	0.1	0.2	0.4
Output rating	Capacity [kVA]	0.3	0.6	0.95	0.3	0.6	1.14
	Current [A]	0.8	1.4	2.5	0.8	1.6	3.0
	Voltage [V]	Three-phase 200 ~ 230V					
	Frequency [Hz]	0.1 ~ 200Hz					
Input rating	Voltage [V]	Single-phase 200 ~ 230V (±10%)			Three-phase 200 ~ 230V (±10%)		
	Frequency [Hz]	50 ~ 60Hz (±5%)					
	Current [A]	2.0	3.5	5.5	1.2	2.0	3.5
Weight [kg]		0.44	0.46	1.68	0.43	0.45	0.67
Control spec	Control method	V/f, Slip compensation					
	Speed reference resolution	Digital command: 0.01Hz / Analog reference: 0.1Hz (Max freq., 60Hz)					
	Frequency accuracy	Digital command: 0.01% of Max output freq. / Analog signal command of 0.1% of Max output freq.					
	V/f curve	Linear, Squared V/f					
	Overload capacity	150% for 1 minute					
	Torque boost	Auto & manual torque boost					
Operation	Keypad display	4 digit, 7 segment LED					
	Operation method	Keypad / Terminal / Communication					
	Frequency setting	Analog: 0 to 10V / 0 to 20mA / Potentiometer / Digital: Keypad					
	Operation function	PI control / Up-Down operation / 3-Wire operation					
Input signal	Multi-function terminal (P1 ~ P5)	PNP / NPN selectable 5 points (programmable)					
	Output signal	Multi-function relay Analog output					
Protection	Drive trip	Over voltage / Low voltage / Over current / Ground fault / Drive overload / Overload trip / Drive overheat / Condenser overload / Output phase open / Frequency command loss / Hardware fault / etc.					
	Drive alarm	Stall prevention					
Enclosure		IP20					
Option	Communication, copy unit	RS485(LS Bus / Modbus RTU), Parameter copy unit					



- EMC filter - class A (Built-in option)
- Selectable V/f, sensorless vector control
- Motor parameter Auto-tuning
- 150% torque at 0.5Hz
- 0.1 ~ 400Hz frequency output
- 1 ~ 15kHz carrier frequency
- 0 ~ 10Vdc analog input
- IP20 enclosure
- Selectable manual/automatic torque boost
- Built-in potentiometer
- Selectable PNP/NPN Input signal
- Fault history: Last 5 faults
- Enhanced process PID control
- Up-Down & 3-Wire operation
- Modbus RTU communication (optional)
- 8 programmable I/O
- Parameter copy unit
- Monitoring & commissioning PC based software tool (Drive View)

Model Number



General specification

Model number: SV□□□ iC5-□			004-1	008-1	015-1	022-1
Motor rating		[HP]	0.5	1	2	3
		[kW]	0.4	0.75	1.5	2.2
Output rating	Capacity	[kVA]	0.95	1.9	3	4.5
	Current	[A]	2.5	5	8	12
	Voltage	[V]	Three-phase 200 ~ 230V			
	Frequency	[Hz]	0.1 ~ 400Hz			
Input rating	Voltage	[V]	Single-phase 200 ~ 230V (±10%)			
	Frequency	[Hz]	50 ~ 60Hz (±5%)			
	Current	[A]	5.5	9.2	16	21.6
Weight		[kg]	0.87	0.89	1.79	1.85
Control spec	Control method	V/f, Slip compensation, Sensorless vector				
	Speed reference resolution	Digital command: 0.01Hz / Analog reference: 0.06Hz (Max freq., 60Hz)				
	Frequency accuracy	Digital command: 0.01% of Max output freq. / Analog signal command of 0.1% of Max output freq.				
	V/f curve	Linear, Squared, User custom V/f				
	Overload capacity	150% for 1 minute, 200% for 30 seconds				
	Torque boost	Auto & manual torque boost				
Operation	Keypad display	3 digit, 7 segment LED				
	Operation method	Keypad / Terminal / Communication				
	Frequency setting	Analog: 0 to 10V / 4 to 20mA / Potentiometer / Digital: Keypad				
	Operation function	PID control / Up-Down operation / 3-Wire operation				
Input signal	Multi-function terminal (P1 ~ P5)	PNP / NPN selectable 5 points (programmable)				
	Output signal	Multi-function relay	(N.O., N.C.) Less than AC 250V, 0.3A / Less than DC 30V 1A			
	Multi-function open collector	Fault output & drive status output DC24V (less than 50mA)				
	Analog output	0 to 10Vdc (less than 10mA): frequency / current / voltage / DC voltage selectable				
Protection	Drive trip	Over voltage / Low voltage / Over current / Ground fault / Drive overheat / Output phase open / Drive overload Overload trip / Communication error / Frequency command loss / Hardware fault / Fan fault / etc.				
	Drive alarm	Stall prevention, Overload				
Enclosure			IP20			
Option	Communication, copy unit	Modbus RTU, Parameter copy unit				

iG5A

Variable Frequency Drive

Powerful & compact sensorless vector control VFD

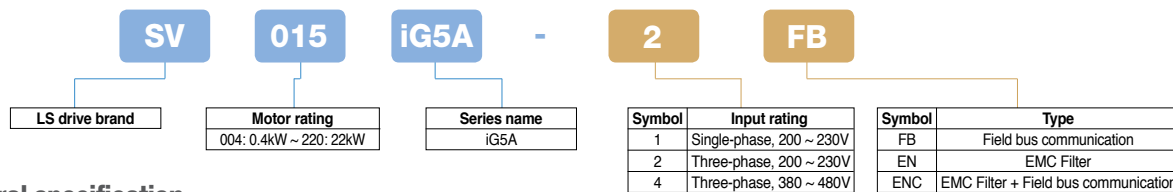
1 phase 0.4~1.5kW(0.5~2HP), 200~230V
 3 phase 0.4~22kW(0.5~30HP), 200~230V
 3 phase 0.4~22kW(0.5~30HP), 380~480V



- Selectable V/f, sensorless vector control
- Motor parameter Auto-tuning
- Powerful torque at overall speed range
- 0.1 ~ 400Hz frequency output
- 1 ~ 15kHz carrier frequency
- -15% ~ +10% input voltage margin
- Fault history: Last 5 faults
- 0~10Vdc / -10~+10Vdc analog input
- IP20 enclosure, UL Type 1 (Option)
- Selectable manual/automatic torque boost
- Selectable PNP/NPN input signal
- 2nd motor control and parameter setting
- Built-in Dynamic braking transistor as standard
- Enhanced process PID control
- Built-in RS485 (LS Bus / Modbus RTU) communication
- Cooling fan On/Off control & Easy change
- Remote control using external keypad * RJ45 cable(Optional)
- Upgraded functions: Sleep & Wake-up (Energy savings)
 KEB (Kinetic Energy Buffering) protection
 Low leakage PWM algorithm
- Monitoring & commissioning PC based software tool (Drive View)
- Footprint EMC Filter (Option)
- Communication options
 - DeviceNet, EtherNet, Profibus-DP, CANOpen



Model Number



General specification

Model number: SV □□□ iG5A-1 □		004	008	015
Motor rating	[HP]	0.5	1	2
	[kW]	0.4	0.75	1.5
Output rating	Capacity [kVA]	0.95	1.9	3.0
	Current [A]	2.5	5	8
Input rating	Voltage [V]	Three-phase 200 ~ 230V		
	Frequency [Hz]	0.1 ~ 400Hz		
	Voltage [V]	Single-phase 200 ~ 230V (+10%, -15%)		
Weight	[kg]	0.77	1.12	1.84

Model number: SV □□□ iG5A-2 □		004	008	015	022	037	040	055	075	110	150	185	220
Motor rating	[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]	0.95	1.9	3	4.5	6.1	6.5	9.1	12.2	17.5	22.9	28.2	33.5
	Current [A]	2.5	5	8	12	16	17	24	32	46	60	74	88
Input rating	Voltage [V]	Three-phase 200 ~ 230V											
	Frequency [Hz]	0.1 ~ 400Hz											
	Voltage [V]	Three-phase 200 ~ 230V (+10%, -15%)											
Weight	[kg]	0.76	0.77	1.12	1.84	1.89	1.89	3.66	3.66	9.00	9.00	13.3	13.3

Model number: SV □□□ iG5A-4 □		004	008	015	022	037	040	055	075	110	150	185	220
Motor rating	[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]	0.95	1.9	3	4.5	6.1	6.5	9.1	12.2	18.3	22.9	29.7	34.3
	Current [A]	1.25	2.5	4	6	8	9	12	16	24	30	39	45
Input rating	Voltage [V]	Three-phase 380 ~ 480V											
	Frequency [Hz]	0.1 ~ 400Hz											
	Voltage [V]	Three-phase 380 ~ 480V (+10%, -15%)											
Weight	[kg]	0.76	0.77	1.12	1.84	1.89	1.89	3.66	3.66	9.00	9.00	13.3	13.3

Control spec	Control method	V/f, Slip compensation, Sensorless vector
	Speed reference resolution	Digital command: 0.01Hz / Analog reference: 0.06Hz (Max freq., 60Hz)
	Frequency accuracy	Digital command: 0.01% of Max output freq. / Analog signal command of 0.1% of Max output freq.
	V/f curve	Linear, Squared, User custom V/f
	Overload capacity	150% for 1 minute
	Torque boost	Auto & manual torque boost
Operation	Keypad display	4 digit, 7 segment LED
	Operation method	Keypad / Terminal / Communication
	Frequency setting	Analog: 0 to 10V / -10 to 10V / 0 to 20mA / Digital: Keypad
	Operation function	PID control / Up-Down operation / 3-Wire operation
Input signal	Multi-function terminal (P1 ~ P8)	PNP / NPN selectable 8 points (programmable)
Output signal	Multi-function relay	Fault output & drive status output (N.O., N.C.) Less than AC250V, 0.3A / Less than DC 30V 1A
	Multi-function open collector	
	Analog output	0 to 10Vdc (less than 10mA): frequency / current / voltage / DC voltage selectable
Protection	Drive trip	Over voltage / Low voltage / Over current / Over Current 2 / Ground fault / Drive overheat / Output phase open / Drive overload / Overload trip / Communication error / Frequency command loss / Hardware fault / Fan fault / Brake error / etc.
	Drive alarm	Stall prevention, Overload
Enclosure		IP20, NEMA1 (Optional)
Option	Cable, conduit kit	Remote cable(2M/3M/5M) plus external keypad, Conduit kit for NEMA 1
	Communication	DeviceNet, EtherNet, CANOpen, Profibus-DP
Others		Built-in Dynamic braking transistor, Built-in RS485(LS Bus / Modbus RTU)

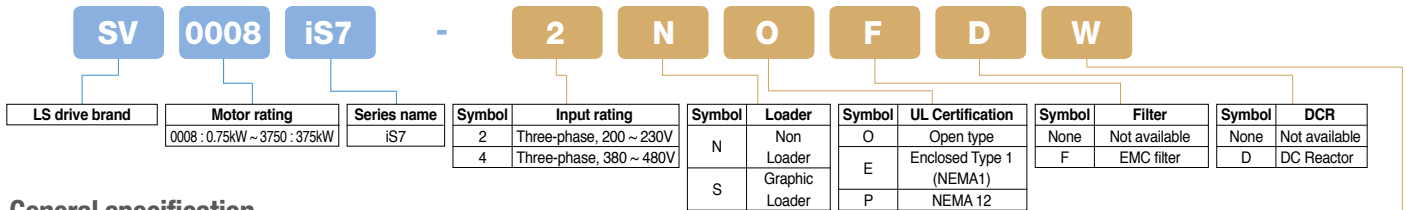


- Constant torque / Variable torque dual rating
- Selectable V/f, V/f PG, sensorless vector, sensed vector
- 150 MIPS(million instructions per second) high speed DSP
- High performances & functions:
 - Droop control (automatic torque balance)
 - KEB (Kinetic Energy Buffering) protection
 - Ride Through (LV Trip Delay) protection
 - Under Load Trip protection
 - Power brake & Flux Brake function
 - Static motor parameter Auto-tuning*
- Easy to control: Easy Start Mode, User & Macro group, Multi Function Key
- 2nd motor sensorless control and parameter setting
- Available IP54 enclosure(0.7522kW[1~30HP]) as built-in option
- Built-in RS485(LS Bus / Modbus RTU) communication
- Built-in Dynamic braking transistor (0.7522kW[1~30HP])
- Available EMC Filter & DC Reactor as built-in option
- EMC Filter(0.7522kW[1~30HP]) / DC Reactor(0.75160kW[1~215HP])
- Wide graphic LCD keypad (6 different languages)
- PLC board (optional):
 - Master-K platform: 14 max. inputs & 7 max. outputs
- Extension I/O boards (Optional):
 - 11 max. inputs & 6 max outputs
- Communication boards (Optional):
 - Profibus-DP, DeviceNet, Modbus TCP, Rnet, LonWorks, CANopen
- Monitoring & commissioning PC based software tool (Drive View)



※ ABS Standard - Acquired (up to 90kW) / In Progress (above 90kW)
※ DNV Standard - Acquired

Model Number



General specification

Model number: SV □□□□ iS7-2 □	0008	0015	0022	0037	0055	0075	0110	0150	0185	0220	0300	0370	0450	0550	0750	Symbol	Application	
Motor rating	[HP]	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	None	Normal application
	[kW]	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	W	Web application
Output rating	Capacity [kVA]	1.9	3	4.5	6.1	9.1	12.2	17.5	22.9	28.5	33.5	46	57	69	84	116		
	Current (CT) [A]	5	8	12	16	24	32	46	60	74	88	116	146	180	220	288		
	Current (VT) [A]	8	12	16	24	32	46	60	74	88	124	146	180	220	288	345		
	Voltage [V]	Three-phase 200 ~ 230V																
	Frequency [Hz]	0.01 ~ 400Hz (Sensorless-1 control: 0.01~300Hz, Sensorless-2 or Sensed control: 0.01~120Hz)																
Input rating	Voltage [V]	Three-phase 200 ~ 230V (-15% ~ +10%)																
	Frequency [Hz]	50 ~ 60Hz (±5%)																
	Current (CT) [A]	8.3	12.9	18.6	24	32.9	41.4	58	69	88	96	121	154	191	233	305		
	Current (VT) [A]	7	10.6	14.8	21.8	28	42	52	60	75	107	152	190	231	302	326		

Model number: SV □□□□ iS7-4 □	0008	0015	0022	0037	0055	0075	0110	0150	0185	0220	0300	0370	0450	0550	0750	0900	1100	1320	1600	1850	2200	2800	3150	3750		
Motor rating	[HP]	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	120	150	180	225	250	300	375	420	500	
	[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	132	160	185	220	280	315	375	
Output rating	Capacity [kVA]	1.9	3	4.5	6.1	9.1	12.2	17.5	22.9	29.7	34.3	46	57	69	84	116	139	170	201	248	286	329	416	467	557	
	Current (CT) [A]	2.5	4	6	8	12	16	24	30	39	45	61	75	91	110	152	183	223	264	325	370	432	547	613	731	
	Current (VT) [A]	4	6	8	12	16	24	30	39	45	61	75	91	110	152	183	223	264	325	370	432	547	613	731	877	
	Voltage [V]	Three-phase 380 ~ 480V																								
	Frequency [Hz]	0.01 ~ 400Hz (Sensorless-1 control: 0.01~300Hz, Sensorless-2 or Sensed control: 0.01~120Hz)																								
Input rating	Voltage [V]	Three-phase 380 ~ 480V (-15% ~ +10%)																								
	Frequency [Hz]	50 ~ 60Hz (±5%)																								
	Current (CT) [A]	4.3	7.2	10.6	15.4	21	25.8	39	44	57	57	57	69	83	113	154	195	239	286	362	404	466	605	674	798	
	Current (VT) [A]	3.5	5.3	7.3	10.8	13.8	22.5	26	33	40	52.2	90	109	123	162	195	237	282	350	403	463	590	673	796	948	

Control spec	Control method	V/f, V/f PG, Slip compensation, Sensorless-1 vector, Sensorless-2 vector, Sensed vector
	Speed reference resolution	Digital command: 0.01Hz / Analog reference: 0.06Hz (Max freq., 60Hz)
	Frequency accuracy	Digital command: 0.01% of Max output freq. / Analog signal command of 0.1% of Max output freq.
	V/f curve	Linear, Squared, User custom V/f
	Overload capacity	CT(Heavy duty): 150% for 1 minute, VT(Normal duty): 110% for 1 minute
	Torque boost	Auto & Manual torque boost
Operation	Keypad display	Wide graphic LCD keypad (available 6 languages)
	Operation method	Keypad / Terminal / Communication
	Frequency setting	Analog: 0 to 10V / -10 to 10V/ 0 to 20mA / Digital: Keypad
	Operation function	PID control / Up-Down operation / 3-Wire operation / DC braking / Frequency limit / Second function / Slip compensation / Reverse rotation prevention / Auto restart / Drive By-pass / Auto-tuning / Flying star / Energy buffering / Power braking / Flux braking / Low leakage / MMC / Easy start
Input signal	Multi-function terminal (P1 ~ P8)	PNP / NPN selectable 8 points (programmable)
Output signal	Multi-function relay	Fault output & drive status output (N.O., N.C.) Less than AC250V, 1A / Less than DC 30V 1A DC24V (less than 50mA)
	Multi-function open collector	
	Analog output	
Protection	Drive trip	Over current / Over voltage / Low current / External trip / Ground fault / Drive overheat / I/O phase open / Overload / Communication error / Frequency command loss / Hardware fault / Fan fault / Pre-PID fault / No motor trip / External brake trip / etc.
	Drive alarm	Stall prevention / Overload / Light load / Encoder connection error / Keypad command loss / Speed command loss
Enclosure		IP00 (30~75kW, 200V/90~375kW, 400V), IP21 (0.75~22kW, 200V / 0.75~75kW, 400V), IP54 / NEMA12 (0.75~22kW, 200V/ 400; Optional)
Option	Board, Cable, Keypad	Graphic LCD keypad(IP21), Extension I/O, Isolation I/O, Encoder board, PLC board, Remote cable(2M/3M)
	Communication	Profibus-DP, DeviceNet, Modbus TCP, Rnet, LonWorks, CANopen, EtherNet/IP
Others		Built-in Dynamic braking transistor (0.75~22kW[1~30HP]), Built-in RS485(LS Bus / Modbus RTU)

iP5A

Variable Frequency Drive

Fan & Pump specialized VFD

3 phase 200V : 5.5~30kW(1~400HP), 200~230V
3 phase 400V : 5.5~450kW(1~600HP), 380~480V



- Specialized functions for Fan & Pump:
 - Advanced PID control (Pre-PID, Dual PID)
 - Multi Motor Control function (Up to 4 motors: 5.5 ~ 90kW[7.5~125HP])
- Energy saving & High efficiency:
 - Sleep & Wake-up function
 - Flying Starting function
 - Automatic energy saving function
 - Flux Braking Algorithm
- Improved protection functions:
 - Pre-heater function
 - Low Leakage PWM
 - Safety stop function
 - Automatic carrier frequency change
- Selectable V/f, Sensorless vector control
- Long-life condenser & Simple framework
- Easy Start function
- Selectable PNP/NPN input signal
- Plug-in type control terminals
- Cooling fan On/Off control
- Built-in RS485(LS Bus) communication
- Communication boards (Optional):
 - Modbus RTU, DeviceNet, Profibus-DP, LonWorks, BACnet, Modbus TCP*, CANOpen, CC-Link
- Monitoring & commissioning PC based software tool (Drive View)
- DNV Certification

Model Number

SV	0055	iP5A	-	2	N	O	L	(CLASS)				
LS drive brand	Motor rating	Series name	Symbol	Input rating	Symbol	Loader	Symbol	UL Certification	Symbol	DCR	Symbol	Certificate
	0008 : 0.75kW ~ 4500 : 450kW	iP5A	2	Three-phase, 200 ~ 230V	None	Loader	O	Open type	None	Not available	(CLASS)	DNV
			4	Three-phase, 380 ~ 480V	N	Non Loader	E	Enclosed Type 1	L	DC Reactor		

General specification

Model number: SV □□□□ iP5A-2 □		0055	0075	0110	0150	0185	0220	0300	0370	0450	0550	0750	0900	1100	1320	1600	2200	2800	3150	3750	4500	
Motor rating (Fan/Pump)	[HP]	7.5	10	15	20	25	30	40	50	60	75	100	125	150	175	215	300	350	400	500	600	
	[kW]	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	220	280	315	375	450	
Current (110% overload)	[A]	24	32	46	60	74	88	115														
	Normal duty: 110% for 1 minute																					
Motor rating (General load)	[HP]	5	7.5	15	15	20	25	30	40	50	60	75	100	125	150	175	215	300	350	400	500	
	[kW]	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	220	280	315	375	
Current (150% overload)	[A]	17	23	33	44	54	68	84														
	Heavy duty: 150% for 1 minute																					
Output rating	[kVA]	9.1	12.2	17.5	22.9	28.2	33.5	43.8														
	[V]	Three-phase 200 ~ 230V																				
Input rating	[Hz]	0.01 ~ 120Hz																				
	[V]	Three-phase 200 ~ 230V (-15% ~ +10%)																				
Frequency	[Hz]	50 ~ 60Hz (±5%)																				
	[kg]	4.9	6	6	13	13.5	20	20	27	27	29	42	43							243	280	380
Weight	[kg]	4.9	6	6	13	13.5	20	20	27	27	29	42	43							243	280	380
	[kg]	4.9	6	6	13	13.5	20	20	27	27	29	42	43							243	280	380
Control spec	Control method	V/f, Slip compensation, Sensorless vector																				
	Speed reference resolution	Digital command: 0.01Hz (below 100Hz), 0.1Hz(over 100Hz) / Analog reference: 0.1Hz/60Hz																				
Operation	Frequency accuracy	Digital command: 0.01% of Max output freq. / Analog signal command of 0.1% of Max output freq.																				
	V/f curve	Linear, Squared, User custom V/f																				
Input signal	Overload capacity	110% for 1 minute, 120% for 1 minute(based on ambient 25°C)																				
	Torque boost	Auto & Manual(0 ~ 15%) torque boost																				
Output signal	Keypad display	32 characters LCD keypad																				
	Operation method	Keypad / Terminal / Communication																				
Protection	Frequency setting	Analog: 0 ~ 12V / -12V ~ 12V / 4 ~ 20mA or 0 ~ 20mA / Pulse / Ext - PID / Digital: Keypad																				
	Operation function	DC braking / Frequency limit / Frequency jump / Second function / Slip compensation / Reverse rotation prevention / Auto restart / Drive By-pass / Auto-tuning / PID control / Flying star / Safety stop / Flux braking / Low leakage / Pre-PID / MMC / Easy start / Pre-heater																				
Enclosure	Sart signal	Forward / Reverse																				
	Multi-step	Up to 8 speeds can be set including JOG (Use Programmable Digital Input terminal)																				
Option	Multi-step Accel/Decel time	0.1~6,000 sec. Up to 4 types can be set (Use Multi-function terminal)																				
	Emergency stop	Accel/Decel curve : Linear, U curve, S curve																				
Option	JOG	Interrupts the Output from Drive																				
	Fault reset	JOG operation																				
Option	Operating status	Trip status is removed when Protection function is active																				
	Fault output	Frequency detection level / Overload alarm / Stalling / Over voltage / Low voltage / Drive overheating / Run / Stop / Constant speed / Drive By-pass / Speed search																				
Option	Indicator	Contact output (3A, 3C, 3B) - AC250V 1A, DC30V 1A																				
	Indicator	Output frequency / Output current / Output voltage / DC Link voltage(Output voltage:0~10V)																				
Option	Drive trip	Over voltage / Low voltage / Over current 1, 2 / Ground fault / Drive overheating / Electronic thermal / Output phase open / overload / External Fault A, B / Communication Error / Frequency command loss / Hardware fault / Option fault / etc																				
	Drive alarm	Stall prevention / Overload / Temperature sensor fault																				
Option	Board, cable, keypad	IP20/UL type 1(5.5~11kW[7.5~15HP]), IP00/UL open type(15~450kW[20~600HP])																				
	Communication	LCD Keypad, Remote cable(2M/3M/5M), Sub-E board(Current output)																				
Option	Communication	DeviceNet, Profibus-DP, Modbus TCP, Modbus RTU, Matasys N2, LonWorks, BACnet, CC-Link, CANopen																				

iV5

Variable Frequency Drive

High duty full flux vector control VFD

3 phase 200V : 2.2~37kW(3~50HP), 200~230V

3 phase 400V : 2.2~800kW(1~1067HP), 380~480V

400V DC input type : 5.5~500kW(7.5~666HP)



- Ultimate performance solution for System Drive
- Advanced Speed & Torque control (200% instantaneous torque: Max. 250%)
- Precious Speed & Position synchronization operation
- Static motor parameter Auto-tuning
- Draw / Droop / Process PID control
- Highly precious control through optional Sincos Encoder (SPM & IPM motors)
- Synchronous motor sensorless control
- Specialized functions for various applications
 - Load balance function
 - Diameter calculation / Taper function
 - Splicing / Inertia compensation function
 - Quick stop function
- Built-in Dynamic braking transistor (2.2~22kW[3~30HP])
- User-friendly LCD keypad (Detachable)
- Plug-in type control terminals
- Extension I/O boards (Optional):
 - EL I/O (for Elevator application)
 - Encoder division (open collector)
 - Synchronization option (Speed/Position control)
 - Sincos encoder
- Communication boards (Optional)
 - RS485(LS Bus / Modbus RTU)
 - Profibus-DP
 - DeviceNet
- Monitoring & commissioning PC based software tool (Drive View)



Model Number

SV	022	iV5	-	2	DB	(MD)	(DC)	380V				
LS drive brand	Motor rating	Series name	Symbol	Input rating	Symbol	Dynamic Brake	Symbol	Cover type	Symbol	Input type	Symbol	Rated voltage
	022: 2.2kW ~ 80000: 800kW	iV5	2	Three-phase, 200 ~ 230V	None	Not available	None	Metallic cover	None	AC Input	None	200~230V or 380~480V
			4	Three-phase, 380 ~ 480V	DB	Dynamic Braking	(MD)	Mold cover*	(DC)	DC Input	****	380V, 460V, 480V

General specification

Model number: SV □□□ iV5-2 □		022	037	055	075	110	150	185	220	300	370
Motor rating	[HP]	3	5	7.5	10	15	20	25	30	40	50
	[kW]	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37
Output rating	Capacity [kVA]	4.5	6.1	9.1	12.2	17.5	22.5	28.2	33.1	46	55
	Current [A]	12	16	24	32	46	59	74	88	122	146
Input rating	Voltage [V]	Three-phase 200 ~ 230V									
	RPM	0 ~ 3600 [RPM]									
Weight	Mold cover type [kg]	6	6	7.7	7.7	13.7	13.7	20.3	20.3		
	Metallic cover type [kg]			14	14	28	28	28	28	42	42

Model number: SV □□□ iV5-4 □		022	037	055	075	110	150	185	220	300	370	450	550	750	900	1100	1320	1600	2200	2800	3150	3750	5000	8000
Motor rating	[HP]	3	5	7.5	10	15	20	25	30	40	50	60	75	100	120	150	175	215	300	373	420	500	666	1067
	[kW]	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	220	280	315	375	500	800
Output rating	Capacity [kVA]	4.5	6.1	9.1	12.2	18.3	22.9	29.7	34.3	46	57	70	85	116	140	170	200	250	329	416	468	557	732	1105
	Current [A]	6	8	12	16	24	30	39	45	61	75	91	110	152	183	223	264	325	432	546	614	731	960	1384
Input rating	Voltage [V]	Three-phase 380 ~ 480V																						
	RPM	0 ~ 3600 [RPM]																						
Weight	Mold cover type [kg]	6	6	7.7	7.7	13.7	13.7	20.3	20.3															
	Metallic cover type [kg]			14	14	28	28	28	28	42	42	63	63	68	98	98	112	112	175	243	380	380	476	1300

Model number: SV □□□ iV5-4 (DC)		055	075	110	150	185	220	300	370	450	550	750	900	1100	1320	1600	2200	2800	3150	3750	5000
Motor rating	[HP]	7.5	10	15	20	25	30	40	50	60	75	100	120	150	175	215	300	373	420	500	666
	[kW]	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	220	280	315	375	500
Output rating	Capacity [kVA]	9.1	12.2	18.3	22.9	29.7	34.3	46	57	70	85	116	140	170	200	250	329	416	468	557	732
	Current [A]	12	16	24	30	39	45	61	75	91	110	152	183	223	264	325	432	546	614	731	960
Input rating	Voltage [V]	380 ~ 480V																			
	RPM	0 ~ 3600 [RPM]																			
Weight	Mold cover type [kg]	12	12	24	24.5	25	25	38.5	38.5	50	50	55	79	79	98.5	98.5	154.5	206	343	343	466
	Metallic cover type [kg]																				

Control spec	Control method	Sensored Vector (speed sensor)
	Speed reference resolution	Digital command: 0.1rpm / Analog reference: □□0.0005% of Max output freq.
	Speed accuracy	Digital command: □□0.01(0~4°C) of Max output freq. / Analog signal reference: □□0.02(25□□10°C) of Max output freq.
	Cut-off frequency of ASR	50Hz
	Torque control accuracy	3%
	Accel/Decel time	0.00~6000.0 sec
	Accel/Decel combination	4 combinations of Accel/Decel time
	Accel/Decel curve	Linear / S curve
	Frequency setting	Analog: -10 to 10V / 4 to 20mA / Digital: Keypad
Input signal	Analog input	3 channels (AI1, AI2, AI3): Extension I/O 2 channels (AI4, AI5) -10 to 10V / 0 to 10V / 10 to 0V / 4 to 20mA / 20 to 4mA / (AI3, AI5[Extension I/O]: Motor NTC/PTC selectable) Selectable among 15 different Multi-function analog inputs AI3, AI5: NTC is available only with LG-OTIS motors (both of NTC and PTC are available in case of SV28000iV5~SV3750iV5)
Output signal	Contact input	FX, RX, BX, RST, P1~P7 Selectable among 40 different Multi-function analog inputs
	Analog output	2 channels (AO1, AO2) -10 to 10V / 10 to -10V / 0 to 10V / 10 to 0V Selectable among 40 different Multi-function analog outputs
	Contact output	Multi-function contact output: 2 channels (1A-1B, 2A-2B) Fault contact output: 1 channel (30A-30C, 30B-30C)
	Open collector	1 channel (OC1/EG)
Protection		Over voltage / Over current / Low voltage / Drive overheat / Drive thermal malfunction / Motor overheat / Motor thermal malfunction / Overspeed / BX(Instantaneous IGBT gate block) / Fuse open / External fault / Encoder error / Electronic thermal / Overload / IGBT short / Communication error / etc.
Enclosure		IP00 (2.2~22kW[3~30HP]: Mold cover / 30~374kW[40~500HP]: Metallic cover), IP20 (2.2~22kW[3~30HP]: Metallic cover)
Option	Board	EL I/O(for Elevator application), Encoder division(open collector), Synchronization option(Speed/Position control), Sincos encoder
	Communication	RS485(LS Bus / Modbus RTU), Profibus-DP, DeviceNet

Comparison

Variable Frequency Drive

Model Series	iE5		iC5	iG5A			S100		
Input Phase	Single-phase	Three-phase	Single-phase	Single-phase	Three-phase		Single-phase	Three-phase	
Voltage Range	200~230V		200~230V	200~230V		380~480V	200~240V	200~240V	380~480V
Motor rating	0.1~0.4kW	0.1~0.4kW	0.4~2.2kW	0.4~1.5kW	0.4~22kW	0.4~22kW	0.4~2.2kW	0.4~15kW	0.4~75kW
	0.13~0.5HP	0.13~0.5HP	0.5~3HP	0.5~2HP	0.5~30HP	0.5~30HP	0.5~3HP	0.5~20HP	0.5~100HP
Constant Torque	Standard		Standard	Standard			Standard		
Variable Torque							Standard		
Control method	V/f		Standard	Standard	Standard		Standard		
	Sensorless Vector		Standard	Standard		Standard			
	Sensored Vector								
Enclosure	IP00								
	IP20		Standard	Standard	Standard		Standard		
			0.1~0.4kW	0.4~2.2kW	0.4~22kW		0.4~2.2kW	0.4~15kW	0.4~75kW
			0.13~0.5HP	0.5~3HP	0.5~30HP		0.5~3HP	0.5~20HP	0.5~100HP
	UL Type1			Option		Option			
				0.4~22kW		0.4~2.2kW		0.4~15kW	0.4~75kW
				0.5~30HP		0.5~3HP		0.5~20HP	0.5~100HP
	IP54								
	IP66								
							0.4~15kW		0.4~22kW
							0.5~20HP		0.5~30HP
Keypad	Type		Fixed type	Fixed type	Fixed type		Fixed type		Detachable type
	Built-in		7 Segment	7 Segment	7 Segment		7 Segment		iS7 Graphic LCD
			0.1~0.4kW	0.4~2.2kW	0.4~22kW		0.4~2.2kW	0.4~15kW	0.4~22kW
			0.13~0.5HP	0.5~3HP	0.5~30HP		0.5~3HP	0.5~20HP	0.5~30HP
	Option						iS7 Graphic LCD		
							0.4~2.2kW		0.4~15kW
							0.5~3HP		0.5~20HP
Remote cable	2 meters			Option		Option			
	3 meters			Option		Option			
	5 meters			Option		Option			
Braking transistor				Standard		Standard		Option	
				0.4~22kW		0.4~22kW		30~75kW	
				0.5~30HP		0.5~30HP		40~100HP	
EMC Filter			Built-in Option	Footprint Filter ^{note 1)}		Built-in	Built-in	Built-in	Built-in Option
			0.4~2.2kW	0.4~4kW		0.4~2.2kW	0.4~22kW	0.4~22kW	30~45kW
			0.5~3HP	0.5~5.4HP		0.5~3HP	0.5~30HP	0.5~30HP	40~60HP
DC Reactor							Built-in		
							30~75kW		
							40~100HP		
RS485(LS Bus)	Standard			Standard	Standard ^{note 2)}		Standard		
Modbus RTU	Standard		Option	Standard	Standard ^{note 2)}		Standard		
Modbus TCP					Option ^{note 3)}		Option		
DeviceNet					Option ^{note 4)}				
Profibus-DP							Option		
Fnet(LS PLC link)									
Rnet									
LonWorks									
CANopen						Standard ^{note 3&4)}	Option		
BACnet									
EtherNet/IP						Standard ^{note 3)}	Option		
CC-Link									
Encoder									
Sin/Cos encoder									
PLC									
Standard I/O							Standard		
Multiple I/O							Standard		
Extension I/O							Option		
Elevator I/O									
Synchronization I/O									

Note1) SV□□□G5A-4EN-4EN or ENC
 Note2) SV□□□G5A-FB and ENC

Note3) SV□□□G5A-FB
 Note4) SV□□□G5A-ENC

Comparison

Variable Frequency Drive

Model Series	iP5A		H100		iS7		iV5	
Input Phase	Three-phase		Three-phase		Three-phase		Three-phase	
Voltage Range	200~230V	380~480V	200~240V	380~480V	200~230V	380~480V	200~230V	380~480V
Motor rating	5.5~30kW	5.5~450kW	0.75~18.5kW	0.75~90kW	0.75~22kW	0.75~375kW	2.2~37kW	2.2~375kW
	7.5~40HP	7.5~600HP	1.0~22HP	1.0~120HP	1~30HP	1~500HP	3~50HP	3~666HP
Constant Torque					Standard		Standard	
Variable Torque	Standard		Standard		Standard			
Control method	Standard		Standard		Standard			
V/f	Standard		Standard		Standard			
Sensorless Vector	Standard				Standard			
Sensored Vector					Option		Standard	
Enclosure	IP00				Standard		Standard	
	Standard	Standard			Standard	Standard	Standard	Standard 30~75kW
	15~30kW	15~450kW			30~75kW	90~375kW	2.2~37kW	2.2~375kW
	20~40HP	20~600HP			40~100HP	125~500HP	3~30HP	3~500HP
	IP20		Standard		Standard		Standard	
	5.1~11kW		0.75~18.5kW	0.75~90kW	0.75~22kW	0.75~75kW	5.5~22kW	
	7.5~15HP		1.0~22HP	1.0~120HP	1~30HP	1~100HP	7.5~30HP	
	UL Type 1		Option		Option			
	5.1~11kW	5.1~11kW	0.75~18.5kW	0.75~90kW	0.75~75kW			
	7.5~15HP	7.5~15HP	1.0~22HP	1.0~120HP	1~100HP			
	IP54				Built-in Option			
					0.75~22kW			
					1~30HP			
Keypad	Type		Detachable type		Detachable type		Detachable type	
	Built-in		37~450kW		0.75~90kW		90~160kW	
	Option		50~600HP		1.0~22HP		125~215HP	
							0.75~75kW	
							5.5~30kW	
Remote cable	2 meters		7.5~40HP		1~100HP			
	Option		Option		Option			
	3 meters		Option		Option			
	5 meters		Option		Option			
Braking transistor					Standard		Standard	
					0.75~22kW		2.2~22kW	
					1~30HP		3~30HP	
EMC Filter					Built-in		Built-in Option	
					0.75~90kW		0.75~22kW	
					1.0~120HP		1~30HP	
DC Reactor	Built-in Option		Built-in		Built-in Option			
	15~280kW		37~90kW		0.75~22kW		0.75~220kW	
	20~350HP		50~120HP		1~30HP		1~300HP	
RS485(LS Bus)	Standard / Option		Standard		Standard		Option	
Modbus RTU	Option		Standard		Standard		Option	
Modbus TCP	Option				Option			
DeviceNet	Option				Option		Option	
Profibus-DP	Option				Option		Option	
Fnet(LS PLC link)								
Rnet					Option			
LonWorks	Option		Option		Option			
CANopen					Option			
BACnet	Option		Standard					
EtherNet/IP					Option			
CC-Link	Option				Option		Option	
Metasys N2	Option							
Encoder					Option		Standard	
Encoder option (SIN/COS, Endat)							Option	
PLC					Option			
Extension I/O			Option		Option		Option	
Elevator I/O							Option	
Synchronization I/O					Option		Option	

Option list

Variable Frequency Drive

Series	Option	Description
iC5	SV-iC5 Modbus RTU	iC5 Modbus communication card
	SV-iC5 Copy Unit	iC5 Copy Unit
iG5A	SV-iG5A Remote Cable 2M	2 meter connection cable between drive and keypad plus fixture
	SV-iG5A Remote Cable 3M	3 meter connection cable between drive and keypad plus fixture
	SV-iG5A Remote Cable 5M	5 meter connection cable between drive and keypad plus fixture
	Nema Option 1 (SV004/008iG5A-2/4)	Conduit Kit for NEMA 1 (iG5A 0.4~0.75kW)
	Nema Option 2 (SV015iG5A-2/4)	Conduit Kit for NEMA 1 (iG5A 1.5kW)
	Nema Option 3 (SV022~040iG5A-2/4)	Conduit Kit for NEMA 1 (iG5A 2.2~4kW)
	Nema Option 4 (SV055/075iG5A-2/4)	Conduit Kit for NEMA 1 (iG5A 5.5~7.5kW)
	Nema Option 5 (SV110/150iG5A-2/4)	Conduit Kit for NEMA 1 (iG5A 11~15kW)
Nema Option 6 (SV185/220iG5A-2/4)	Conduit Kit for NEMA 1 (iG5A 18.5~22kW)	
S100	LSLV-S100 CANopen	CANopen communication card
	LSLV-S100 EtherNet	EtherNet communication card
	LSLV-S100 Profibus	Profibus-DP communication board
H100	LonWorks	LonWorks communication card
iS7	SV-iS7 LCD Keypad	Graphic LCD display keypad for iS7 (128x64 COG, 11 Rubber Key, 3 LED, IP21)- Multi Languages (English, Italian, Spanish, Russian, Turkish, Arabic)
	SV-iS7 Remote Cable(2M)	2 meter connection cable between drive and keypad
	SV-iS7 Remote Cable(3M)	3 meter connection cable between drive and keypad
	SV-iS7 Isolation I/O	Insulated I/O module, 8 multi-functional inputs and 2 output (Standard: 30~375kW / Option: 0.75~22kW)
	SV-iS7 Extension I/O	Extension I/O module, 3 multi-functional inputs and 3 output
	SV-iS7 Encoder	Encoder board for closed loop control
	SV-iS7 Profibus-DP	Profibus-DP communication board
	SV-iS7 PLC	PLC card (MK120S Platform)
	SV-iS7 R-Net	Rnet communication board
	SV-iS7 Modbus TCP	100M BASE-TX, 10M BASE-T support
	SV-iS7 Devicenet	DeviceNet Communication board
	SV-iS7 LonWorks	LonWork Communication board
	SV-iS7 CANopen	CanOpen communication board
iP5A	SV-iP5A LCD Keypad	LCD display keypad for iP5A
	SV-iP5A LonWork Extension	LonWorks communication board
	SV-iP5A BACNet	BACnet communication board
	SV-iP5A/IV5 RS485/Modbus-RTU	RS485(LS Bus / Modbus RTU) communication board
	SV-iS5/iP5A/IV5 Devicenet	DeviceNet communication board
	SV-iS5/iP5A/IV5 Profibus	Profibus-DP communication board
	SV-iS5/iP5A Sub Board E	Current output board
	SV-iS5/iP5A Remote Cable(2M)	2 meter connection cable between drive and keypad
	SV-iS5/iP5A Remote Cable(3M)	3 meter connection cable between drive and keypad
	SV-iS5/iP5A Remote Cable(5M)	5 meter connection cable between drive and keypad
SV-iP5A Modbus-TCP	Modbus TCP communication card	
iV5	SV-iV5 EL I/O	I/O interface board for Elevator application
	SV-iV5 Enc_Div(OC)	Encoder division board (Open collector)
	SV-iV5 SYNC I/O	Synchronization operation board (Speed/Positioning control)
	SV-iS5/iP5A/IV5 Profibus	Profibus-DP communication board
	SV-iS5/iP5A/IV5 Devicenet	DeviceNet communication board
	SV-iP5A/IV5 RS485/Modbus-RTU	RS485(LS Bus / Modbus RTU) communication board
SV-iV5 Sincos Encoder	Sincos encoder signal input board	

Dynamic Braking Unit list

Variable Frequency Drive

Model name	Specifications
Dynamic Braking Unit	: Based on 150% torque for 100 seconds
SV0150DBU-2	Brake unit for 11 to 15kW, 230V / 10%ED
SV0220DBU-2	Brake unit for 18.5 to 22kW, 230V / 10%ED
SV0037DBH-2(NEW)	Brake unit for 30 to 37kW, 230V / 10%ED
SV0150DBU-4	Brake unit for 11 to 15kW, 400V / 10%ED
SV0220DBU-4	Brake unit for 18.5 to 22kW, 400V / 10%ED
SV0037DBH-4(NEW)	Brake unit for 30 to 37kW, 400V / 10%ED
SV0075DBH-4(NEW)	Brake unit for 45 to 75kW, 400V / 10%ED
SV0150DBU-2U	Brake unit for 11 to 15kW, 230V / 10%ED (UL, cUL listed)
SV0220DBU-2U	Brake unit for 18.5 to 22kW, 230V / 10%ED (UL, cUL listed)
SV0370DBU-2U	Brake unit for 30 to 37kW, 230V / 10%ED (UL, cUL listed)
SV0550DBU-2U	Brake unit for 45 to 55kW, 230V / 10%ED (UL, cUL listed)
SV0150DBU-4U	Brake unit for 11 to 15kW, 400V / 10%ED (UL, cUL listed)
SV0220DBU-4U	Brake unit for 18.5 to 22kW, 400V / 10%ED (UL, cUL listed)
SV0370DBU-4U	Brake unit for 30 to 37kW, 400V / 10%ED (UL, cUL listed)
SV0550DBU-4U	Brake unit for 45 to 55kW, 400V / 10%ED (UL, cUL listed)
SV0750DBU-4U	Brake unit for 75kW, 400V / 10%ED (UL, cUL listed)
SV0750DB-4	Brake unit for 45 to 75kW, 400V / 100%ED (CE marked)
SV2200DB-4	Brake unit for 160 to 220kW, 400V / 100%ED (CE marked)

External resistor list

Variable Frequency Drive / Drive

Model name	Specifications
External brake resistors	: Based on 5% ED (Enable duty)
MCRA 120 W 100 OHM J	120 watt, 100 ohm resistor
MCRA 120 W 50 OHM J	120 watt, 50 ohm resistor
MCRA 120 W 40 OHM J	120 watt, 40 ohm resistor
MCRA 200 W 100 OHM J	200 watt, 100 ohm resistor
MCRA 200 W 160 OHM J	200 watt, 160 ohm resistor
MCRA 200 W 200 OHM J	200 watt, 200 ohm resistor
MCRB 300 W 100 OHM J	300 watt, 100 ohm resistor
MCRB 400 W 200 OHM J	400 watt, 200 ohm resistor
MCRB 400 W 160 OHM J	400 watt, 160 ohm resistor
MCRB 400 W 100 OHM J	400 watt, 100 ohm resistor
MCRB 400 W 50 OHM J	400 watt, 50 ohm resistor
MCRB 400 W 40 OHM J	400 watt, 40 ohm resistor
MCRB-ST 0.6 KW 130 OHM J	600 watt, 130 ohm resistor
MCRB-ST 0.6 KW 33 OHM J	600 watt, 33 ohm resistor
MCRM-ST 0.8 KW 20 OHM J	800 watt, 20 ohm resistor
MCRM-ST 1.0 KW 85 OHM J	1 kW, 85 ohm resistor
MCRM-ST 1.2 KW 60 OHM J	1.2 kW, 60 ohm resistor
MCRM-ST 1.2 KW 15 OHM J	1.2 kW, 15 ohm resistor
MCRM-ST 2.0 KW 40 OHM J	2 kW, 40 ohm resistor
MCRM-ST 2.4 KW 30 OHM J	2.4 kW, 30 ohm resistor
MCRM-ST 2.4 KW 10 OHM J	2.4 kW, 10 ohm resistor
MCRM-ST 2.4 KW 8 OHM J	2.4 kW, 8 ohm resistor
MCRM-ST 3.6 KW 20 OHM J	3.6 kW, 20 ohm resistor
MCRM-ST 3.6 KW 5 OHM J	3.6 kW, 5 ohm resistor



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 a 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.

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