



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



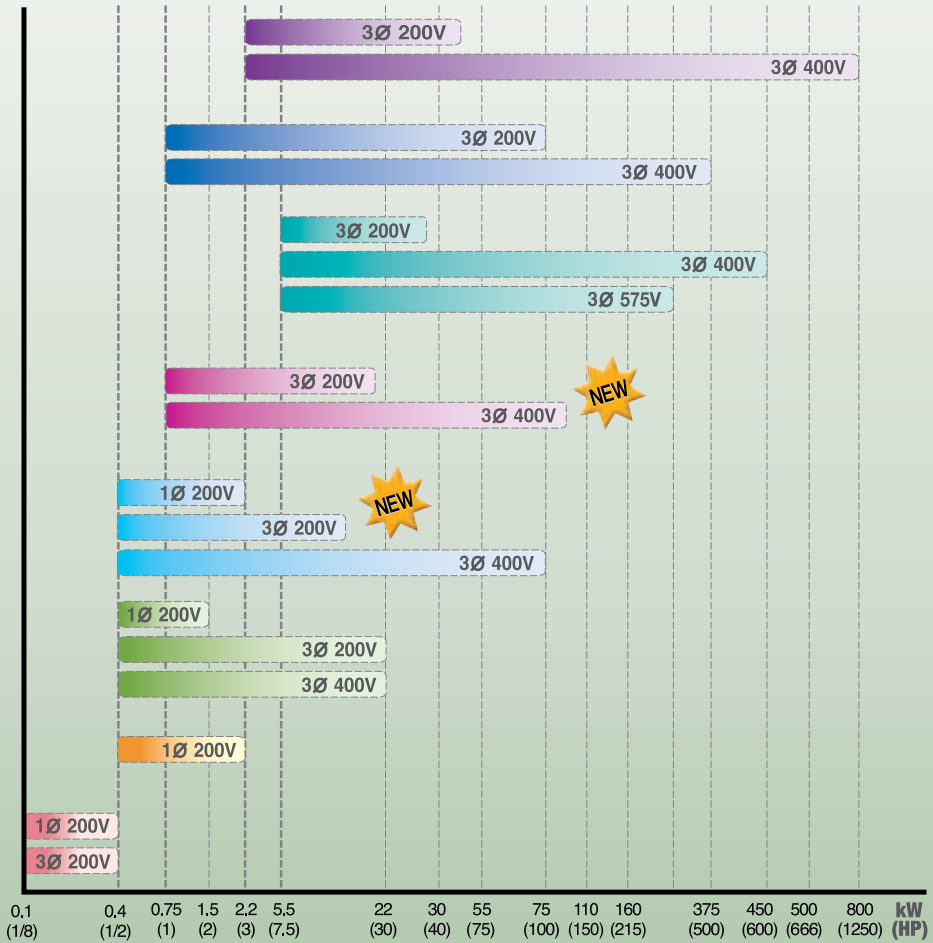
**iC5**

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

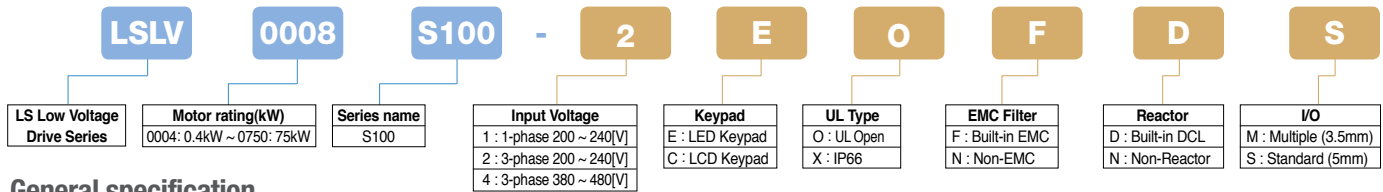
## High Performance Standard VFD

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	
<b>Motor rating</b>	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	
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	
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	18.5	
<b>Output rating</b>	Capacity Heavy Duty(HD)	1.0	1.9	3.0	4.2	Capacity Heavy Duty(HD)	1.0	1.9	3.0	4.2	6.1	6.5	9.1	12.2	17.5	22.9
[kVA] Normal Duty(ND)	1.2	2.3	3.8	4.6	[kVA] Normal Duty(ND)	1.2	2.3	3.8	4.6	6.9	6.9	11.4	15.2	21.3	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	
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	
Frequency [Hz]	0~400Hz (IM Sensorless:0~120[Hz])															
Voltage [V]	3-phase 200~240V															
Input rating	Voltage [V] 1-phase 200 ~ 240VAC (-15%~+10%)															
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	
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	
Weight[kg] (Built-in EMC)	0.9(1.14)	1.3(1.76)	1.5(1.76)	2.0(2.22)	Weight[kg] (Built-in EMC)	0.9	0.9	1.3	1.5	2.0	2.0	3.3	3.3	4.6	7.1	

Model number: LSLV □□□□ S100-4 □□□□	0004	0008	0015	0022	0037	0040	0055	0075	0110	0150	0185	0220	0300	0370	0450	0550	0750	
<b>Motor rating</b>	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	
<b>Output rating</b>	Capacity Heavy Duty(HD)	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
[kVA] 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)	1.3	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)	2.0	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	

<b>Control spec</b>	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	
<b>Operation</b>	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	
<b>Input signal</b>	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	
<b>Output signal</b>	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]	
<b>Protection</b>	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	
<b>Enclosure</b>	IP20, UL Type1, IP66	
<b>Option</b>	Keypad	Graphic LCD keypad(IS7)
Communication	Profibus-DP, EtherNet-IP, Modbus-TCP, CANopen	

# H100

Variable Frequency Drive

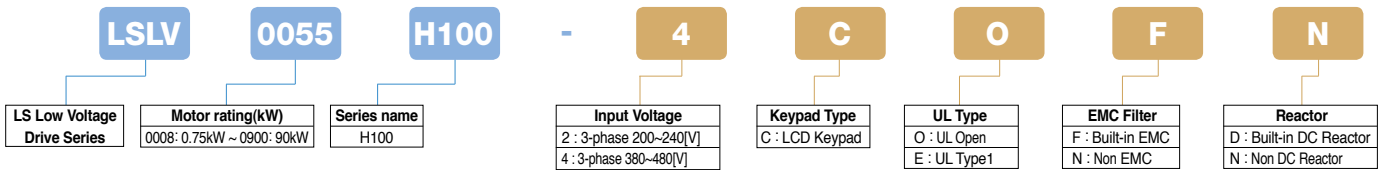
## Fan and Pump VFD

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	2.0	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
Output Frequency		0~400Hz								
Output Voltage [V]		3-phase 200~240V								
Rated Input	Service Voltage [V]	3-phase 200~240VAC (-15%~+10%)								
	Input Frequency	50 ~ 60Hz (±5%)								
Weight	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
Output Frequency		0~400Hz															
Output Voltage [V]		3-phase 380~480V															
Rated Input	Service Voltage [V]	3-phase 380~480VAC (-15%~+10%)															
	Input Frequency	50 ~ 60Hz (±5%)															
Weight	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
	Operation Method	Optional: Keypad, terminal board or communication control
Input signal	Frequency Setting	Analog mode: -10~10V, 0~10V, 0~20mA Digital mode: Keypad and pulse train input
	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
Output signal	Pulse Train	0~3kHz, Low Level: 0~0.8V, High Level: 3.5~12V
	Multifunctional Open Collector Terminal	DC 26V, 50mA or below
	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
Protection	Analog Output	0~12Vdc(0~20mA): Optional among frequency, output current, output voltage and DC voltage
	Pulse train	Maximum 32kHz, 0~12V
	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 trip, Analog input error, Motor overload trip, Keypad command loss trip, Damper trip, Level Detect trip, All auxiliary motor failure trip, Pump clean failure (fault)
Enclosure Option	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
	Instant Power Interruption	Below 8 ms: Continuous operation [within the rated input voltage and rated output] 8 ms or above: Automatic restart operation
Others	Board	IP20/UL Open(default), UL Enclosed Type 1(option)
	Communication	Extension I/O (available soon) Lonworks Built-in BACnet, Modbus-RTU(RS485), Metasys N2

# iE5

Variable Frequency Drive

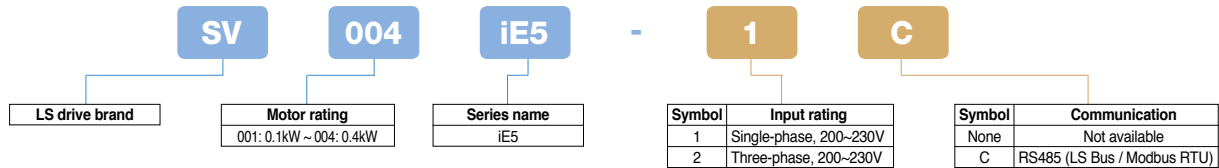
## User friendly micro size slim VFD

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



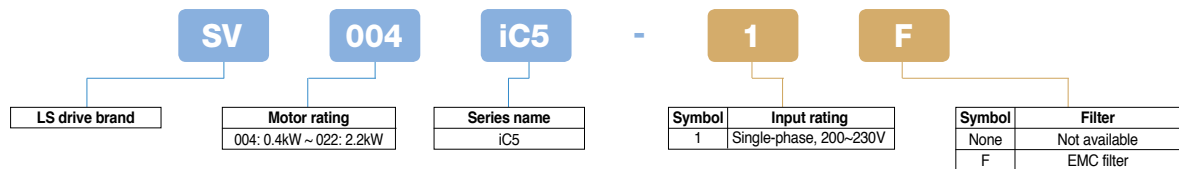
### General specification

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

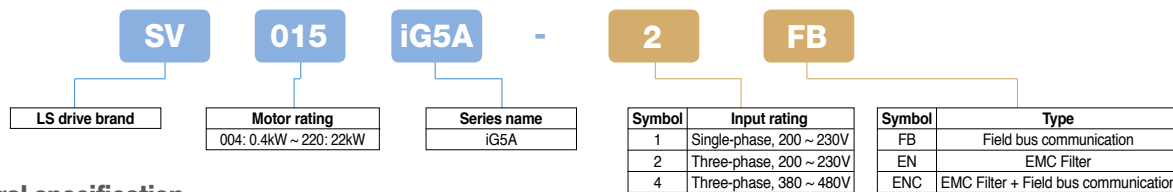
1 phase 0.4~1.5kW(0.5~2HP), 200~230V  
 3 phase 0.4~22kW(0.5~30HP), 200~230V  
 3 phase 0.4~22kW(0.5~30HP), 380~480V



- 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)



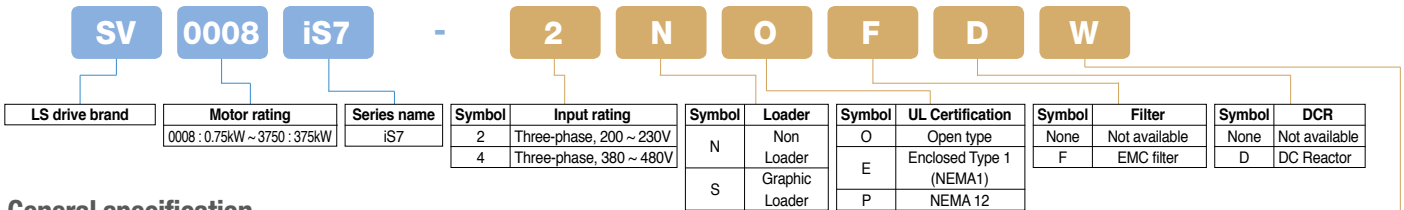


- Constant torque / Variable torque dual rating
- Selectable V/f, V/f PG, sensorless vector, sensed vector
- 150 MIPS(million instructions per second) high speed DSP
- High performances & functions:
  - Droop control (automatic torque balance)
  - KEB (Kinetic Energy Buffering) protection
  - Ride Through (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
- 2<sup>nd</sup> 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											
	Current (CT)	[A]	5	8	12	16	24	32	46	60	74	88	116	146	180	220	288										
Input rating	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)																								
	Voltage	[V]	Three-phase 200 ~ 230V (-15% ~ +10%)																								
	Frequency	[Hz]	50 ~ 60Hz (±5%)																								
Current (CT)	[A]	4.3	6.9	11.2	14.9	22.1	28.6	44.3	55.9	70.8	85.3	121	154	191	233	305											
Current (VT)	[A]	6.8	10.6	14.9	21.3	28.6	41.2	54.7	69.7	82.9	116.1	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	
Input rating	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)																								
	Voltage	[V]	Three-phase 380 ~ 480V (-15% ~ +10%)																								
	Frequency	[Hz]	50 ~ 60Hz (±5%)																								
Current (CT)	[A]	2.2	3.6	5.5	7.5	11.0	14.4	22.0	26.6	35.6	41.6	55.5	67.9	82.4	102.6	143.4	174.7	213.5	255.6	316.3	404	466	605	674	798		
Current (VT)	[A]	3.7	5.7	7.7	11.1	14.7	21.9	26.4	35.5	55.7	67.5	81.7	101.8	123	143.6	173.4	212.9	254.2	315.3	359.3	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																									
Operation	Overload capacity	CT(Heavy duty): 150% for 1 minute, VT(Normal duty): 110% for 1 minute																									
	Torque boost	Auto & Manual torque boost																									
	Keypad display	Wide graphic LCD keypad (available 6 languages)																									
Input signal	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																									
Output signal	Multi-function terminal (P1 ~ P8)	PNP / NPN selectable 8 points (programmable)																									
	Multi-function relay	Fault output & drive status output (N.O., N.C.) Less than AC250V, 1A / Less than DC 30V 1A																									
Protection	Multi-function open collector	DC24V (less than 50mA)																									
	Analog output	0 to 10Vdc (less than 10mA): frequency / current / voltage / DC voltage selectable																									
Enclosure	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																									
Option	Board, Cable, Keypad	IP00 (30~75kW, 200V/90~375kW, 400V), IP21 (0.75~22kW, 200V / 0.75~75kW, 400V), IP54 / NEMA12 (0.75~22kW, 200V/ 400; Optional)																									
	Communication	Graphic LCD keypad(IP21), Extension I/O, Isolation I/O, Encoder board, PLC board, Remote cable(2M/3M)																									
Others	Multi-function relay	Profibus-DP, DeviceNet, Modbus TCP, Rnet, LonWorks, CANopen, EtherNet/IP																									
	Multi-function open collector	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	12.5	13	20	20	27	27	29	42	43							243	280	380
	[kg]	4.9	6	6	19.5	19.5	26.5	26.5	39	40	42	67	68	101	101	114	200	200				
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) 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

<b>SV</b>	<b>022</b>	<b>iV5</b>	<b>-</b>	<b>2</b>	<b>DB</b>	<b>(MD)</b>	<b>(DC)</b>	<b>380V</b>				
<b>LS drive brand</b>	<b>Motor rating</b> 022: 2.2kW ~ 80000: 800kW	<b>Series name</b> iV5	<b>Symbol</b>	<b>Input rating</b>	<b>Symbol</b>	<b>Dynamic Brake</b>	<b>Symbol</b>	<b>Cover type</b>	<b>Symbol</b>	<b>Input type</b>	<b>Symbol</b>	<b>Rated voltage</b>
			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	
	Voltage [V]	Three-phase 200 ~ 230V										
Input rating	RPM	0 ~ 3600 [RPM]										
	Voltage [V]	Three-phase 200 ~ 230V (+10%, -10%)										
	Frequency [Hz]	50 ~ 60Hz (±5%)										
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	
	Voltage [V]	Three-phase 380 ~ 480V																							
Input rating	RPM	0 ~ 3600 [RPM]																							
	Voltage [V]	Three-phase 380 ~ 480V (+10%, -10%)																							
	Frequency [Hz]	50 ~ 60Hz (±5%)																							
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	
	Voltage [V]	380 ~ 480V																				
Input rating	RPM	0 ~ 3600 [RPM]																				
	Voltage [V]	DC 540 ~ 680V (+10%)																				
Weight	[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	
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																				
	Analog input	3 channels (AI1, AI2, AI3): Extension I/O 2 channels (AI4, AI5)																				
Input signal		-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																				
Output signal	Contact input	AI3, AI5: NTC is available only with LG-OTIS motors (both of NTC and PTC are available in case of SV28000iV5~SV3750iV5)																				
	Analog output	FX, RX, BX, RST, P1~P7																				
Output signal		Selectable among 40 different Multi-function analog outputs																				
		2 channels (AO1, AO2)																				
		-10 to 10V / 10 to -10V / 0 to 10V / 10 to 0V																				
Open collector	Contact output	Selectable among 40 different Multi-function analog outputs																				
		Multi-function contact output: 2 channels (1A-1B, 2A-2B)																				
Protection		Fault contact output: 1 channel (30A-30C, 30B-30C)																				
		1 channel (OC1/EG)																				
Enclosure Option	Board	IP00 (2.2~22kW[3~30HP]: Mold cover / 30~374kW[40~500HP]: Metallic cover), IP20 (2.2~22kW[3~30HP]: Metallic cover)																				
	Communication	EL I/O(for Elevator application), Encoder division(open collector), Synchronization option(Speed/Position control), Sincos encoder 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 <sup>note 1)</sup>	Built-in		Built-in	Built-in Option
			0.4~2.2kW		0.4~4kW	0.4~2.2kW		0.4~22kW	30~45kW
			0.5~3HP		0.5~5.4HP	0.5~3HP		0.5~30HP	40~60HP
DC Reactor								Built-in	
								30~75kW	
								40~100HP	
RS485(LS Bus)	Standard			Standard	Standard <sup>note 2)</sup>		Standard		
Modbus RTU	Standard		Option	Standard	Standard <sup>note 2)</sup>		Standard		
Modbus TCP					Option <sup>note 3)</sup>		Option		
DeviceNet					Option <sup>note 4)</sup>				
Profibus-DP								Option	
Fnet(LS PLC link)									
Rnet									
LonWorks									
CANopen					Standard <sup>note 3&amp;4)</sup>		Option		
BACnet									
EtherNet/IP					Standard <sup>note 3)</sup>		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	
<b>Input Phase</b>	Three-phase		Three-phase		Three-phase		Three-phase	
<b>Voltage Range</b>	200~230V	380~480V	200~240V	380~480V	200~230V	380~480V	200~230V	380~480V
<b>Motor rating</b>	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
<b>Constant Torque</b>					Standard		Standard	
<b>Variable Torque</b>	Standard		Standard		Standard			
<b>Control method</b>	Standard		Standard		Standard			
<b>V/f</b>	Standard		Standard		Standard			
<b>Sensorless Vector</b>	Standard				Standard			
<b>Sensored Vector</b>					Option		Standard	
<b>Enclosure</b>	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	
	5.1~11kW		0.75~18.5kW		0.75~90kW		5.5~22kW	
	7.5~15HP		1.0~22HP		1.0~120HP		7.5~30HP	
	IP21 <sup>1)</sup>		Option		Standard			
	Standard	Standard	Option		Standard	Standard		
	5.1~11kW	5.1~11kW	0.75~18.5kW		0.75~90kW			
	7.5~15HP	7.5~15HP	1.0~22HP		1.0~120HP			
	IP54				Built-in Option <sup>2)</sup>			
					0.75~22kW			
					1~30HP			
<b>Keypad</b>	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	
<b>Remote cable</b>	2 meters		7.5~40HP		1~100HP			
	Option		Option		Option			
	3 meters		Option		Option			
	5 meters		Option		Option			
<b>Braking transistor</b>					Standard		Standard	
					0.75~22kW		2.2~22kW	
					1~30HP		3~30HP	
<b>EMC Filter</b>					Built-in		Built-in Option	
					0.75~90kW		0.75~22kW	
					1.0~120HP		1~30HP	
<b>DC Reactor</b>	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	
<b>RS485(LS Bus)</b>	Standard / Option		Standard		Standard		Option	
<b>Modbus RTU</b>	Option		Standard		Standard		Option	
<b>Modbus TCP</b>	Option				Option			
<b>DeviceNet</b>	Option				Option		Option	
<b>Profibus-DP</b>	Option				Option		Option	
<b>Fnet(LS PLC link)</b>								
<b>Rnet</b>					Option			
<b>LonWorks</b>	Option		Option		Option			
<b>CANopen</b>					Option			
<b>BACnet</b>	Option		Standard					
<b>EtherNet/IP</b>					Option			
<b>CC-Link</b>	Option				Option		Option	
<b>Metasys N2</b>	Option							
<b>Encoder</b>					Option		Standard	
<b>Encoder option (SIN/COS, Endat)</b>							Option	
<b>PLC</b>					Option			
<b>Extension I/O</b>			Option		Option		Option	
<b>Elevator I/O</b>							Option	
<b>Synchronization I/O</b>					Option		Option	

1) UL Enclosed Type 1 with conduit box installed.

2) Enclosed IP54 Type, UL Enclosed Type 12

# 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
<b>Dynamic Braking Unit</b>	<b>: Based on 150% torque for 100 seconds</b>
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
<b>External brake resistors</b>	<b>: Based on 5% ED (Enable duty)</b>
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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### ■ HEAD OFFICE

LS Tower, 127, LS-ro, Dongan-gu, Anyang-si, Gyeonggi-Do, 431-848, Korea  
 Tel : 82-2-2034-4620 / mswoo@lsis.com  
 Tel : 82-2-2034-4907 / hjchoi@lsis.com

### Overseas Subsidiaries

- **LSIS(Dalian) Co., Ltd. Dalian, China**  
 No. 15, Liaohexi 3-Road, Economic and Technical Development Zone, Dalian 116600, China  
 Tel : 86-411-8730-7510 / Fax : 86-411-8730-7560
- **LSIS(Wuxi) Co., Ltd. Wuxi, China**  
 No. 1, Lexing Road, Wuxi National High & New Tech Industrial Development Area, Wuxi214028, Jiangsu, P.T.China  
 Tel : 86-510-8534-6666-8005 / Fax : 86-510-8534-4078
- **LS Hukai Electric(Hubei) Co., Ltd. Hubei, China**  
 No. 100, Tanjahe Road, Dianjun District, Yichang City, Hubei Province, 443004, China  
 Tel : 86-717-667-7339 / Fax : 86-717-667-7559
- **LS-VINA Industrial Systems Co., Ltd. Hanoi, Vietnam**  
 Nguyen Khe, Dong Anh, Hanoi, Vietnam  
 Tel : 84-4-6275-8055 / Fax : 84-4-3882-0220
- **LSIS(ME) FZE Dubai, U.A.E.**  
 LOB 19-205, JAFZA View Tower, Jebel Ali Free Zone, Dubai, United Arab Emirates  
 Tel : 971-4-886-5360 / Fax : 971-4-886-5361
- **LSIS Europe B.V. Netherlands**  
 1st. Floor, Tupolevlaan 48, 1119NZ Schiphol-Rijk, The Netherlands  
 Tel : 31-20-654-1420 / Fax : 31-20-654-1429
- **LSIS Japan Co., Ltd. Tokyo, Japan**  
 Tokyo Club Building 13F, 2-6, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo, 100-0013  
 Tel : 81-3-6268-8241 / Fax : 81-3-6268-8240
- **LSIS USA Inc. Chicago, U.S.A.**  
 2000 Millbrook Drive, Lincolnshire, Chicago, IL 60069, United States  
 Tel : 847-941-8240 / Fax : 847-941-8259

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### Overseas Branches

- **LSIS Shanghai Office, China**  
 32nd Floor, International Corporate City, No.3000 NorthZhongshan Road, Putuo District, Shanghai, China, 200063  
 Tel : 86-21-5237-9977 / Fax : 86-21-5237-7189
- **LSIS Beijing Office, China**  
 Room 2306, Building B Landgent Center, No.24 Middle Road, East 3rd Ring Road, Chaoyang District, Beijing, P.R. China  
 Tel : 86-10-5761-3127 / Fax : 86-10-5761-3128
- **LSIS Guangzhou Office, China**  
 Room 1818-1820, Xinyuan Building, NO.898 Tianhe North Road, Tianhe District, Guangzhou, P.R. China  
 Tel : 86-20-8326-6784 / Fax : 86-20-8326-6287
- **LSIS Qingdao Office, China**  
 Room 2001, Galaxy Building, 29 ShanDong Road, ShiNan District, QingDao, ShanDong, P.R. China  
 Tel : 86-532-8501-6058 / Fax : 86-532-8501-6057
- **LSIS Chengdu Office, China**  
 Room1710, 17/F Huamin Empire Plaza, NO.1 Fuxin Road, Chengdu, P.R. China  
 Tel : 86-28-8670-3200 / Fax : 86-28-8670-3203
- **LSIS ShenYang Office, China**  
 Room 803, Hongyuan Building, 52 South Nanjing Road, Heping District, Shenyang, P.R. China  
 Tel : 86-24-2321-9050 / Fax : 86-24-8386-7210
- **LSIS Jinan Office, China**  
 Room 317, Chuangzhan Center, No. 201, Shanda Road, Lixia District, Jinan, Shandong, P. R. China  
 Tel : 86-531-8699-7826 / Fax : 86-531-8697-7628
- **LSIS Co., Ltd. Tokyo Office, Japan**  
 Tokyo Club Building 13F, 2-6, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo, 100-0013  
 Tel : 81-3-6268-8241 / Fax : 81-3-6268-8240
- **LSIS Co., Ltd. Rep. Office, Vietnam**  
 Gema Dept Tower 18F, 6 Le Thanh Ton, District 1, HCM, Vietnam  
 Tel : 84-8-3823-7890
- **LSIS Detroit Office, U.S.A.**  
 5700 Crooks Rd, Suite 211, Troy, MI 48098, USA  
 Tel : 1-248-792-2637-8 / Fax : 1-248-792-2642
- **LSIS Co., Ltd. India Office, India**  
 109 First Floor, Park Central, Sector-30, Gurgaon- 122 002, Haryana, India  
 Tel : 91-1244-930-077 / Fax : 91-1244-930-066
- **LSIS Moscow Office, Russia**  
 123610, Krasnopresnenskaya, nab., 12, building 1, office №1005, Moscow, Russia  
 Tel : 7-495-258-1466/1467 / Fax : 7-495-258-1466/1467
- **LSIS U.K. Office, United Kingdom**  
 G17 Bedford I-Lab, Stannard Way, Priory Business Park, Bedford, MK44 3RZ, U.K.  
 Tel : 44-012-3483-4774 / Fax : 44-012-3483-4775