

# Intelligent Control

Because of effectual functions and protection algorithms, the iP5A provides constant performance, in spite of external power fluctuations.



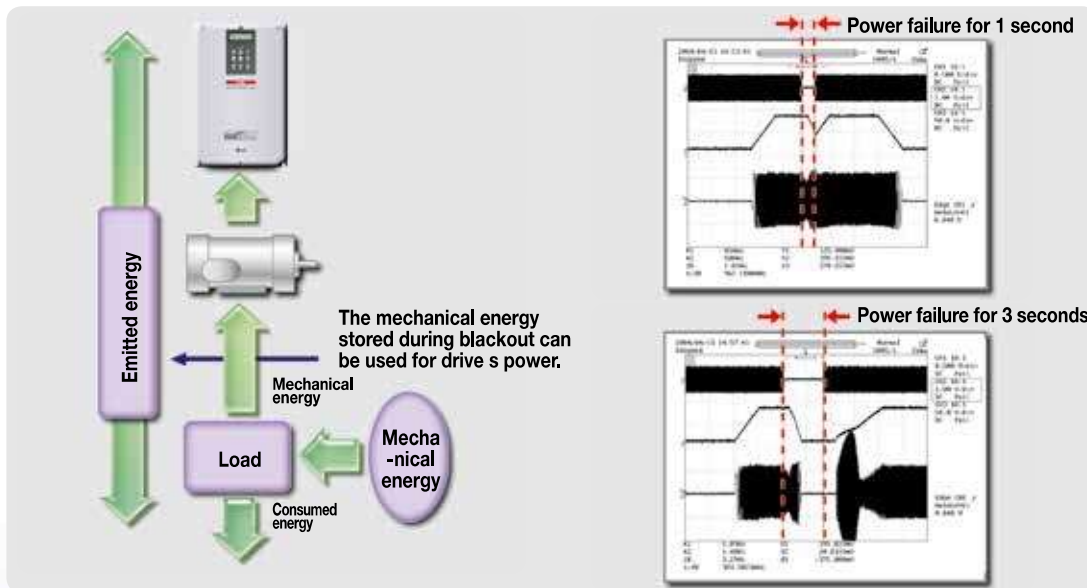
## Constant and Stable Performance

In spite of external voltage fluctuations and lightning surges, the iP5A optimizes motor performance.



## Improved System Management during Power Dips and Momentary Power Outages

During Power Dips or Momentary Power Outage, the drive output can be maintained by utilizing the residual mechanical energy in the load as a regenerative source. The duration of the power-dip ride-through depends on the load characteristics.



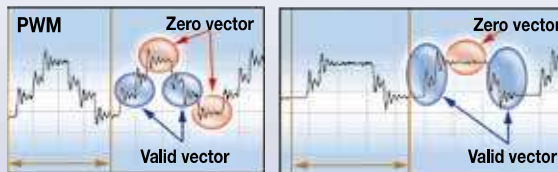
## Safety Stop

During unexpected power failure conditions, the iP5A can bring the load to a controlled stop, by utilizing the inertial energy. This can prevent further process problems or accidents.



## Current Leakage Reduction Algorithm

Under damp conditions, leakage currents can occur when using drives. These currents can cause a system failure. The iP5A low-leakage PWM algorithm reduces these leakage currents to ensure reliability of operation.



## Flux Braking Algorithm

This algorithm reduces deceleration time, thereby improving system efficiency.



## Automatic Carrier Frequency Change

By taking ambient temperature into account, the iP5A can automatically adjust the Carrier (Modulation) Frequency.



## Protection

The iP5A has optimized protective functions, such as safety stop and pre-excitation of the motor, amongst others.

# User-friendly Keypad & Easy Maintenance

The iP5A construction allows for easy maintenance, with ease-of-access to all components.



**Easy Start**

When pushing 'STOP' key for 2~3 seconds in case drive turns on, the drive turns into 'Easy Start Mode' with FWD, REV, and STOP command. 'SHIFT/ESC' can return it to previous mode.

Control method: V/F  
Control frequency: Jog

## 1 NPN/PNP Input

iP5A has both NPN and PNP input, and you can select one of them easily.

## 2 Abundant I/O Suggestion

iP5A serves abundant I/O.

Digital Input/Output	8 points / 4 points
Analog Input (Voltage + Current)/Output	(1+1) points / 4 points
Pulse Input	1 point
NTC/PTC Input	1 point

## 3 Various Units of I/O Display

The iP5A display can be calibrated in many different types of process units.

DRV_REF 500.0mBa 15 FBK 82.1mBa	DRV_REF 500.0kPa 15 FBK 82.1kPa
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## 4 Built-in RS485 and Optional Communication

The built-in RS485 allows for communication without external option. However, the optional communication boards enable the iP5A to talk to BMS and most Industrial Systems

## 5 Long-life Condenser and Simple Framework

iP5A adopts long-life condenser and enables easy maintenance in simple framework.

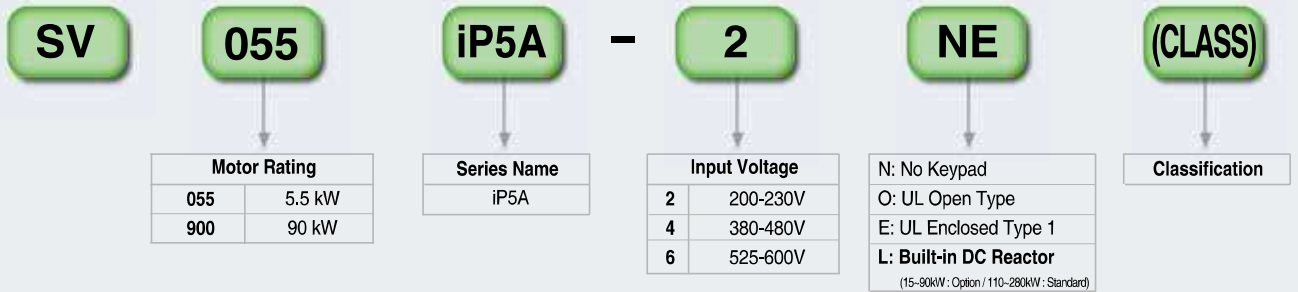
## 6 Consumption Time Display

iP5A displays consumption time of components so that users can replace them in time.

## 7 Others

- Removable terminal board
- External fan available
- Cooling fan on/off control

# Model & Type



Motor Rating	
055	5.5 kW
900	90 kW

Series Name
iP5A

Input Voltage	
2	200-230V
4	380-480V
6	525-600V

N: No Keypad
O: UL Open Type
E: UL Enclosed Type 1
<b>L: Built-in DC Reactor</b>
<small>(15-90kW : Option / 110-280kW : Standard)</small>

Classification
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SV055iP5A-2NE

← Model Number

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INPUT 200-230 V 3 Phase  
25A 50/60HZ

← Input Rating

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OUTPUT 0-Input V 3 Phase  
24A 0.01-120HZ  
9.1KVA, Enclosed Type 1

← Output Rating

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← Protection Degree

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← Bar Cord

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← Serial Number

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90204000408

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LS Industrial Systems Co., Ltd. Made in Korea



Marine Approved Drives  
needs additional ordering.

# Standard Specifications

## ■ 200~230V Class (0.75~30kW / 1~40HP)

Model Number (SV □□□ iP5A-2)		008	015	022	037	055	075	110	150	185	220	300		
Capacity [kVA] <sup>Note1</sup>		1.9	3.0	4.6	6.1	9.1	12.2	17.5	22.9	28.2	33.5	43.8		
Fan or pump load	Motor rating <sup>Note2</sup>	(HP)	1	2	3	5	7.5	10	15	20	25	30	40	
		(kW)	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	
	Current [A]		5	8	12	16	24	32	46	60	74	88	115	
	(110% over current)		110% 1 Minute (Normal Duty)											
Output ratings	General load	Motor rating	(HP)	0.5	1	2	3	5	7.5	10	15	20	25	30
			(kW)	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22
		Current [A]		2.5	5	8	12	17	23	33	44	54	68	84
	(150% over current)		150% 1 Minute (Heavy Duty)											
	Frequency		0.01~120 Hz											
Voltage		200~230V <sup>Note3</sup>												
Input ratings	Voltage		3Ø200~230V (-15%~+10%)											
	Frequency		50/60 Hz (± 5%)											
Protection degree		IP20 / UL Type1						IP00 / UL Open <sup>Note4</sup>						
Weight [kg (lbs.)]		4.1(9.0)	4.2(9.3)	4.2(9.3)	4.9(10.8)	4.9(10.8)	6(13.2)	6(13.2)	13(28.7)	13.5(29.8)	20(44.1)	20(44.1)		

## ■ 380~480V Class (0.75~90kW / 1~125HP)

Model Number (SV □□□ iP5A-4)		008	015	022	037	055	075	110	150	185	220	300	370	450	550	750	900		
Capacity [kVA] <sup>Note1</sup>		2.0	3.2	4.8	6.4	9.6	12.7	19.1	23.9	31.1	35.9	48.6	59.8	72.5	87.6	121.1	145.8		
Fan or pump load	Motor rating <sup>Note2</sup>	(HP)	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	125	
		(kW)	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	
	Current [A]		2.5	4	6	8	12	16	24	30	39	45	61	75	91	110	152	183	
	(110% over current)		110% 1 Minute (Normal Duty)																
Output ratings	General load	Motor rating	(HP)	0.5	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100
			(kW)	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75
		Current [A]		1.25	2.5	4	6	8.8	12	16	22/24	28/30	34/39	44/45	-	-	-	-	-
	(150% over current)		150% 1 Minute (Heavy Duty)																
	Frequency		0.01~120 Hz																
Voltage		380~480V <sup>Note3</sup>																	
Input ratings	Voltage		3Ø380~480V (-15%~+10%)																
	Frequency		50/60 Hz (± 5%)																
Protection degree		IP20 / UL Type1						IP00 / UL Open <sup>Note4</sup>											
Weight [kg (lbs.)]	Standard Type		4.1(9.0)	4.2(9.3)	4.2(9.3)	4.9(10.8)	4.9(10.8)	6(13.2)	6(13.2)	12.5(27.6)	13(28.7)	20(44.1)	20(44.1)	27(59.5)	27(59.5)	29(64)	42(92.6)	43(94.8)	
	Built-in DCL Type		-	-	-	-	-	-	-	19.5(43.3)	19.5(42.9)	26.5(58.3)	26.5(58.3)	33(86)	40(88.2)	42(92.6)	67(147.4)	68(149.9)	

<sup>Note 1</sup> Rated capacity (v 3□□V□□) is based on 220V for 200V class and 460V for 400V class.

<sup>2</sup> Indicates the maximum applicable capacity when using a 4-Pole LS motor.

<sup>3</sup> Maximum output voltage will not exceed the input voltage. An output voltage less than the input voltage may be programmed if necessary.

<sup>4</sup> IP20/UL Type1 with optional conduit, it can be modified to UL Type1.

# Standard Specifications

## ■ 380~480V Class (110~450kW / 50~125HP)

Model Number (SV □□□□iP5A-4)			1100	1320	1600	2200	2800	3150	3750	4500		
Capacity [kVA] <sup>Note1)</sup>			178	210	259	344	436	488	582	699		
Output ratings	Fan or pump load	Motor rating <sup>Note2)</sup>	(HP)	150	200	250	350	400	500	600	700	
			(kW)	110	132	160	220	280	315	375	450	
		Current [A]		223	264	325	432	547	613	731	877	
		(110% over current)		110% 1 Minute (Normal Duty)								
	General load	Motor rating	(HP)	125	150	200	250	350	400	500	600	
			(kW)	90	110	132	160	220	280	315	375	
		Current [A]		183	223	264	325	432	547	613	731	
		(150% over current)		150% 1 Minute (Heavy Duty)								
	Frequency			0.01~120 Hz								
	Voltage			380~480V <sup>Note3)</sup>								
Input ratings	Voltage		3Ø380~480V (-15%~+10%)									
	Frequency		50/60 Hz (± 5%)									
Protection degree			IP00 / UL Open <sup>Note4)</sup>									
DCL			Built-in						External Option			
Weight [kg (lbs.)]			101 (222.7)	101 (222.7)	114 (251.3)	200 (441.9)	200 (441.9)	243 (535.7)	380 (837.7)	380 (837.7)		

## ■ 525~600V Class (5.5~110kW / 7.5~150HP)

Model Number (SV □□□□iP5A-6)			055	075	110	150	185	220	300	370	450	550	750	900	1100		
Capacity [kVA]			9.6	12.7	19.1	23.9	31.1	35.9	48.6	59.8	72.5	87.6	121.1	145.8	178		
Output ratings	Fan or pump load	Motor rating	(HP)	7.5	10	15	20	25	30	40	50	60	75	100	125	150	
			(kW)	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	
		Current [A]		9	12	17	23	27	34	43	55	64	80	104	128	150	
		(110% over current)		110% 1Minute (Normal Duty)													
	General load	Motor rating	(HP)	5.5	7.5	10	15	20	25	30	40	50	60	75	100	125	
			(kW)	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	
		Current [A]		6.1	9	12	17	23	27	34	43	55	64	80	104	128	
		(150% over current)		150% 1 Minute (Heavy Duty)													
	Frequency			0.01~120 Hz													
	Voltage			525 ~600V <sup>Note3)</sup>													
Input ratings	Voltage		3f 525~600V (-15% ~ +10 %)														
	Frequency		50/60 Hz (± 5 %)														
Protection degree			IP20 / UL Type1						IP00 / UL Open <sup>Note4)</sup>								
Weight [kg (lbs.)]			Standard Type		6.5 (14.4)	7.0 (15.5)	7.0 (15.5)	11.7 (25.8)	11.7 (25.8)	18.9 (41.7)	18.9 (41.7)	32 (70.65)	32 (70.65)	32 (70.65)	46 (101.5)	46 (101.5)	101 (223)

Note 1) Rated capacity (r 3 X V X I) is based on 220V for 200V class and 480V for 400V class. 2) Indicates the maximum applicable capacity when using a 4-Pole LS motor.

3) Maximum output voltage will not exceed the input voltage. An output voltage less than the input voltage may be programmed if necessary.

4) IP20/UL Type1 with optional conduit, it can be modified to UL Type1.