iV5

Variable Frequency Drive

High duty full flux vector control VFD

3 phase 200V :2.2~37kW(3~50HP), 200~230V
3 phase 400V : 2.2~500kW(1~666HP), 380~480V
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
- Synchronous motor sensorless control
  (SPM & IPM motors)
- 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 encorder
- Communication boards (Optional)
  RS485(LS Bus / Modbus RTU)
  Profibus-DP
  DeviceNet
- Monitoring & commissioning PC based software tool
  (Drive View)

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Model Number

SV 022 iV5 - 2 DB (MD) (DC), 380V

LS drive brand	Motor rating	Series name
	022: 2.2kW ~ 3750: 370kW	iV5

Symbol	Input rating
2	Three-phase, 200 ~ 230V
4	Three-phase, 380 ~ 480V

Symbol	Dynamic Brake
None	Not available
DB	Dynamic Braking

Symbol	Cover type
None	Metallic cover
(MD)	Mold cover*

Symbol	Input type
None	AC Input
(DC)	DC Input

Symbol	Rated voltage
None	200~230V or 380~480V
****	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									
	RPM		0 ~ 3600 [RPM]									
Input rating	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
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
		[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
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
	Current	[A]	6	8	12	16	24	30	39	45	61	75	91	110	152	183	223	264	325	432	546	614	731	960
	Voltage	[V]	Three-phase 380 ~ 480V																					
	RPM		0 ~ 3600 [RPM]																					
Input rating	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

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																			
	RPM		0 ~ 3600 [RPM]																			
Input rating	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 accurancy	Digital command: □□0.01(0~40°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
	Aceel/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): Extention I/O 2 channels (AI4, AI5) -10 to 10V / 0 to 10V / 10 to 0V / 4 to 20mA / 20 to 4mA / (AI3, AI5[Extention I/O]: Motor NTC/PTC selectable) Selectable among 15 diferent Multi-function analog inputs AI3, AI5: NTC is avaliable only with LG-OTIS motors (both of NTC and PTC are available in case of SV2800iV5~SV3750iV5)
	Contact input	FX, RX, BX, RST, P1~P7 Selectable among 40 diferent Multi-function analog inputs
Output signal	Aanalog output	2 channels (AO1, AO2) -10 to 10V / 10 to -10V / 0 to 10V / 10 to 0V Selectable among 40 diferent 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), Encorder division(open collector), Synchronization option(Speed/Position control), Sincos encorder
	Communication	RS485(LS Bus / Modbus RTU), Profibus-DP, DeviceNet