LSLV Drive Transition Guide

iG5A ▶ G100

3 Phase 200-240V 0.4kW - 22kW (1/2-30HP)
3 Phase 380V-480V 0.4kW - 22kW (1/2-30HP)

General Drive
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Safety Information

Read and follow all safety instructions in this manual precisely to avoid unsafe operating conditions, property damage, personal injury, or death.

Safety symbols in this manual

⚠ Danger

Indicates an imminently hazardous situation which, if not avoided, will result in severe injury or death.

⚠ Warning

Indicates a potentially hazardous situation which, if not avoided, could result in injury or death.

Ⓘ Caution

Indicates a potentially hazardous situation that, if not avoided, could result in minor injury or property damage.

Safety Information

⚠ Danger

- Do not open the cover of the equipment while it is on or operating. Likewise, do not operate the inverter while the cover is open. Exposure of high voltage terminals or charging area to the external environment may result in an electric shock. Do not remove any covers or touch the internal circuit boards (PCBs) or electrical contacts on the product when the power is on or during operation. Doing so may result in serious injury, death, or serious property damage.
- Do not open the cover of the equipment even when the power supply to the inverter has been turned off unless it is necessary for maintenance or regular inspection. Opening the cover may result in an electric shock even when the power supply is off.
- The equipment may hold charge long after the power supply has been turned off. Use a multi-meter to make sure that there is no voltage before working on the inverter, motor or motor cable.

⚠ Warning

- This equipment must be grounded for safe and proper operation.
- Do not supply power to a faulty inverter. If you find that the inverter is faulty, disconnect the power supply and have the inverter professionally repaired.
- The inverter becomes hot during operation. Avoid touching the inverter until it has cooled to avoid burns.
- Do not allow foreign objects, such as screws, metal chips, debris, water, or oil to get inside the inverter. Allowing foreign objects inside the inverter may cause the inverter to malfunction or result in a fire.
- Do not operate the inverter with wet hands. Doing so may result in electric shock.
- Check the information about the protection level for the circuits and devices.

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Contents

Please refer to the manual for details.

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1. New Features of G100 (1)

Great Reliability

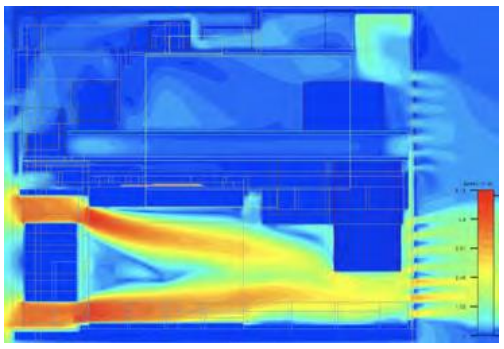
- UL 61800-5-1 Design
  - Designed to meet UL 61800-5-1 standards to enhance
  - protection from electric shock.

- Robust Design
  - Constructed air flow design to minimize exposure of important
  - parts(IGBT, PCB, etc.) from external substances.

- MIL217Plus Based Design
  - Analyzed design based on reliability tool (PSA, Fr-FMEA)
  - Secured circuit robustness and followed strict quality margin

- Material Design
  - Enhanced thermal resistance and intensity by upgrading material
  - Changed thickness to prevent from damage (2T → 2.5T)

- Built-in EMC Filter
  - Embedded C3 EMC filter to meet EN618000-3 standards and provide noise reduction solution.



[Robust Design]

[Built-in EMC Filter]

Great Performance

- Application Adaptability
  - Provides dual rating to enable various applications

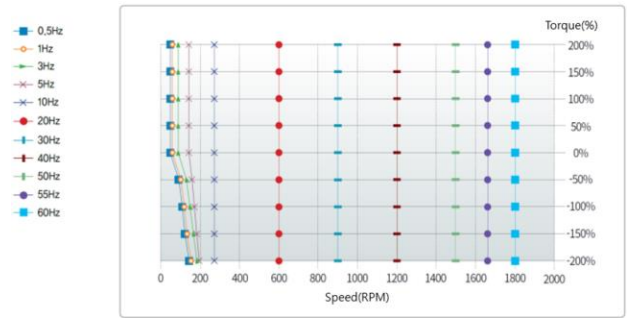
- V/F Accelerate and Decelerate Function
  - Applied Auto Torque Boost & Flux Braking Function

- Sensorless Performance
  - Performs low speed high torque, Satisfies RPM tolerance, Satisfies 200% torque load

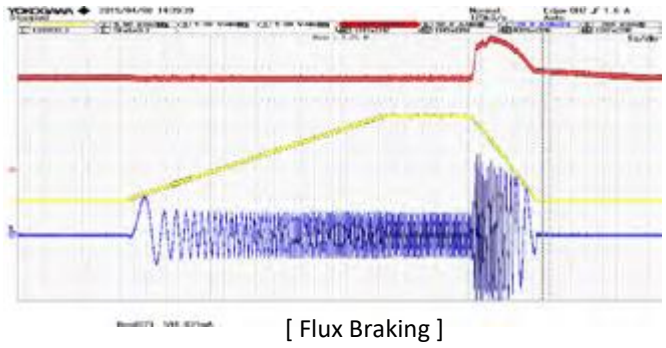
- Sensorless Convenience
  - Easy to tune using only 5 parameters

- KEB(Kinetic Energy Buffering)
  - Select KEB operation function for different speeds and purposes

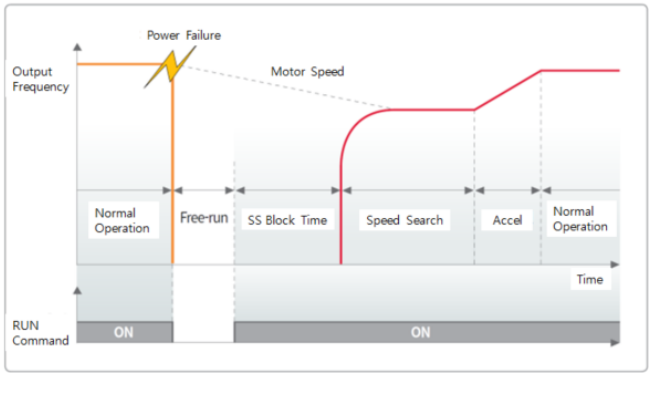
- Flying Start
  - Select optimal flying start operation for different applications
  - Flying Start 1: General
  - Flying Start 2: Fan/Pump



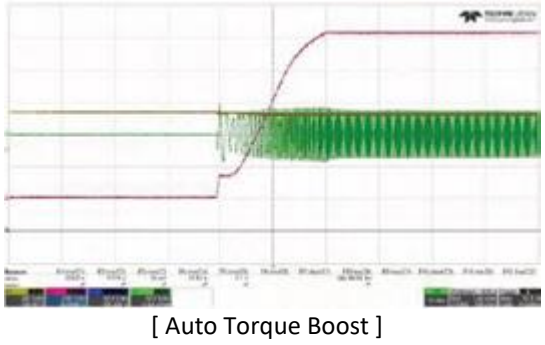
[Sensorless]



[Flux Braking]



[Flying Start]



[Auto Torque Boost]

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1. New Features of G100 (2)

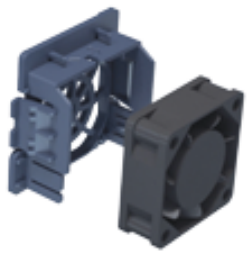
User-friendly Design

- Built-in Potentiometer : Easy operation with built-in potentiometer.
- Remote Keypad: Copy parameter (read/write) using remote keypads.
- Fieldbus Options: 2 Port EtherNet/IP, Profibus-DP, CANopen.
- Smart Copier : Copy parameter (read/write) and download firmware without supplying power to drive.
- Din Rail Mount (Below 4kW): Install using DIN rails (side-by-side).
- Fan Replacement: Simple cooling fan replacement procedure.
- I/O Terminal (5mm): Easy wiring with 5mm I/O pitch.
- QR Code : View manuals and various information from the QR code printed on the front cover.
- Built-in 2 Relay: Cost efficient and easy to compose system with two embedded relays.
- Operation Group: Access commonly used parameters in the operation group, Identical Parameter group structure for all 100 series.

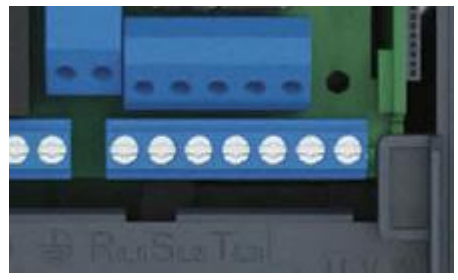
[Remote Keypad]

[Smart copier]

[Din Rail Mount]



[Fan Replacement]



[5mm I/O pitch]

[Operation Group]

iG5A→G100 Transition Guide

2. Specification Comparison (1)

		iG5A	G100	G100C
Applied motor (HD rating)	3phase 200V	0.4kW(0.5HP) ~ 22kW(30HP)	0.4kW(0.5HP) ~ 22kW(30HP)	0.4kW(0.5HP) ~ 1.5kW(2HP)
	3phase 400V	0.4kW(0.5HP) ~ 22kW(30HP)	0.4kW(0.5HP) ~ 22kW(30HP)	0.4kW(0.5HP) ~ 1.5kW(2HP)
Rated output	Output frequency	0 ~ 400Hz	0 ~ 400Hz	←
	Output voltage	3 Phase 200 ~ 230V / 3 Phase 380 ~ 480V	3 Phase 200 ~ 240V / 3 Phase 380 ~ 480V	←
Rated input	Rated Voltage	3 phase 200 ~230V (-15% ~ +10%) 3 phase 380 ~480V (-15% ~ +10%)	3 phase 200 ~230V (-15% ~ +10%) 3 phase 380 ~480V (-15% ~ +10%)	←
	Input frequency	50 ~ 60Hz (±5%)	50 ~ 60Hz (±5%)	←
Control	Control type	V/F, Sensorless Vector	V/F, Slip Compensation, Sensorless Vector	←
	Frequency settings resolution	Digital command: 0.01 Hz Analog command: 0.06 Hz (Max. frequency 60 Hz)	Digital command: 0.01 Hz Analog command: 0.06 Hz (Max. frequency 60 Hz)	←
	V/F pattern	Linear, squared, user V/F	Linear, squared, user V/F	←
	Overload capacity	Heavy load rated current: 150% 1 min	Heavy load rated current: 150% 1 min Normal load rated current: 120% 1 min	←
	Torque Compensation	Manual torque boost, Automatic torque boost	Manual torque boost, Automatic torque boost	←
Operation	Operation type	key pad, terminal strip, communication operation	key pad, terminal strip, communication operation	←
	Frequency settings	Analog type: 0 ~ 10V, -10 ~ 10V, 0 ~ 20mA Digital type: key pad	Analog type: 0 ~ 10V, -10 ~ 10V, 0~20mA Digital type: key pad	←
Input	Multi function terminal(5EA) P1-P5	PNP (Source) or NPN (Sink) selectable	PNP (Source) or NPN (Sink) selectable	←
	Analog input	V1: -10~10V, I2: 0~20mA	V1: -10~10V, I2: 4~20mA	←
Output	Multi function relay terminal	Fault output and inverter operation status output	Fault output and drive operation status output	←
		(N.O., N.C.)Less than AC250V 0.3A, Less than DC 30V, 1A	(N.O., N.C.)Less than AC 250 V 1 A, Less than DC 30 V 1A	←
	Analog output	0 ~ 10V, Less than 10mA	0 ~ 10V, Less than 10mA	←
Protective Function	Trip	Over Voltage, Under Voltage, Over Current, Over Current 2, Ground Fault current detection, Inverter Overheat, Motor Overheat, Output Phase Open, Overload Protection, Communication Error, Loss of Speed Command, Hardware Fault, Fan trip, Brake error.	Over current trip, external signal trip, ARM short current fault trip, over heat trip, input imaging trip, ground trip, motor over heat trip, I/O board link trip, no motor trip, parameter writing trip, emergency stop trip, command loss trip, external memory error, CPU watchdog trip, motor light load trip, Over voltage trip, temperature sensor trip, inverter over heat, option trip, output image trip, inverter overload trip, fan trip, pre-PID operation failure external brake trip, low voltage trip during operation, low voltage trip, analog input error, motor overload trip, over torque trip, under torque trip	←
	Alarm	Stall prevention, overload	Command loss trip warning, overload warning, light load warning, inverter overload warning, fan operation warning, braking resistance braking rate warning, rotor time constant tuning error, inverter pre-overheat warning, over torque warning, under torque warning	←
	Momentary Power Loss	Below 15 msec: Continuous operation (should be within rated input voltage, rated output power.) Above 15 msec: Auto restart enable	HD below 15ms (ND below 8ms): Continuous operation (To be within rated input voltage, rated output) HD above 15ms (ND above 8ms): Automatic restart operation enable	←

* ← : same as G100

iG5A→G100 Transition Guide

2. Specification Comparison (2)

		iG5A	G100	G100C
Environment	Cooling Type	Forced fan cooling structure	Forced fan cooling structure	←
	Protection Degree	IP 20, UL Open type	IP 20, UL Open type	←
	Ambient Temperature	-10°C ~ 50°C	Ambient temperature under the condition of no ice or frost. HD: -10~50℃(14~122°F) ND: -10~40℃(14~104°F) [However, recommended to use load below 80% when using at 50°C under light load]	←
	Storage Temperature	-20°C ~ 65°C	-20~65℃(-4~149°F)	←
	Humidity	Below 90% RH (no condensation)	Relative humidity below 95% RH (no dew formation)	←
	Location	Protected from corrosive gas, combustible gas, oil mist or dust (Pollution degree 2)	No corrosive gas, flammable gas, oil mist and dust etc. indoors (Pollution degree 2 environment)	←
	Altitude, Vibration	Below 1,000m, 5.9m/sec2 (0.6G)	Below 1,000m (From 1000 to 4000m, the rated input voltage and rated output current of the drive must be derated by 1% for every 100m.), below 9.8m/sec2 (1G)	←
	Pressure	70 ~ 106kPa	70 ~ 106kPa	←

* ← : same as G100

3. Operator Comparison

iG5A

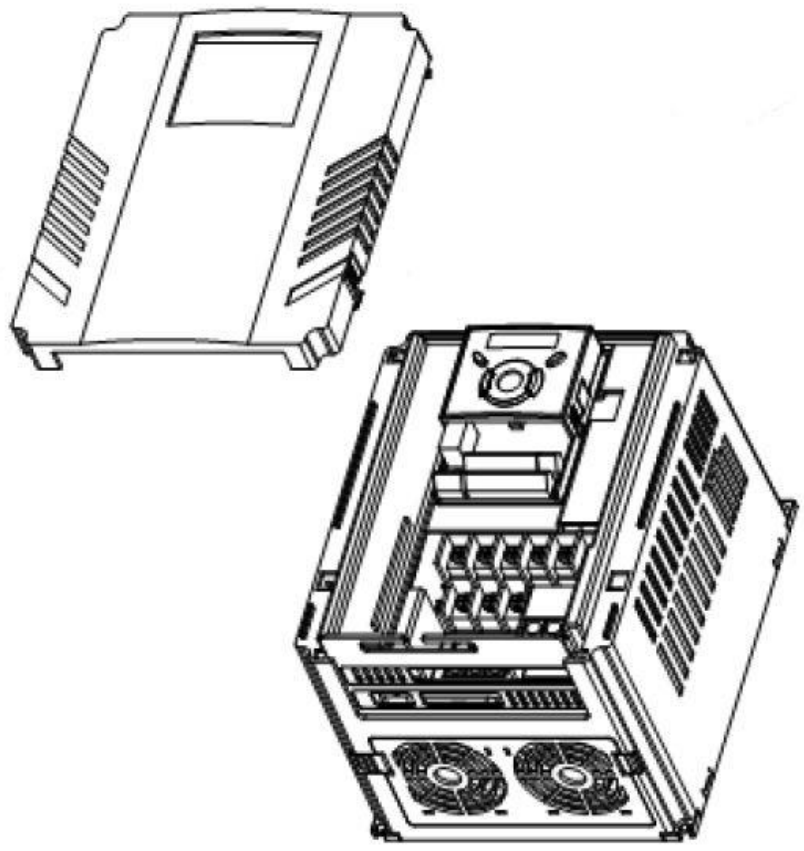
G100

G100C

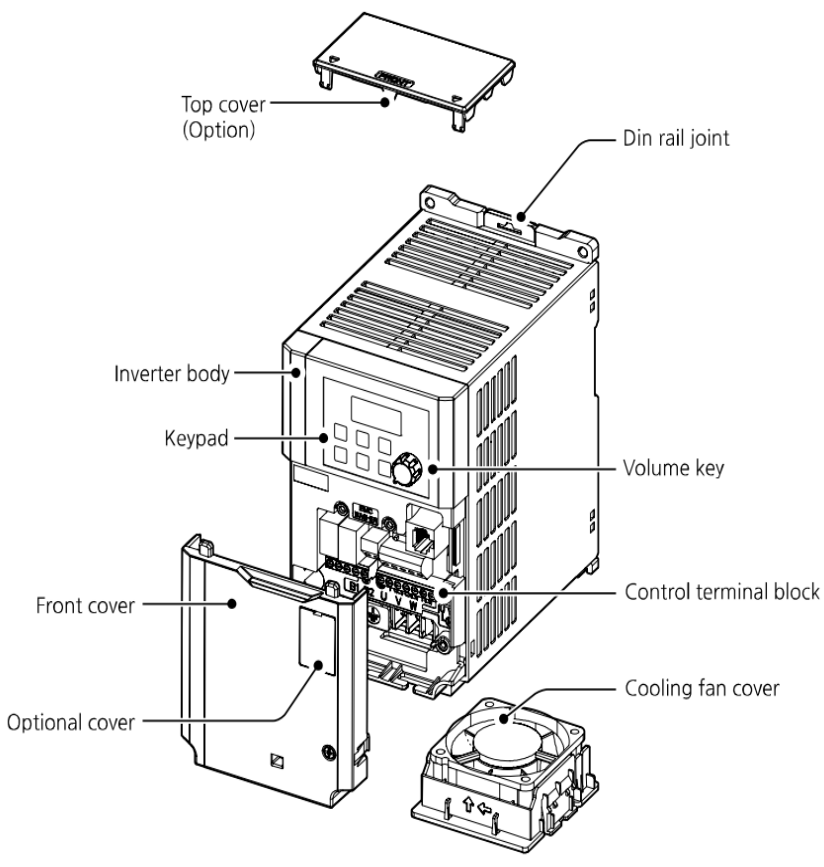
Item	iG5A	G100(G100C)
Display	7-Segment display	7-Segment display
LED	SET Indicator RUN Indicator FWD Indicator REV Indicator	SET Indicator RUN Indicator FWD Indicator REV Indicator
Operation Keys	Run Stop/Reset 4 Way move key Enter	Run Stop/Reset Up/Down move Mode/Shift Enter Potentiometer

4. Product Decomposition

iG5A

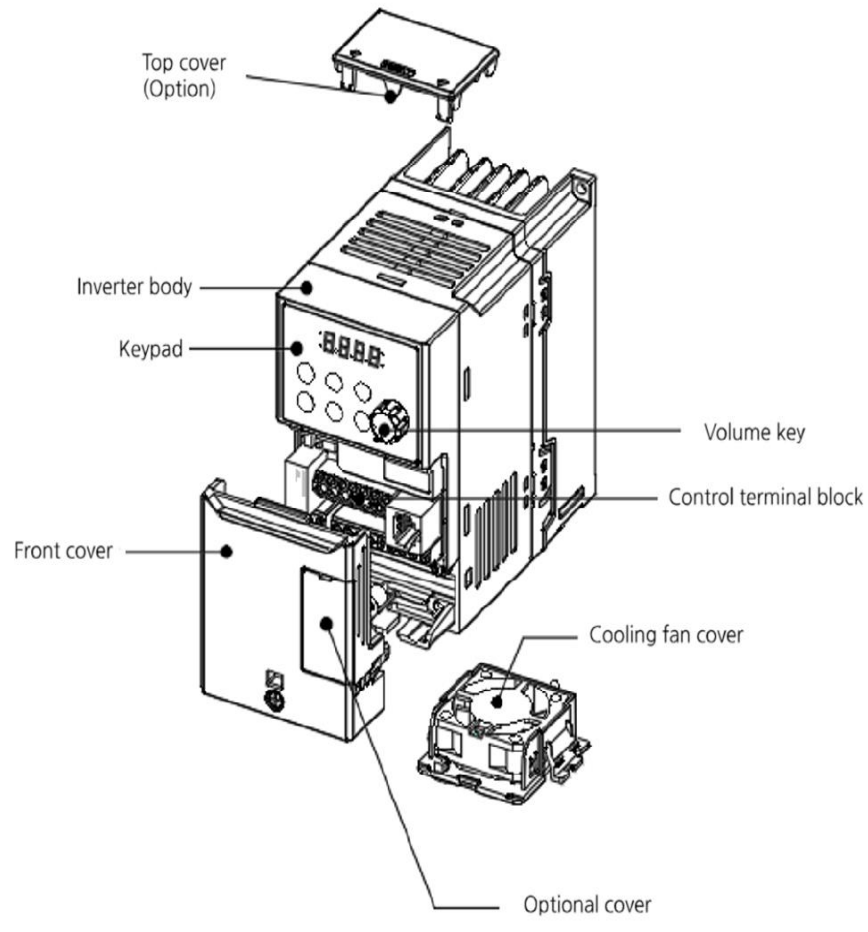


G100



0.4–4.0 kW (3-Phase)

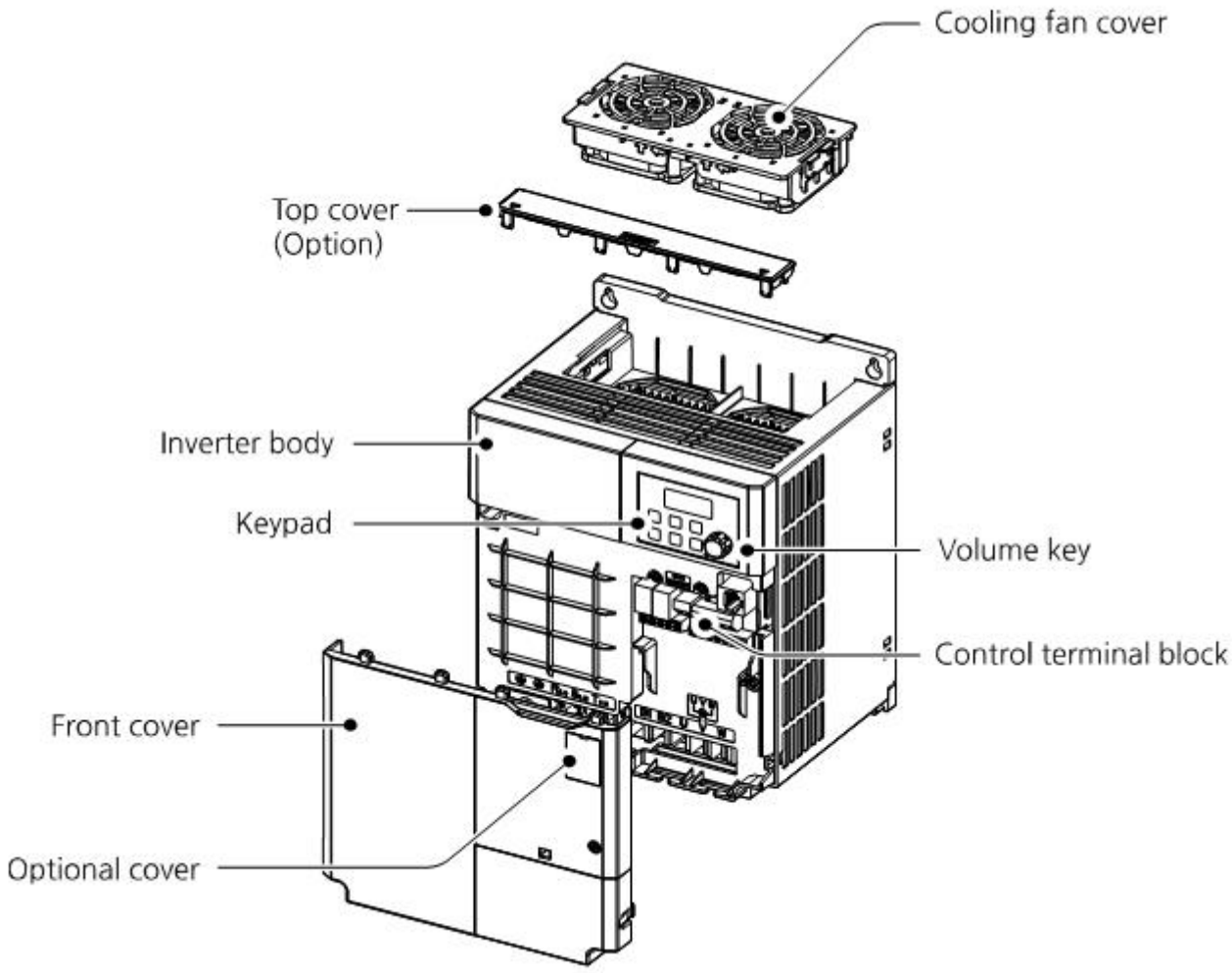
G100C



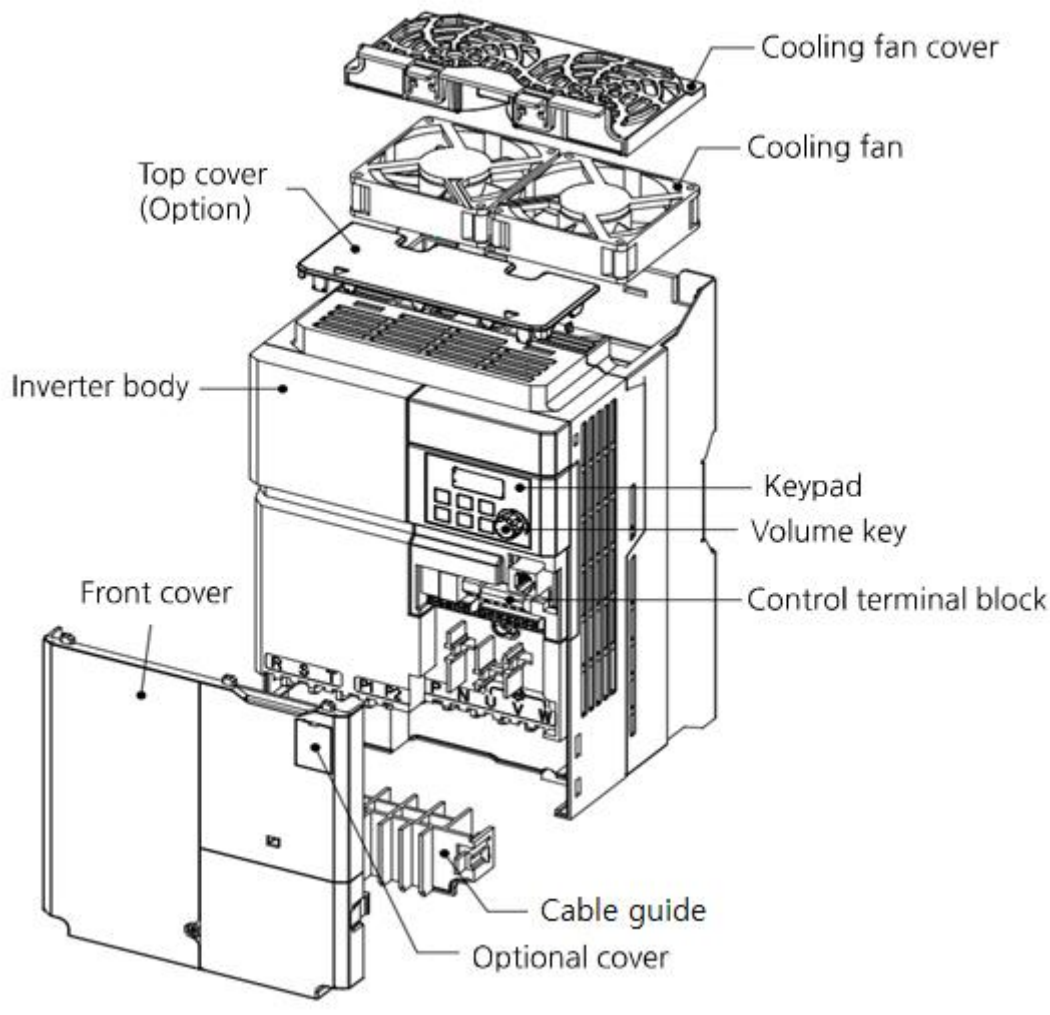
0.4–1.5 kW (3-Phase)

4. Product Decomposition

G100



5.5~7.5 kW (3-Phase)



11~22 kW (3-Phase)

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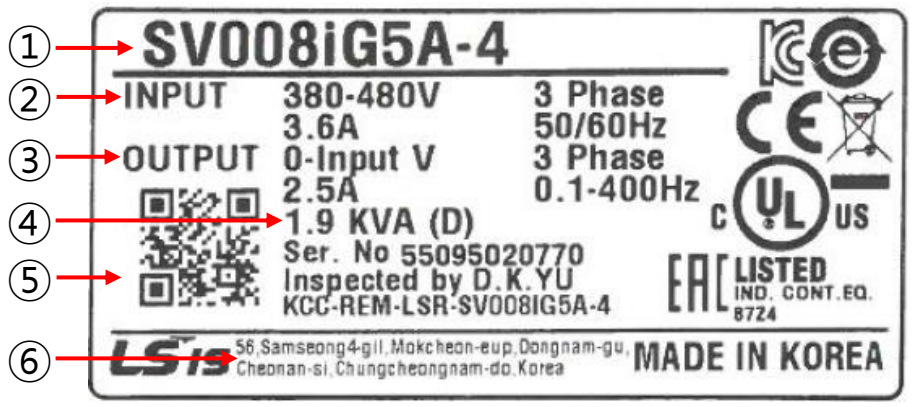
5. Nameplate Comparison

iG5A	G100(G100C)
	
① Inverter type	① Inverter type
② Input power specification	② Input power specification
③ Output power specification	③ Output power specification
④ Inverter capacity	④ Inverter capacity
⑤ QR code and serial number	⑤ QR code and serial number
⑥ Manufacturer and country of manufacture	⑥ Manufacturer and country of manufacture

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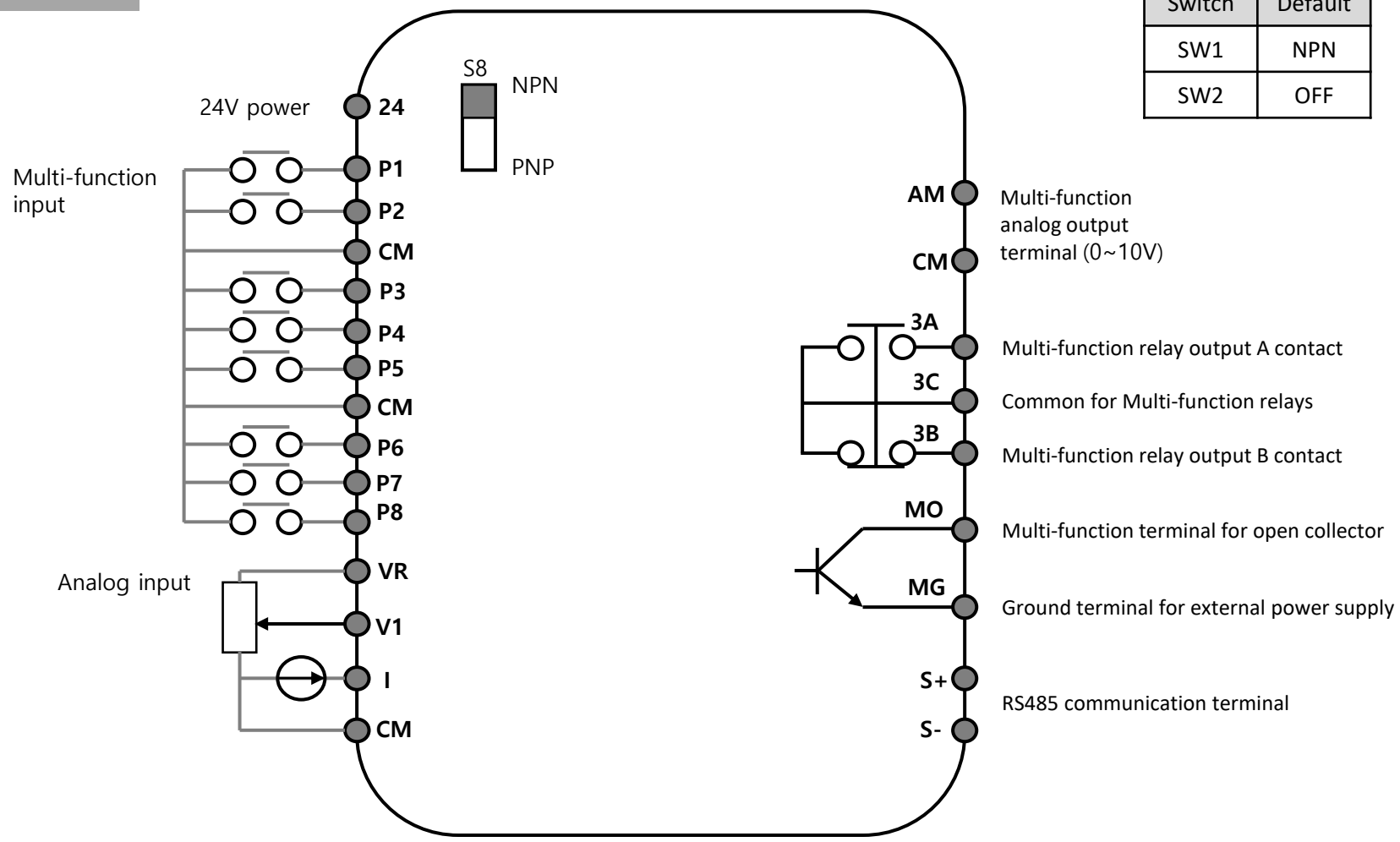
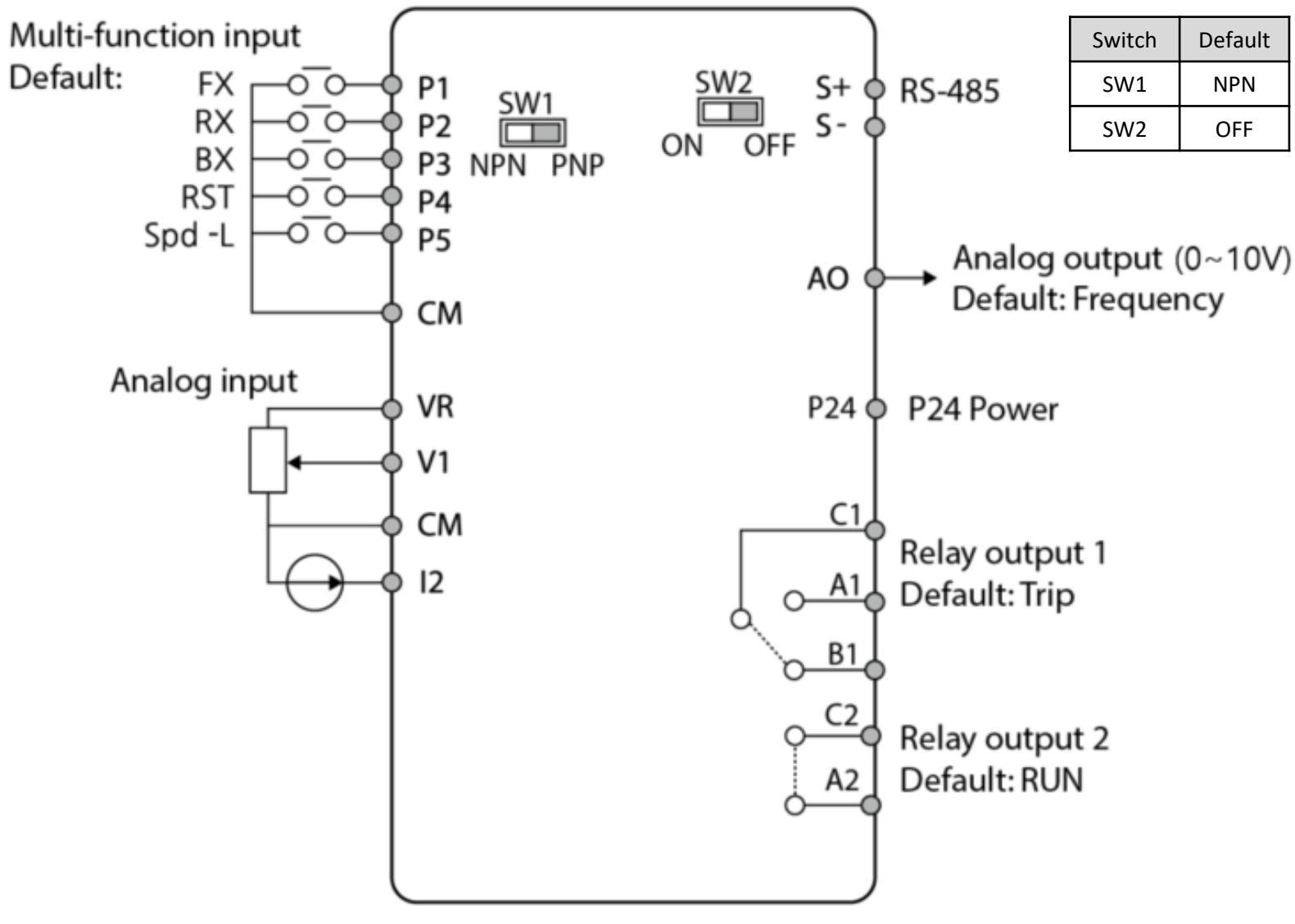
6. Terminal Connection (1)

iG5A



Switch	Default
SW1	NPN
SW2	OFF

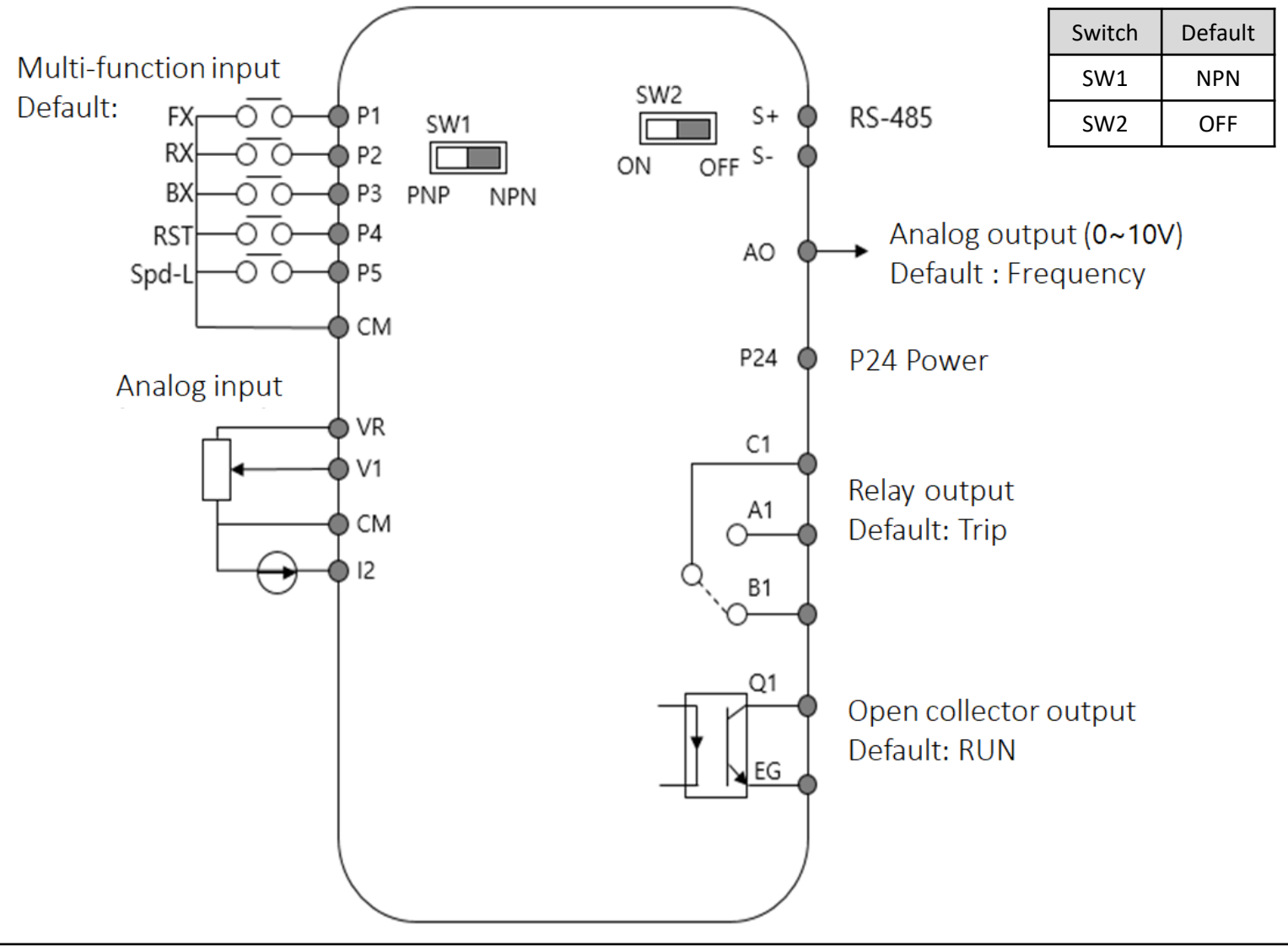
G100



Switch	Default
SW1	NPN
SW2	OFF

6. Terminal Connection (2)

G100C



Switch	Default
SW1	NPN
SW2	OFF

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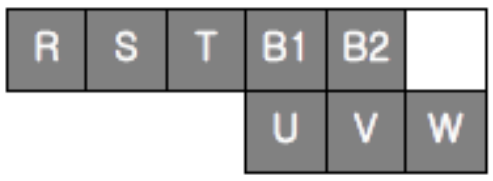
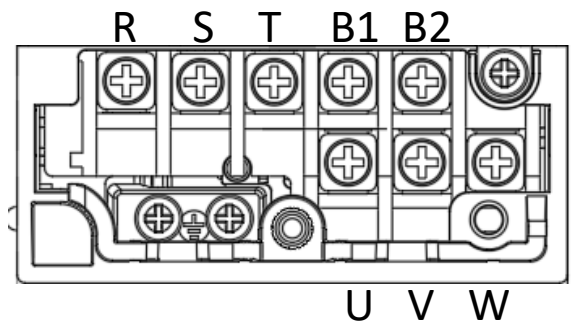
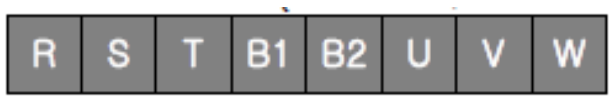
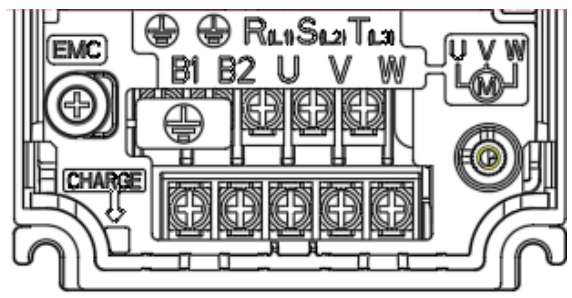
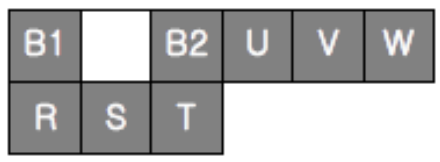
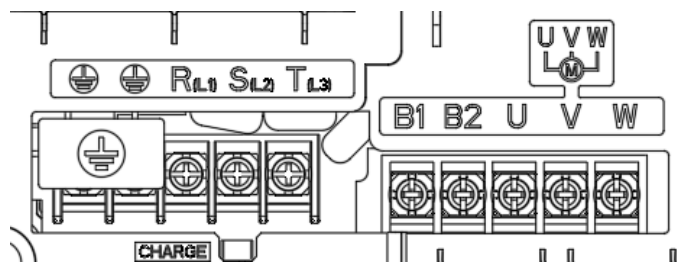
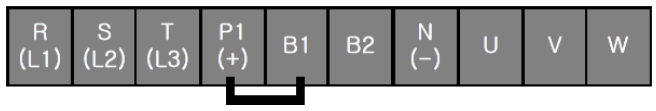
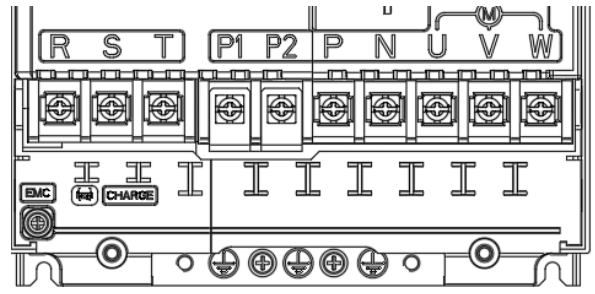
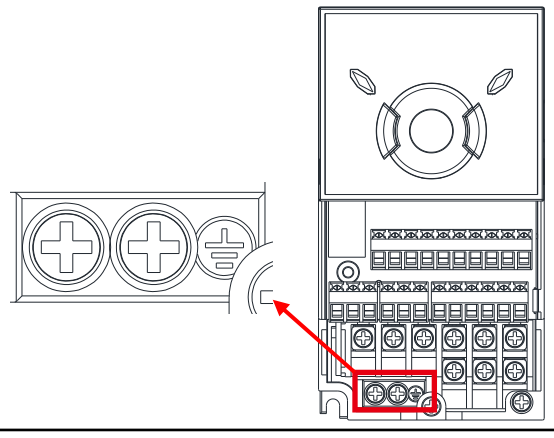
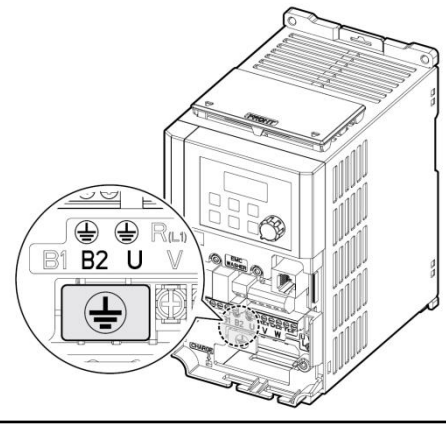
7-1. Power Terminal Comparison

	iG5A		G100
0.4kW, 1.5kW		0.4kW~1.5kW (G100C)	
2.2kW, 4.0kW		0.4kW~4kW	
5.5kW ~ 7.5kW		5.5kW ~ 7.5kW	
11kW ~ 22kW		11kW ~ 22kW	
Ground		Ground	

	iG5A	G100(G100C)
Ground Terminal		
AC power input terminals	R, S, T	R, S, T
Brake resistor terminals	B1, B2	B1, B2
DC voltage output terminals	P1(+)/N(-)	-
Motor output terminals	U, V, W	U, V, W

7-2. Control Terminal Comparison

Product name	Terminal
iG5A	MO MG 24 P1 P2 CM P3 P4 S− S+ 3A 3B 3C P5 CM P6 P7 P8 VR V1 I AM
G100	24 P1 P2 P3 P4 P5 CM A1 B1 C1 A2 C2 VR V1 I2 AO CM S+ S-
G100C	24 P1 P2 P3 P4 P5 CM A1 B1 C1 EG Q1 VR V1 I2 AO CM S+ S-

Item	iG5A	G100	G100C
Multi-Function input Terminal	P1 ~ P8	P1 ~ P5	P1 ~ P5
Input signal common	CM	CM	CM
power supply for potentiometer	VR	VR	VR
Freq. Setting Voltage signal input	V1	V1	V1
Freq. Setting Current signal input	I	I2	I2
Multi-function analog output signal	AM	AO	AO
Multi-function open collector output	MO	-	Q1
Multi-function open collector common	MG	-	EG
24V output	24	24	24
Multi-function relay output terminal A contact	3A	A1 or A2	A1
Multi-function relay output terminal B contact	3B	B1	B1
Multi-function relay output terminal C contact	3C	C1 or C2	C1

8. Option Comparison

Option	iG5A	G100	G100C
Communication	DeviceNet, Ethernet	RAPIEnet+(2Port Ethernet/IP) Profibus-DP, CANopen	-
Keypad	Remote Keypad	Remote Keypad	Remote Keypad
Drive View	Driveview9	Driveview9	Driveview9
Parameter management	-	Smart Copier	Smart Copier

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9. Rated input & output current, Carrier Frequency, Overload Capacity

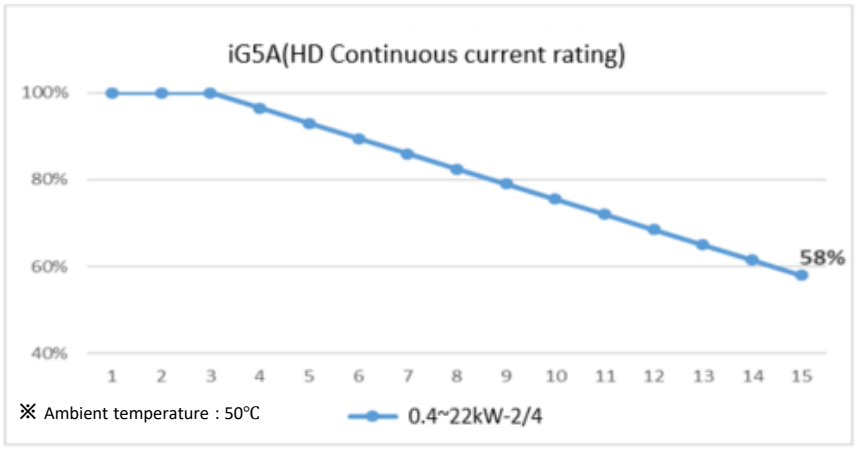
Applied motor capacity (kW/HP)	Rated capacity (kVA)	iG5A				G100(G100C)			
		Rated output current (A) (HD)	Rated output current (A) (ND)	Carrier frequency (kHz)	Overload capacity for 1min (%)	Rated output current (A) (HD)	Rated output current (A) (ND)	Carrier frequency (kHz)	Overload capacity for 1min (%)
3 Phase 200V									
0.4 (0.5)	1.0	2.5	-	3	150	2.5	3.1	3	150
0.75 (1.0)	1.9	5	-	3	150	5.0	6.0	3	150
1.5 (2.0)	3.0	8	-	3	150	8.0	9.6	3	150
2.2 (3.0)	4.2	12	-	3	150	11.0	12.0	3	150
4/3.7(5.0)	6.5	17	-	3	150	17.0	18.0	3	150
5.5(7.5)	9.1	24	-	3	150	24.0	30.0	3	150
7.5(10)	12.2	32	-	3	150	32.0	40.0	3	150
11(15)	17.5	46	-	3	150	47.0	56.0	3	150
15(20)	22.9	60	-	3	150	60.0	70.0	3	150
18.5(25)	28.2	74	-	3	150	75.0	82.0	3	150
22(30)	33.5	88	-	3	150	88.0	-	3	150
3 Phase 400V									
0.4 (0.5)	1.0	1.25	-	3	150	1.3	2.0	3	150
0.75 (1.0)	1.9	2.5	-	3	150	2.5	3.1	3	150
1.5 (2.0)	3.0	4	-	3	150	4.0	5.1	3	150
2.2 (3.0)	4.2	6	-	3	150	5.5	6.9	3	150
4/3.7(5.0)	6.5	9	-	3	150	9.0	10.0	3	150
5.5(7.5)	9.1	12	-	3	150	12.0	16.0	3	150
7.5(10)	12.2	16	-	3	150	16.0	23.0	3	150
11(15)	18.3	24	-	3	150	24.0	31.0	3	150
15(20)	22.9	30	-	3	150	31.0	38.0	3	150
18.5(25)	29.7	39	-	3	150	39.0	45.0	3	150
22(30)	34.3	45	-	3	150	45.0	61.0	3	150

G100C has the same HD, ND rated current as G100

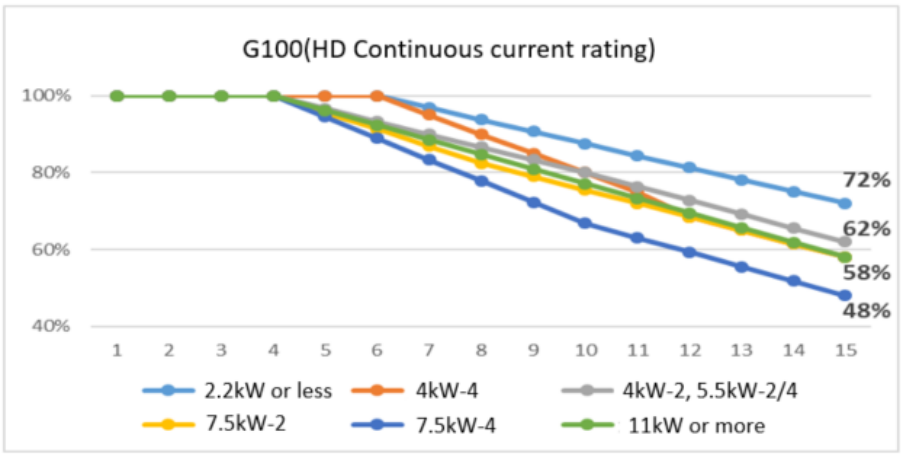
iG5A→G100 Transition Guide

10-1. Derating by Carrier Frequency and Input Voltage

1. Derating by Carrier Frequency

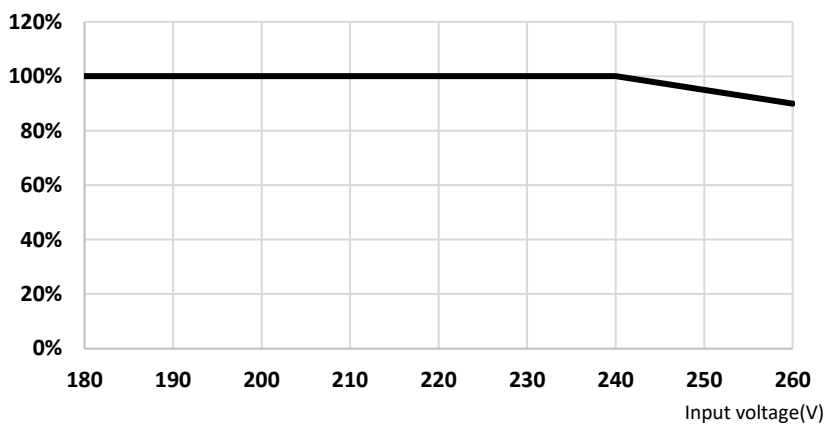


	Any Capacity
3㎑	100%
15㎑	58%

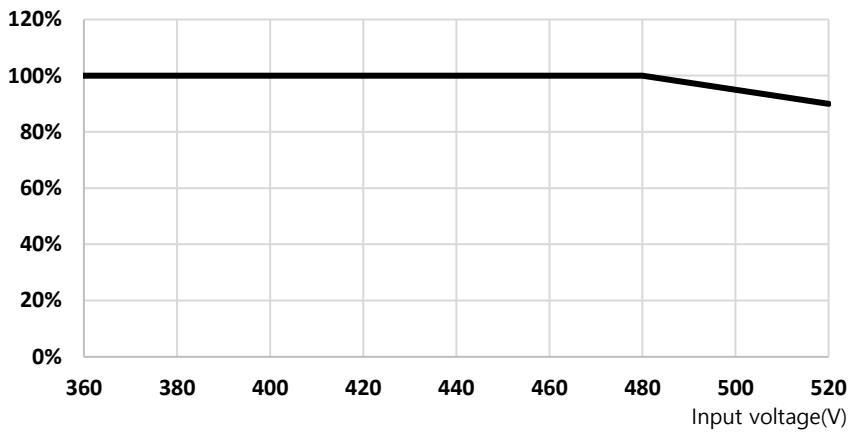


	2.2㎾-2/4 or less	4㎾-4	4㎾-2, 5.5㎾-2/4	7.5㎾-2	7.5㎾-4	11㎾-2/4 or more
4㎑	100%	100%	100%	100%	100%	100%
6㎑	100%	100%	93%	91%	89%	92%
15㎑	72%	58%	62%	58%	48%	58%

2. Derating by Input Voltage



Continuous rated current [200V]

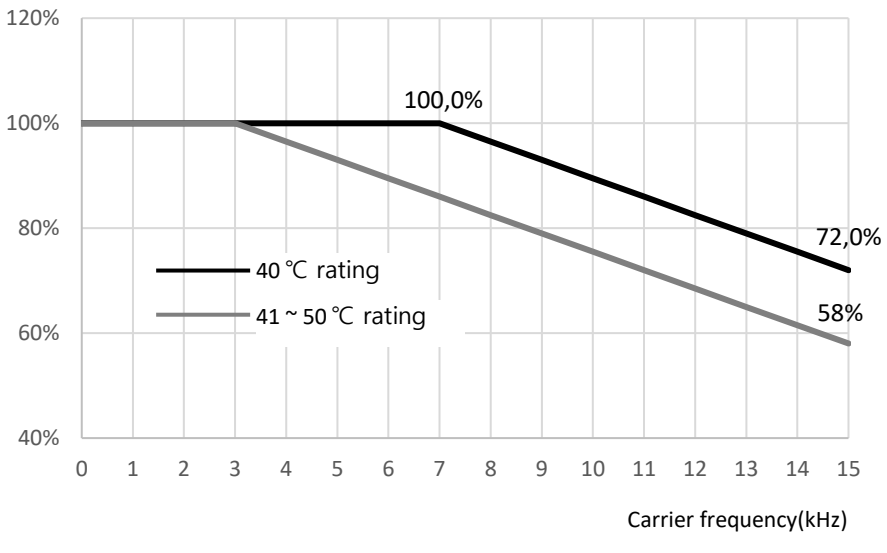


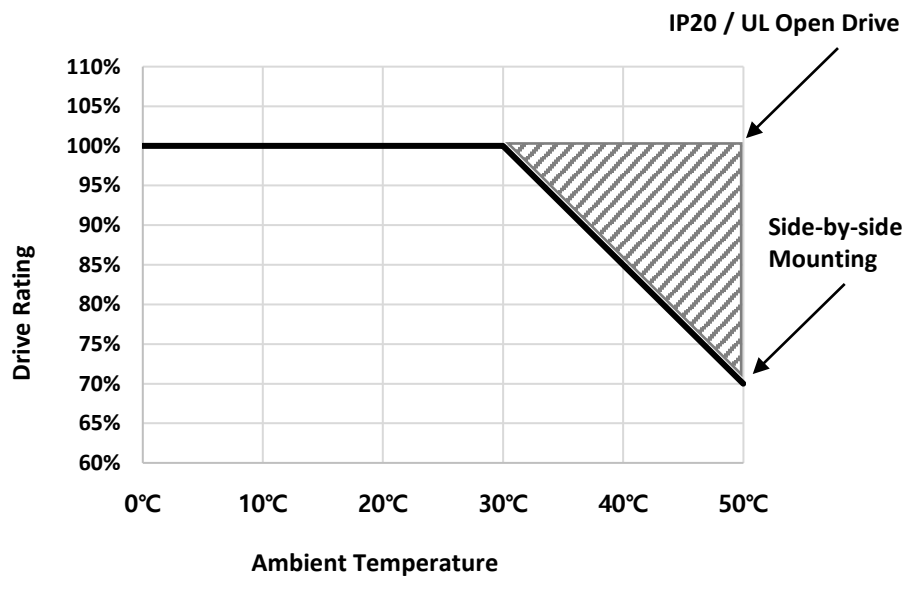
Continuous rated current [400V]

10-2. Derating by Ambient Temperature

The constant-rated current of the inverter is limited based on the ambient temperature and installation type. Refer to the following graph.

iG5A	G100(G100C)





iG5A→G100 Transition Guide

11. Dimension Comparison (1)

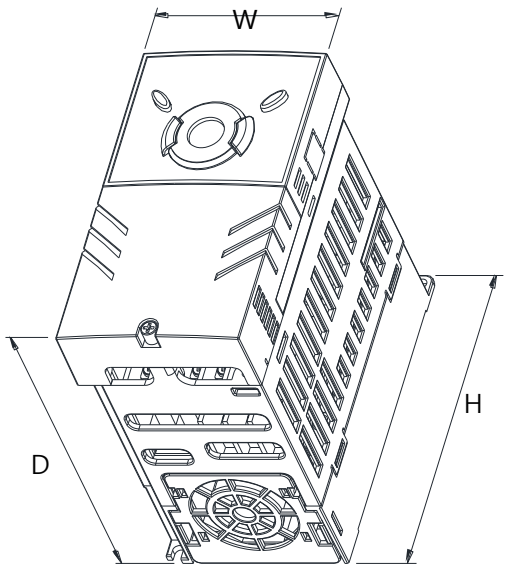
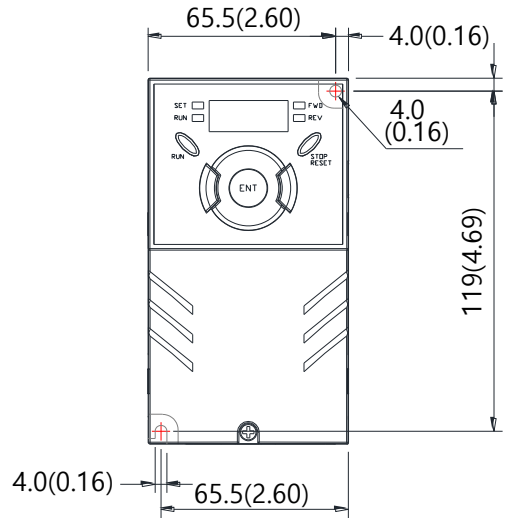
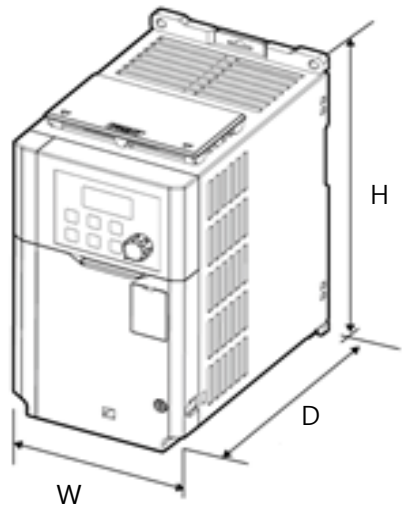
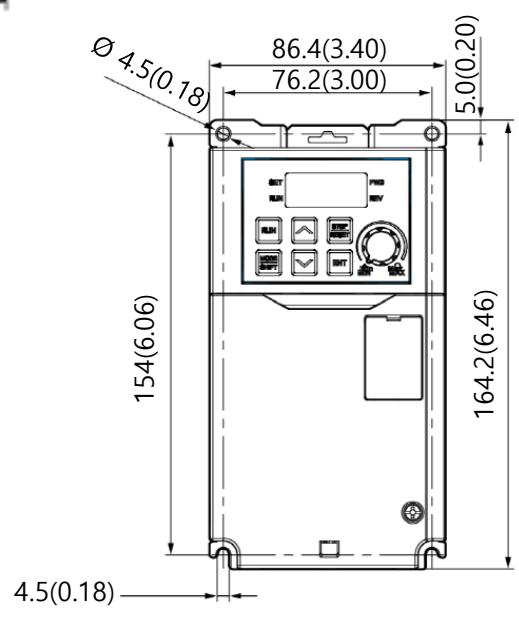
200V																	
Capacity (kW)	iG5A					G100						G100C					
	Frame	W [mm]	H [mm]	D [mm]	vol.[ℓ]	Frame	W [mm]	H [mm]	D [mm]	vol.[ℓ]	vs iG5A	Frame	W [mm]	H [mm]	D [mm]	vol.[ℓ]	vs iG5A
0.4	A	70	128	130	1.16	A	86.2	154	132.5	1.76	**151%**	A-1	70	128	130	1.16	**100%**
0.75		70	128	130	1.16		86.2	154	132.5	1.76	**151%**	A-2	70	128	135	1.21	**104%**
1.5	B	100	128	130	1.66	B	101	167	150.5	2.54	**153%**	B-1	100	128	135	1.73	**104%**
2.2	C	140	128	155	2.78		101	167	150.5	2.54	**91%**	-					
4		140	128	155	2.78	C	135	183	150.5	3.72	**134%**						
5.5	D	180	220	170	6.73	D	180	220	144	5.70	**85%**						
7.5		180	220	170	6.73		180	220	144	5.70	**85%**						
11	E	235	320	189.5	14.25	E	180	290	173	9.03	**63%**						
15		235	320	189.5	14.25	F	220	350	187	14.40	**101%**						
18.5	F	260	410	208.5	22.23	G	260	400	200	20.80	**94%**						
22		260	410	208.5	22.23		260	400	200	20.80	**94%**						

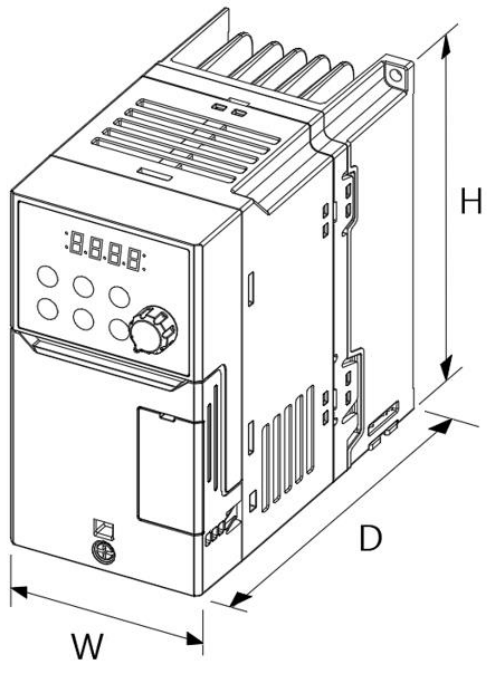
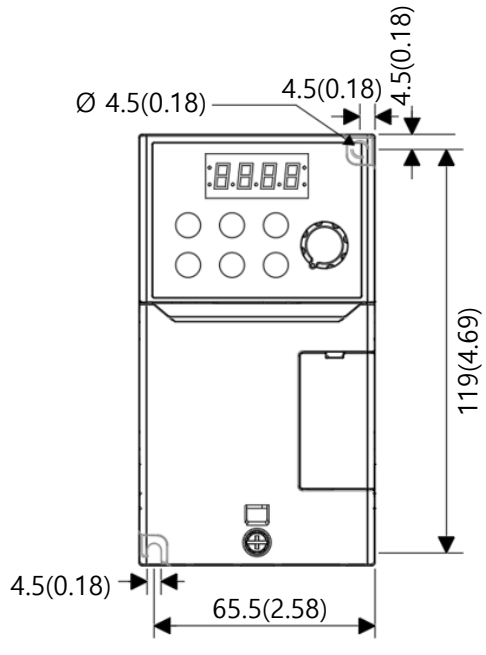
400V Type																	
Capacity (kW)	iG5A					G100						G100C					
	Frame	W [mm]	H [mm]	D [mm]	vol.	Frame	W [mm]	H [mm]	D [mm]	vol.	vs iG5A	Frame	W [mm]	H [mm]	D [mm]	vol.	vs iG5A
0.4	A	70	128	130	1.16	A	86.2	154	132.5	1.76	**151%**	A-1	70	128	130	1.16	**100%**
0.75		70	128	130	1.16		86.2	154	132.5	1.76	**151%**	A-2	70	128	135	1.21	**104%**
1.5	B	100	128	130	1.66	B	101	167	150.5	2.54	**153%**	B-1	100	128	135	1.73	**104%**
2.2	C	140	128	155	2.78		101	167	150.5	2.54	**91%**	-					
4		140	128	155	2.78	C	135	183	150.5	3.72	**134%**						
5.5	D	180	220	170	6.73	D	180	220	144	5.70	**85%**						
7.5		180	220	170	6.73		180	220	144	5.70	**85%**						
11	E	235	320	189.5	14.25	E	180	290	173	9.03	**63%**						
15		235	320	189.5	14.25		180	290	173	9.03	**63%**						
18.5	F	260	410	208.5	22.23	F	220	350	187	14.40	**65%**						
22		260	410	208.5	22.23		220	350	187	14.40	**65%**						

* G100 : In case of 11kW~22kW-400V type, it is 64% compared to iG5A
* G100C : Provides same size (W, H) and same fastening hole as iG5A
* Unit : mm

iG5A→G100 Transition Guide

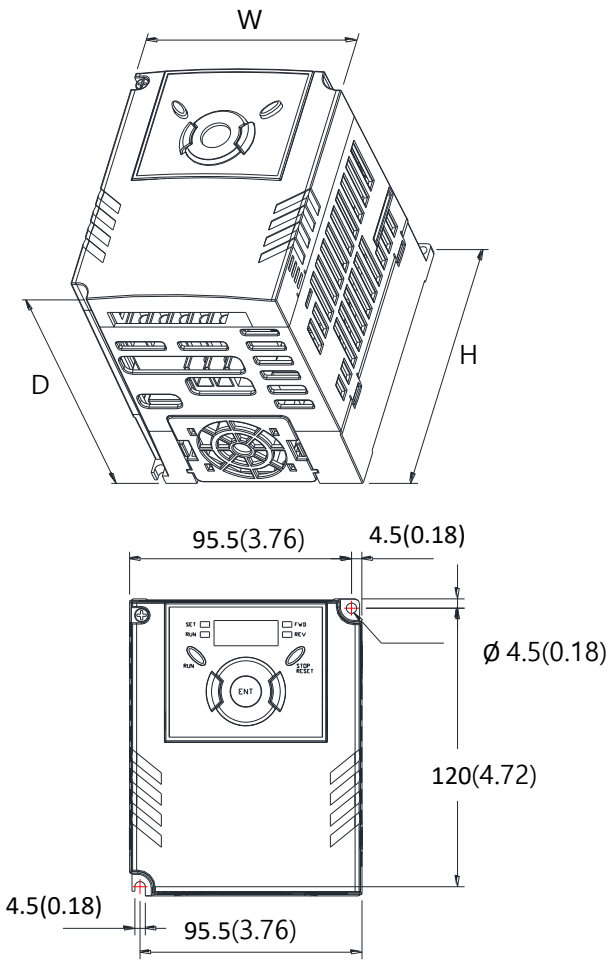
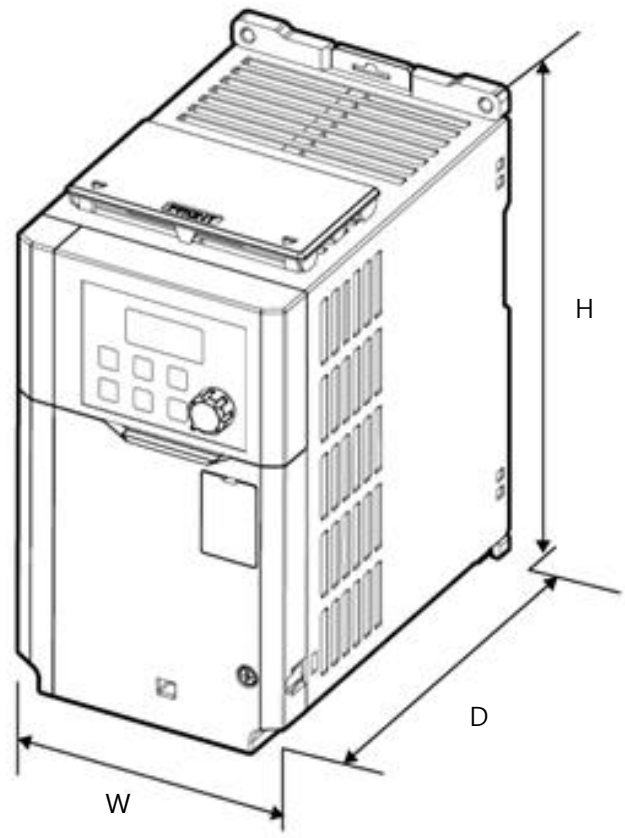
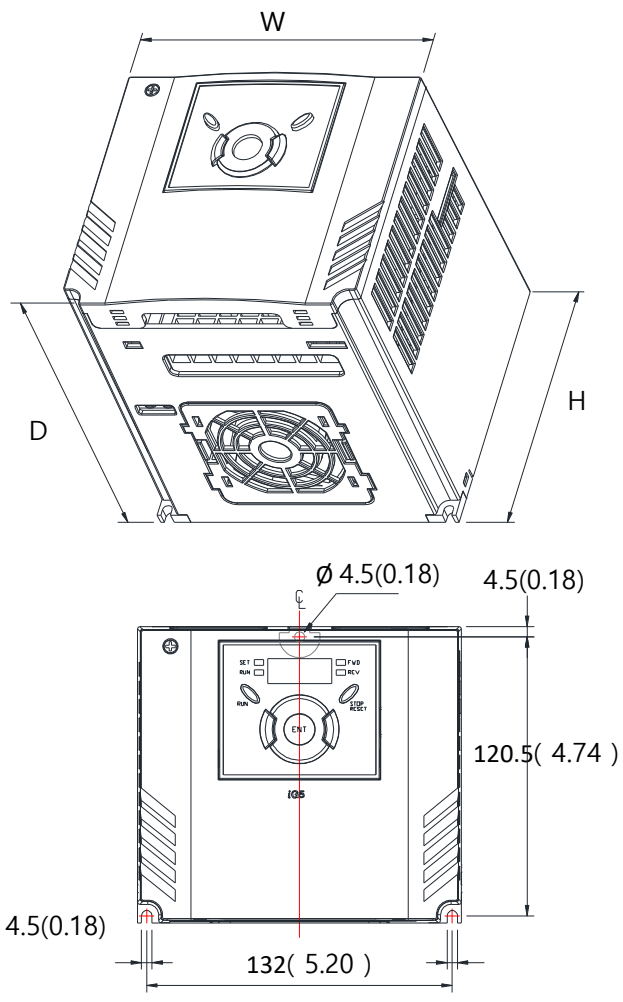
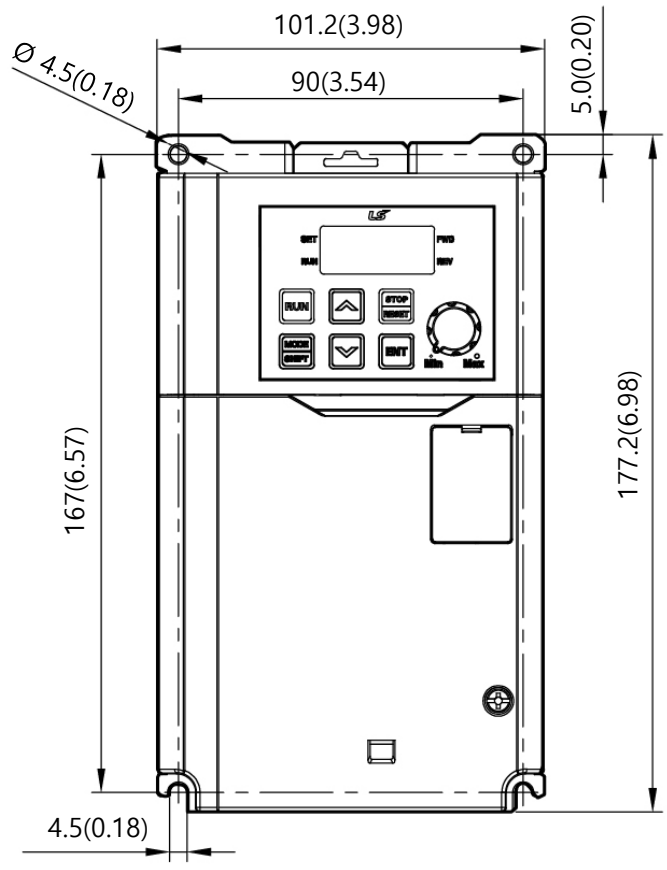
11. Dimension Comparison (2)

Capacity	iG5A	G100
0.4-0.75kW/ 0.5-1.0HP	 	 

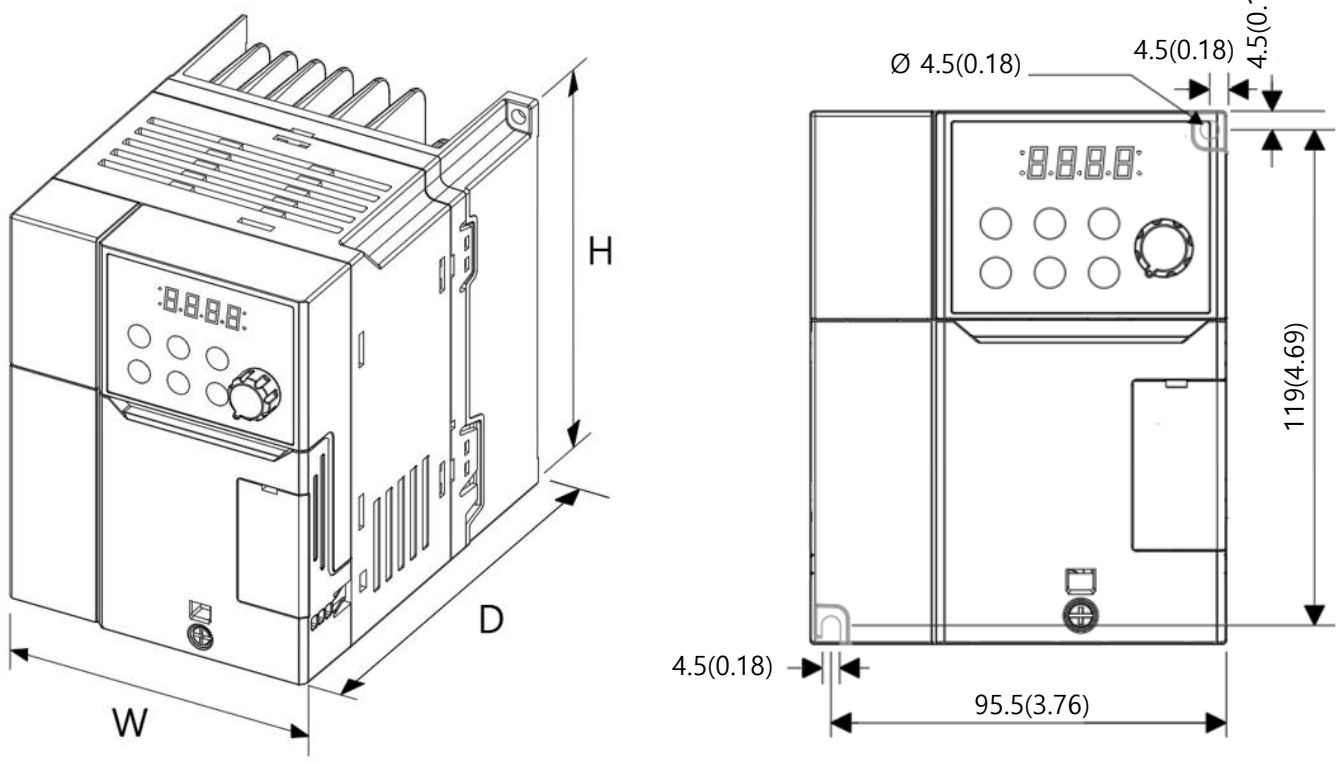
Capacity	G100C
0.4-0.75kW/ 0.5-1.0HP	 

iG5A→G100 Transition Guide

11. Dimension Comparison (3)

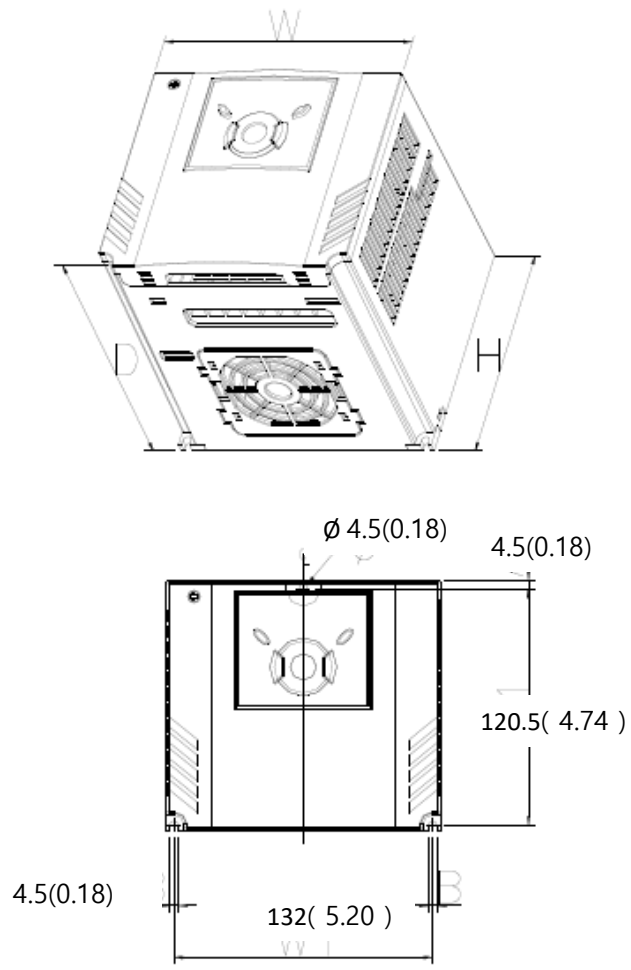
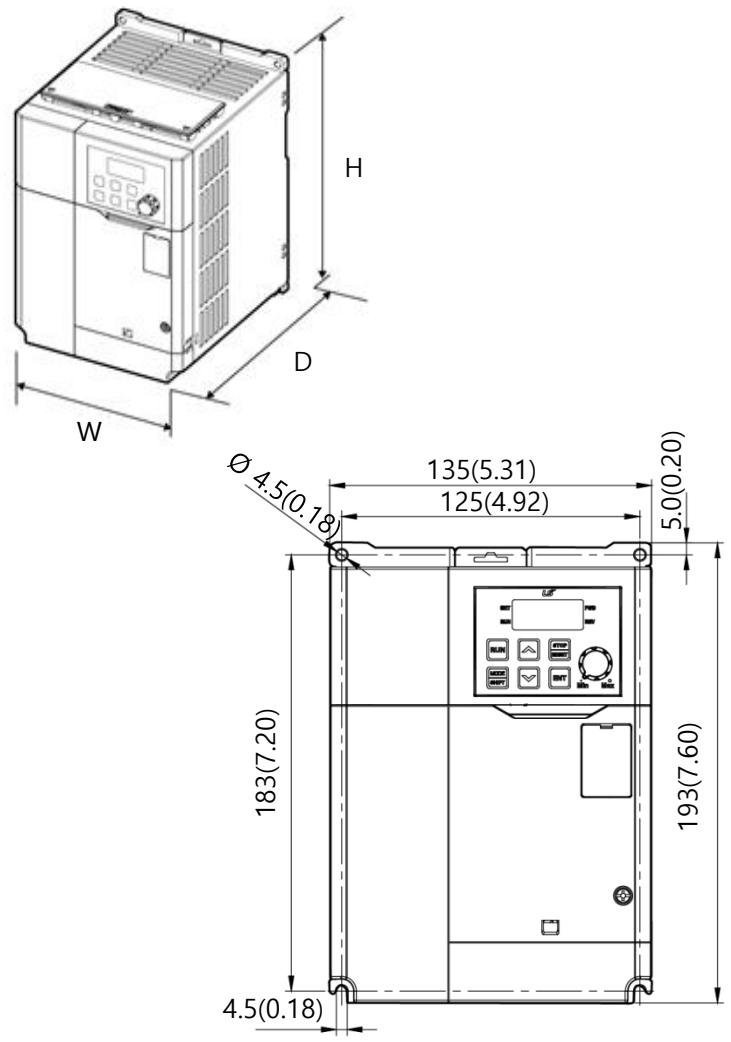
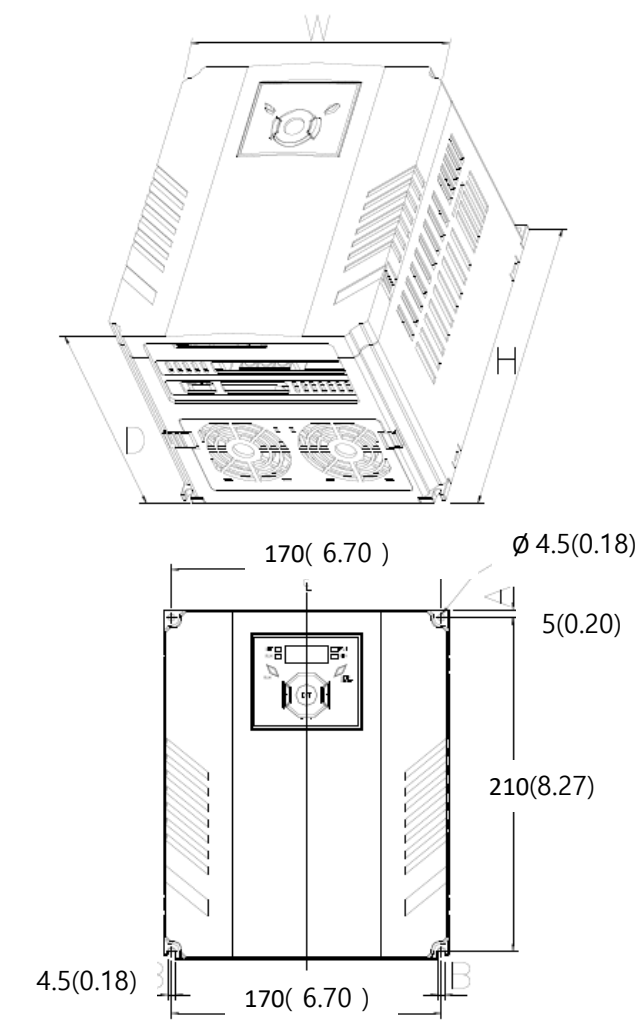
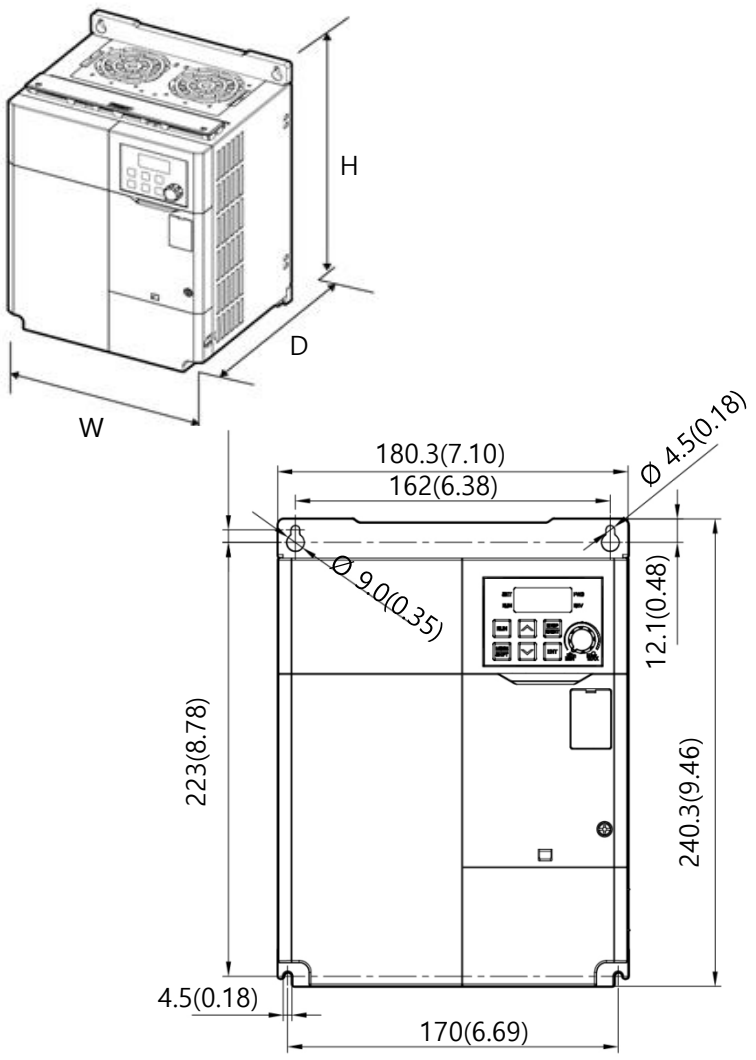
Capacity	iG5A	G100
1.5kW/2HP		
2.2kW/3HP		

11. Dimension Comparison (4)

Capacity	G100C
1.5kW/2HP	

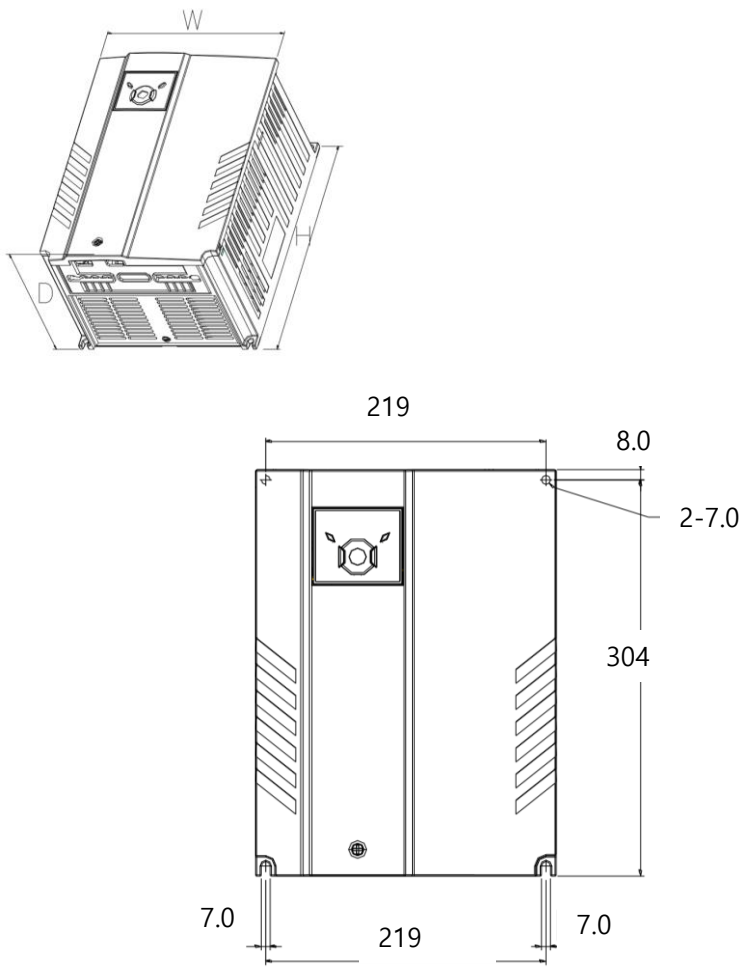
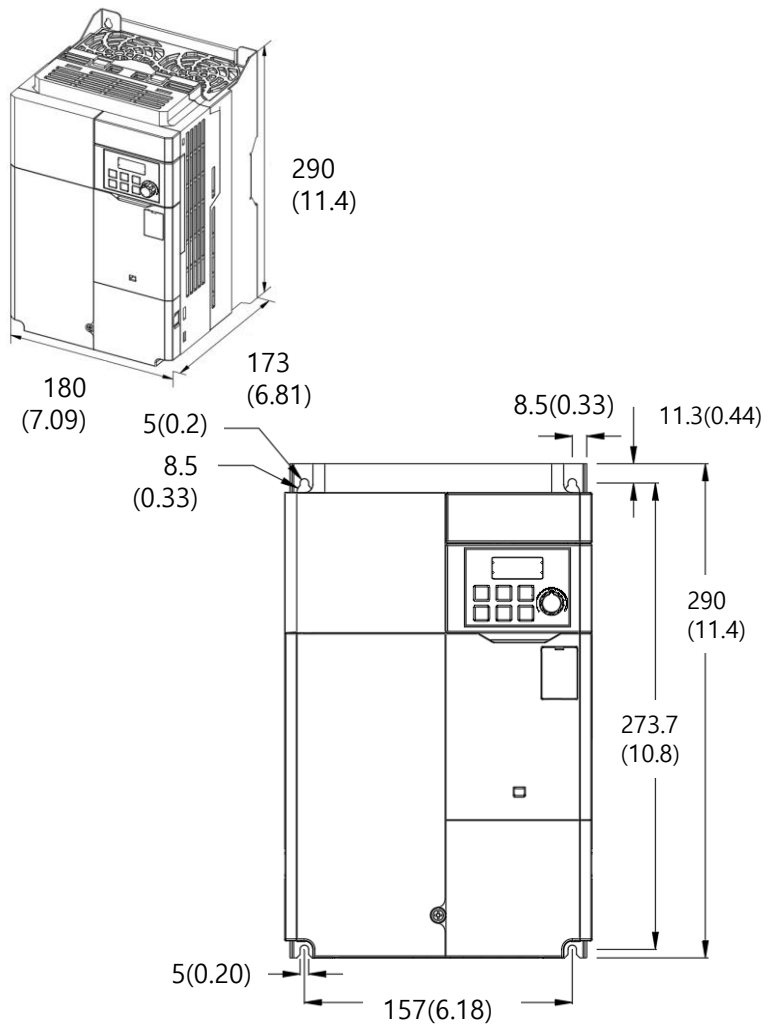
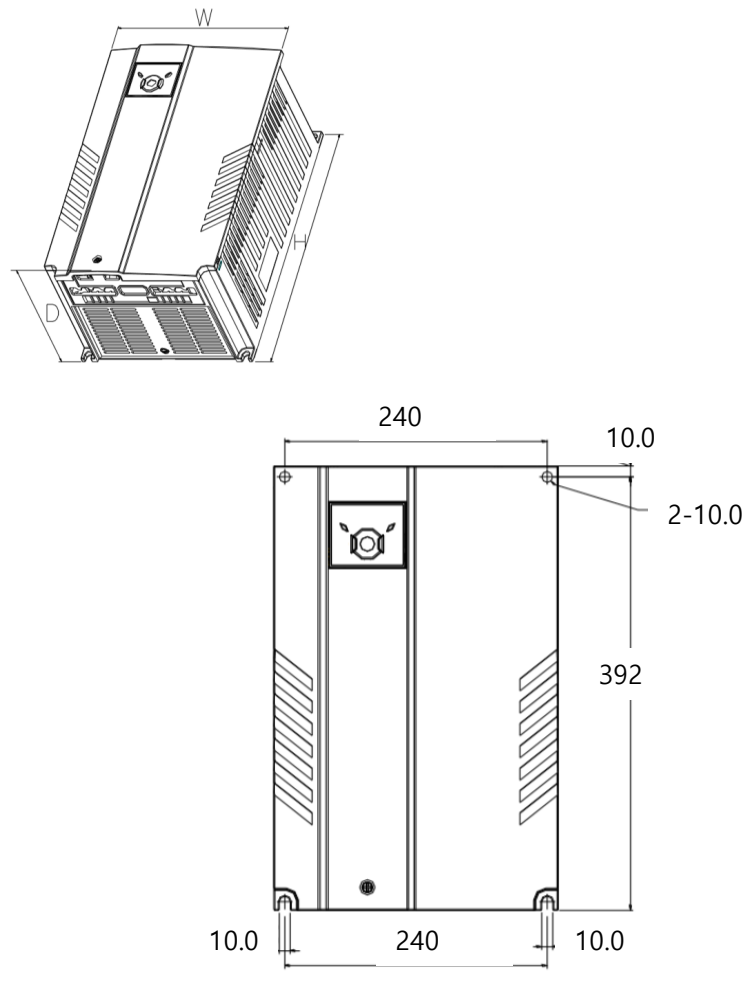
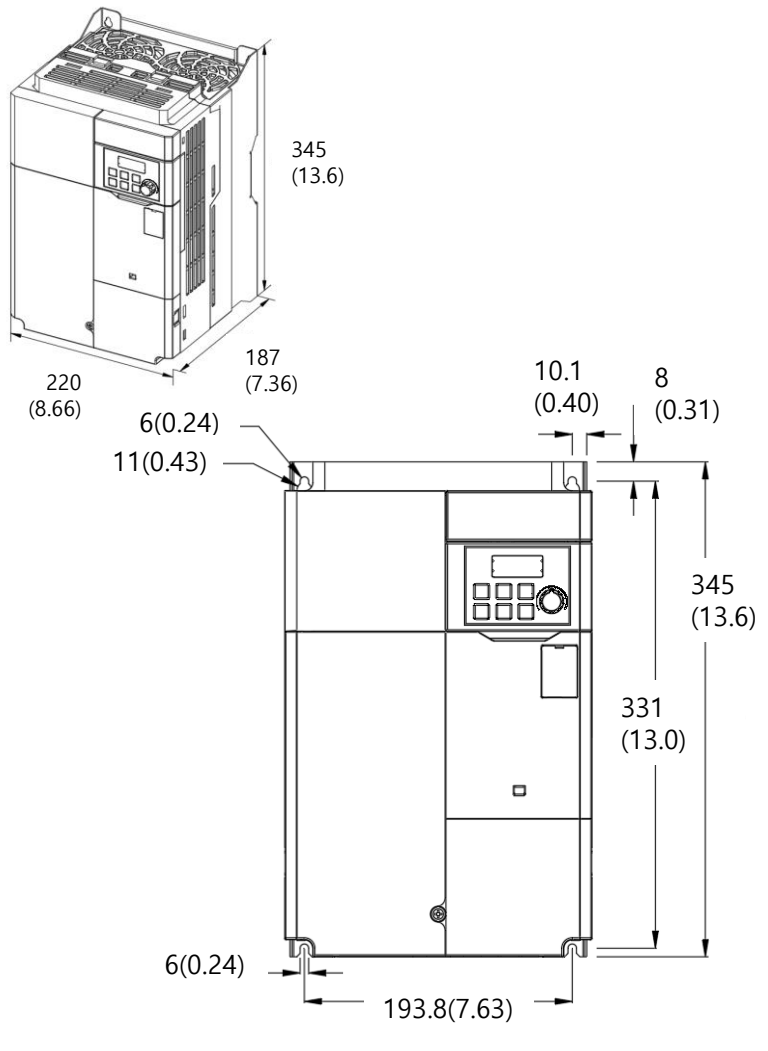
iG5A→G100 Transition Guide

11. Dimension Comparison (5)

Capacity	iG5A	G100
3.7kW/5HP		
5.5-7.5kW/ 7.5-10HP		

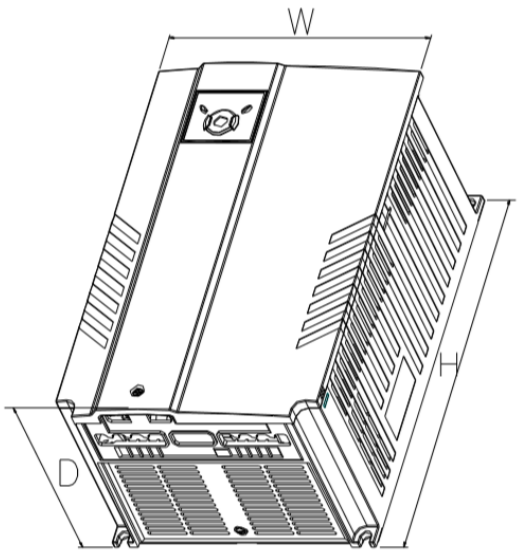
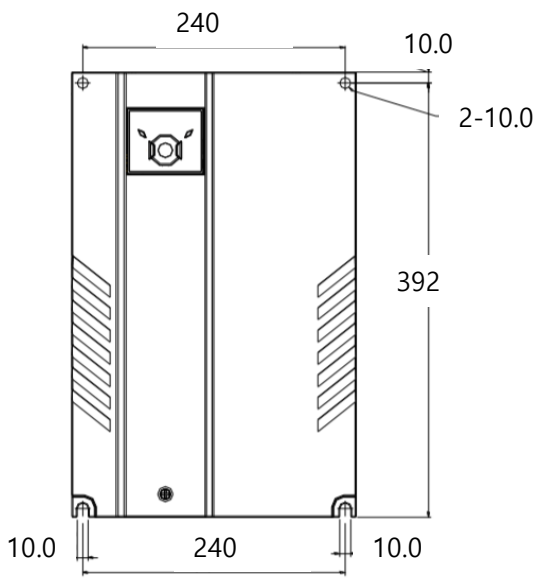
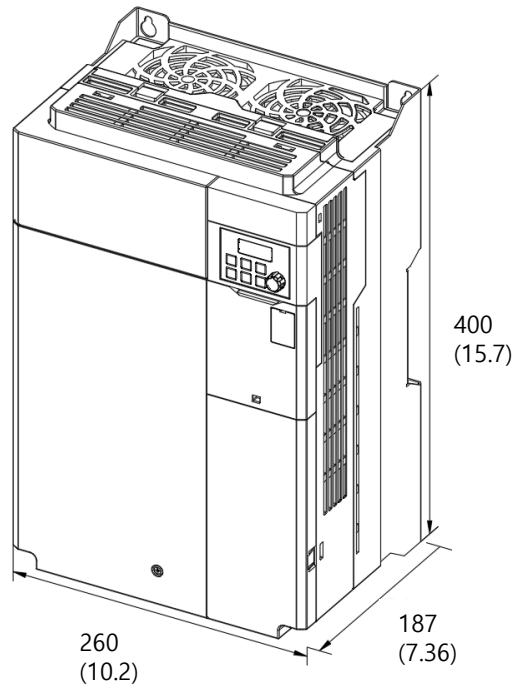
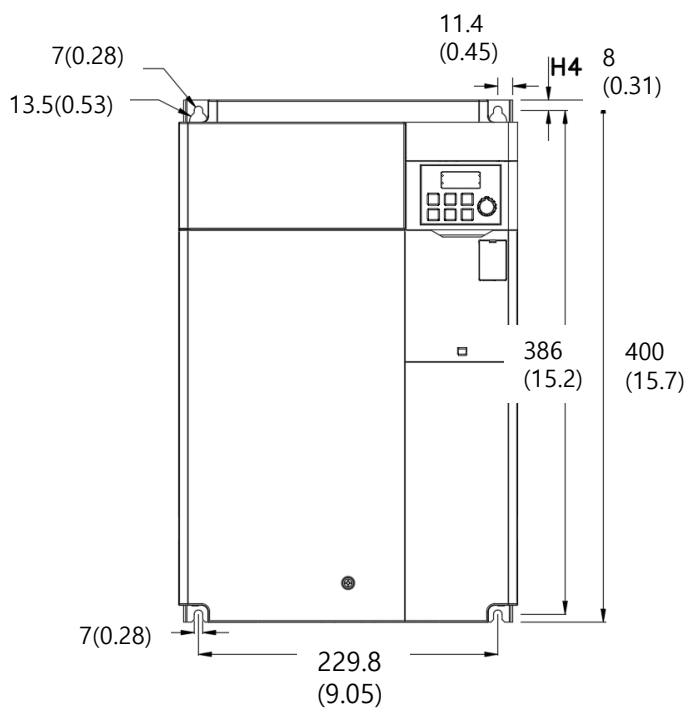
iG5A→G100 Transition Guide

11. Dimension Comparison (6)

Capacity	iG5A	G100
11~15-4kW 11-2kW (15~20HP-4 15HP-2)		
18.5-2kW 18.5-22-4kW (25-2HP 25~30HP)		

iG5A→G100 Transition Guide

11. Dimension Comparison (7)

Capacity	iG5A	G100
18.5~22kW-2 (25~30HP-2)	 	 

iG5A→G100 Transition Guide

12. Efficiency & Heat Losses

Capacity kW (HP)	iG5A			G100(G100C)		
	Efficiency(%)	Heat Losses(W)	Heat Losses(Kcal)	Efficiency(%)	Heat Losses(W)	Heat Losses(Kcal)
200V						
0.4 (0.5)	95.30	15.0	13.00	96.4	2.3	2.0
0.75 (1.0)	95.30	33.0	29.00	96.8	16.3	14.0
1.5 (2.0)	95.50	62.0	53.00	96.7	32.6	28.0
2.2 (3.0)	96.50	71.0	61.00	96.4	62.8	54.0
4/3.7(5.0)	97.20	97.0	84.00	96.8	109.3	94.0
5.5(7.5)	97.50	120.0	103.00	96.9	153.5	132.0
7.5(10)	97.50	170.0	146.00	96.7	229.1	197.0
11(15)	97.80	352	267	97.71	362.5	291.2
15(20)	97.80	480	377	97.89	466.8	368.6
18.5(25)	98.00	555	442	97.86	581.6	467.5
22(30)	98.00	660	532	97.80	704.4	573.1
400V						
0.4 (0.5)	96.69	16.0	14.0	95.8	3.5	3.0
0.75 (1.0)	96.79	33.0	28.0	96.9	8.1	7.0
1.5 (2.0)	98.47	62.0	53.0	97.3	22.1	19.0
2.2 (3.0)	98.57	91.0	78.0	97.6	36.0	31.0
4/3.7(5.0)	97.90	156.0	134.0	97.7	74.4	64.0
5.5(7.5)	97.28	200.0	172.0	96.9	150.0	129.0
7.5(10)	97.68	265.0	228.0	97.4	173.3	149.0
11(15)	97.00	440	339	98.50	274.7	215.8
15(20)	97.10	585	464	98.35	397.4	321.3
18.5(25)	98.00	555	438	98.55	454.0	357.6
22(30)	98.00	660	528	98.65	517.0	411.8

* At 60Hz, 220V or 440V

13. Minimum Connectable Braking Resistance

		iG5A, G100(G100C)	
Capacity (kW)		Resistance (Ω)	Rated Capacity (W)
3 Phase 200 V	0.4	300	100
	0.75	150	150
	1.5	60	300
	2.2	50	400
	4	33	600
	5.5	20	800
	7.5	15	1,200
	11	10	2400
	15	8	2400
	18.5	5	3600
	22	5	3600
3 Phase 400 V	0.4	1200	100
	0.75	600	150
	1.5	300	300
	2.2	200	400
	4	130	600
	5.5	85	800
	7.5	60	1,200
	11	40	2000
	15	30	2400
	18.5	20	3600
	22	20	3600

* Braking Torque 150%, Working Rate 5 % ED

14. Parameter Comparison (1)

Function/Parameter	iG5A			G100(G100C)			iG5A		G100(G100C)	
	Display	Default	Unit	Display	Default	Unit	Setting range	Descriptions	Setting range	Descriptions
Frequency Command	0.00	0.00	Hz	0.00	0	Hz	0~400	-	0~400	-
Accel time	ACC	5	sec	ACC	20	sec	0~6000	-	0~600.0	-
Decel time	dEC	10	sec	dEC	30	sec		-		-
Command Source	drv	1	-	drv	1	-	0	Keypad	0	Keypad
							1	Fx/Rx-1	1	Fx/Rx-1
							2	Fx/Rx-2	2	Fx/Rx-2
							3	RS-485 Comm.	3	RS-485 Comm.
							4	Field bus Comm.	4	Field bus Comm.
Frequency Reference Source	Frq	0	-	Frq	0	-	0	Keypad-1	0	Keypad-1
							1	Keypad-2	1	Keypad-2
							2	V0: -10 ~ +10 [V]	2	V1
							3	V1: 0~+10 [V]	-	-
							4	I: 0~20 [mA]	5	I2
							5	V0+I	6	Int 485
							6	V1+I	-	-
							7	RS-485 Comm.	-	-
							8	Up-down operation	-	-
							9	Field bus Comm.	-	-
							-		4	V0: Built-in Volume Input
									8	Field Bus
Multi-Step freq. 1	St1	10.00	Hz	St1	10.00	Hz	0~400	-	0~Max. Freq.	-
Multi-Step freq. 2	St2	20.00	Hz	St2	20.00			-		-
Multi-Step freq. 3	St3	30.00	Hz	St3	30.00			-		-
Output current	Cur	-	A	Cur	-	A	-	-	-	-
Motor RPM	rPM	0	RPM	rPM	-	RPM	-	-	-	-
Inverter DC link voltage	dCL	-	V	dCL	-	V	-	-	-	-
User display select	vOL	vOL	V	vOL	-	V	vOL	output voltage	-	-
							POr	output power	-	-
							tOr	Output torque	-	-
							-	-	-	-
							-	-	-	-
Fault Display	nOn	-	-	nOn	-	-	-	-	-	-
Select rotation direction	drC	F	-	drC	F	-	F	Forward run	F	Forward run
							r	Reverse run	r	Reverse run
2nd Command source	drv2	1	-	bA-04	-	-	0	Keypad	0	Keypad
							1	Fx/Rx-1	1	Fx/Rx-1
							2	Fx/Rx-2	2	Fx/Rx-2
							3	RS-485	3	RS-485
							4	Field bus	4	Field bus
2nd frequency source	Frq	0	-	bA-05	-	-	1	Keypad-1	0	Keypad-1
							2	Keypad-2	1	Keypad-2
							2	V0: -10 ~ +10 [V]	2	V1
							3	V1: 0~+10 [V]	-	-
							4	I: 0~20 [mA]	5	I2
							5	V0+I	4	V0: Built-in Volume Input
							6	V1+I		
							7	RS-485	6	Int 485
							8	Up-down Operation	-	-
							9	field bus	8	field bus
PID Reference	rEF	0.00	Hz or %	AP-17	-	-	0-400 or 0-100	-	-	-
RID Feedback	Fbk	-	Hz or %	AP-18	-	-	-	-	-	-
Run prevention options	F1	0	-	Ad-09	0	-	0	None	0	None
							1	Forward Prev	1	Forward Prev
							2	Reverse Prev	2	Reverse Prev
Acceleration pattern	F2	0	-	Ad-01	0	-	0	Linear	0	Linear
							1	S-curve	1	S-curve

14. Parameter Comparison (2)

Function/Parameter	iG5A			G100(G100C)			iG5A		G100(G100C)	
	Display	Default	Unit	Display	Default	Unit	Setting range	Descriptions	Setting range	Descriptions
Deceleration pattern	F3	0	-	Ad-02	0	-	0	Linear	0	Linear
							1	S-curve	1	S-curve
Stop Mode	F4	0	-	Ad-08	0	-	0	Dec	0	Dec
							1	Dc-Brake	1	Dc-Brake
							2	Free-Run	2	Free-Run
							3	Power Braking	4	Power Braking
DC braking frequency	F8	5	Hz	Ad-17	5.00	Hz	0.1~60	-	Start frequency ~60.00	-
Output blocking time before DC	F9	0.1	sec	Ad-14	0.10	sec	0~60	-	0.00~60.00	-
DC braking rate	F10	50	%	Ad-16	50	%	0~200	-	0~Inverter rated current	-
DC braking time	F11	1.0	sec	Ad-15	1.00	sec	0~60	-	0.00~60.00	-
Amount of applied DC	F12	50	%	Ad-13	50	%	0~200	-	0~Inverter rated current	-
Start DC braking time	F13	0	sec	Ad-12	0.00	sec	0~60	-	0~60.00	-
Initial Excitation time	F14	0.1		-	-	-	0~60	-	-	-
Jog Frequency	F20	10.00	Hz	dr-11	10.00	Hz	0~400	-	0.00, Start freq.-Max. freq.	-
Maximum frequency	F21	60.00		dr-20	60.00		40~400	-	40.00~400.00	V/F,Silp conpensation
Base frequency	F22	60.00		dr-18	60.00		30~400	-	40.00~120.00	IM Sensorless
Start frequency	F23	0.5		dr-19	0.5		0.1~10	-	0.1~10.00	-
Frequency limit	F24	0	-	Ad-24	0	-	0	No	0	No
							1	Yes	1	Yes
Frequency upper limit value	F25	60.00	Hz	Ad-26	60	Hz	0~400		0.00-Upper limit Frequency	
Frequency lower limit value	F26	0.50	Hz	Ad-25	0.5	Hz		-	Lower limit freq.-Max.freq.	-
Torque boost mode	F27	0	-	dr-15	0	-	0	Manual	0	Manual
							1	Auto	1	Auto
Forward Torque boost	F28	2	%	dr-16	2	%	0~15	-	0~15	-
Reverse torque boost	F29			dr-17				-		-
V/F pattern	F30	0	-	bA-07	0	-	0	Linear	0	Linear
							1	Square	1	Square
							2	User V/F	2	User V/F
									3	Square 2
User Frequency 1	F31	15.00	Hz	bA-41	15	Hz	0~400	-	0~Max. Freq.	-
User Voltage 1	F32	25	%	bA-42	25	%	0~100	-	0~100	-
User Frequency 2	F33	30.00	Hz	bA-43	30	Hz	0~400	-	0~Max. Freq.	-
User Voltage 2	F34	50	%	bA-44	50	%	0~100	-	0~100	-
User Frequency 3	F35	45.00	Hz	bA-45	45	Hz	0~400	-	0~Max. Freq.	-
User Voltage 3	F36	75	%	bA-46	75	%	0~100	-	0~100	-
User Frequency 4	F37	60.00	Hz	bA-47	Max. Freq.	Hz	0~400	-	0~Max. Freq.	-
User Voltage 4	F38	100	%	bA-48	100	%	0~100	-	0~100	-
Output voltage Adjustment	F39	100	%	bA-15	0	V	40~110	-	0, 170~480	-
Energy saving amount	F40	0		Ad-51	0	%	0~30	-	0~30	-
Electronic thermal fault selection	F50	0	-	Pr-40	0	-	0	None	0	None
							1	Yes	1	Free-Run
									2	Dec
Electronic thermal 1 minute rating	F51	150	%	Pr-42	150	%	50~150	-	120~200	-
Electronic thermal continuous rating	F52	100		Pr-43	100		50~150	-	50~150	-
Motor cooling fan type	F53	0	-	Pr-41	0	-	0	Self-cool	0	Self-cool
							1	Forced-cool	1	Forced-cool
Overload warning level	F54	150	%	Pr-18	150	-	30~150	-	30~180	-
Overload warning time	F55	10	sec	Pr-19	10	-	0~30	-	0~30	-

14. Parameter Comparison (3)

Function/Parameter	iG5A			G100(G100C)			iG5A		G100(G100C)	
	Display	Default	Unit	Display	Default	Unit	Setting range	Descriptions	Setting range	Descriptions
overload fault select	F56	1	-	Pr-20	1	-	0	None	0	None
							1	Yes	1	Free-Run
									2	Dec
Overload fault level	F57	180	%	Pr-21	180	%	30~200	-	30~200	-
Overload fault time	F58	60	sec	Pr-22	60	sec	0~60	-	0~60	-
Stall prevention motion and flux Braking	F59	0	-	Pr-50	0000	-	bit 0: Accelerating		bit	0000~1111
							bit 1: At constant speed		0001	Accelerating
							bit 2: Decelerating		0010	At constant speed
							0	b000	0100	Decelerating
							1	b001	1000	FluxBraking
							2	b010	-	
							3	b011		
							4	b100		
							5	b101		
							6	b110		
							7	b111		
Stall level	F60	150	%	Pr-52	180	%	30~200	-	30~250	-
When Stall prevention during deceleration, voltage limit select	F61	0	-	-	-	-	0	None	-	-
							1	Yes		
Up/down frequency save mode	F63	0	-	Ad-65	0	-	0	None	0	None
							1	Yes	1	Yes
Up/down frequency Save	F64	0.00	Hz	-	-	-	-	-	-	-
Up-down mode Select	F65	0	-	-			0	based on Max./ Min. Freq.	-	
							1	increase as much as step freq.(F66)		
							2	0+1		
Up-down step frequency	F66	0.00	Hz	-	-	-	0-400	-	-	-
Draw run mode select	F70	0	-	bA-01	1	-	0	None	0	None
							1	V1(0~10V)	1	V1
							2	I	3	V0
							3	V1(-10~10V)	4	I2
Draw rate	F71	0.0	%				0-100	-		
Auxiliary Command calculation type	-			bA-02	-		-		0	M+(G*A)
									1	M*(G*A)
									2	M/(G*A)
									3	M+{M*(G*A)}
									4	M+G*2*(A-50)
									5	M*{G*2*(A-50)}
									6	M/{G*2*(A-50)}
									7	M+M*G*2*(A-50)
Auxiliary frequency reference gain	-	-	-	bA-03	100	%	-	-	-200~200	-
Fault history 1	H1	nOn	-	Pr-91	-	-		-	-	-
Fault history 2	H2	nOn	-	Pr-92	-	-	-	-	-	-
Fault history 3	H3	nOn	-	Pr-93	-	-	-	-	-	-
Fault history 4	H4	nOn	-	Pr-94	-	-	-	-	-	-
Fault history 5	H5	nOn	-	Pr-95	-	-	-	-	-	-
Reset fault history	H6	0	-	Pr-96	0	-	0	No	0	No
							1	Yes	1	Yes
Dwell frequency	H7	5.00	Hz	Ad-20 (Accel) Ad-22 (Decel)	5	Hz	0.1~400	-	Start freq.-Max. freq.	
Dwell operation time	H8	0.0	sec	Ad-21 (Accel) Ad-23 (Decel)	0	sec	0~10	-	0~60	-

14. Parameter Comparison (4)

Function/Parameter	iG5A			G100(G100C)			iG5A		G100(G100C)	
	Display	Default	Unit	Display	Default	Unit	Setting range	Descriptions	Setting range	Descriptions
Frequency jump	H10	0	-	Ad-27	0	-	0	None	0	None
							1	Yes	1	Yes
Jump frequency lower limit 1	H11	10.00	Hz	Ad-28	10	Hz	0.1~400	-	0.00-Jump frequency upper limit1	
Jump frequency upper limit 1	H12	15.00		Ad-29	15			-	Jump frequency lower limit1-Maximum Frequency	
Jump frequency lower limit 2	H13	20.00		Ad-30	20			-	00-Jump frequency upper limit2	
Jump frequency upper limit 2	H14	25.00		Ad-31	25			-	Jump frequency lower limit2-Maximum Frequency	
Jump frequency lower limit 3	H15	30.00		Ad-32	30			-	0.00-Jump frequency upper limit3	
Jump frequency upper limit 3	H16	35.00		Ad-33	35			-	Jump frequency lower limit3-Maximum Frequency	
S-curve start point gradient	H17	40	%	Ad-03 (Accel) Ad-05 (Decel)	40	%	1~100	-	1~100	-
S-curve end point Gradient	H18			Ad-04 (Accel) Ad-06 (Decel)						
Input/output open-phase Protection	H19	0	-	Pr-05	00	-	0	No	bit	00~11
							1	Output open Phase	01	Output open phase
							2	Input open Phase	10	Input open phase
							3	Both		
Input voltage range during open-phase	-	-	-	Pr-06	15	V	-	-	1~100	-
Starting with power on	H20	0	-	Ad-10	0	-	0	No	0	No
							1	Yes	1	Yes
Selection of startup on trip reset	H21		-	Pr-08		-	0	No	0	No
							1	Yes	1	Yes
Speed search operation selection	H22	0	-	Cn-71	0000	bit	bit 0: Normal accel		bit	0000~1111
							bit 1: Operation after fault		0001	Selects the speed search function at acceleration
							bit 2: Restart after instant power failure		0010	Initialization after a fault trip
							bit 3: Power on start		0100	Restart after instantaneous power interruption
							0	B0000	1000	Starting with power-on
							1	B0001	-	
							2	B0010		
							3	b0011		
							4	b0100		
							5	b0101		
							6	b0110		
							7	b0111		
							8	b1000		
							9	b1001		
							10	b1010		
							11	b1011		
							12	b1100		
							13	b1101		
							14	b1110		
							15	b1111		
Current level during Speed search	H23	100	%	Cn-72	150	%	80~200	-	80~200	-

14. Parameter Comparison (5)

Function/Parameter	iG5A			G100(G100C)			iG5A		G100(G100C)	
	Display	Default	Unit	Display	Default	Unit	Setting range	Descriptions	Setting range	Descriptions
P gain during Speed search	H24	100	-	Cn-73	100	-	0~9999	-	0~9999	-
I gain during speed search	H25	200	-	Cn-74	200/1000	-		-		-
Output block time before speed search	-	-	-	Cn-75	1.0	sec	-	-	0~60	-
Speed search Estimator gain	-	-	-	Cn-76	100	%	-	-	50~150	-
Number of auto restart attempts	H26	0	-	Pr-09	0	-	0~10	-	0~10	-
Auto restart time	H27	1.0	sec	Pr-10	1	sec	0~60	-	0~60	-
Motor capacity	H30	-	kW	dr-14	-	kW	0.2	0.2kW	0.1	0.1kW
							~		0.2	0.2kW
							22.0	22kW	~	
									11	11.0kW
Number of motor Poles	H31	4	Poles	bA-11	4	Poles	2~12	-	2~48	-
Rated slip frequency	H32	-	Hz	bA-12	-	rpm	0~10	-	0~3000	-
Motor rated current	H33	-	A	bA-13	-	A	0.5~150	-	1.0~1000.0	-
Motor no load current	H34	-	A	bA-14	-	A	0.1~100	-	0.0~1000.0	-
Motor rated voltage				bA-15	0	V	-	-	0, 170~480	-
Motor efficiency	H36	-	%	bA-16	-	%	50~100	-	64~100	-
Load inertia rate	H37	0		bA-17	0		0	Less than 10 times	0	Less than 10 times
							1	about 10 times	1	about 10 times
							2	More than 10 times motor inertia	2~8	More than 10 times motor inertia
Carrier frequency	H39	3	kHz	Cn-04	3	kHz	1~15	-	2~15	-
Control mode select	H40	0	-	dr-09	1		0	V/F	0	V/F
							1	Slip Compensation	2	Slip Compensation
							2	-	-	
							3	IM Sensorless	4	IM Sensorless
Auto tuning	H41		-	bA-20	0	-	0	None	0	None
							1	All (Rotation type)	1	All (Rotation type)
							-	-	2	All (Static type)
							-	-	3	Rs+Lsigma (Rotation type)
							-	-	4	Tr (Static type)
Stator resistance	H42	-	Ohm	bA-21	-	-	0~28	-	-	-
Leakage inductance	H44	-	mH	bA-22	-	-	0~300	-	-	-
Stator inductance	-	-	-	bA-23	-	-	-	-	-	-
Sensorless P gain	H45	1000	-	-	-	-	0~32767	-	-	-
Sensorless I gain	H46	100	-	-	-	-	0~32767	-	-	-
Sensorless torque limit	H47	180	%		-	-	100-220	-	-	-
Positive-direction reverse torque	-	-	-	Cn-54	180	%	-	-	0.0~200.0	-
Positive-direction regeneration torque limit	-	-	-	Cn-55			-	-		-
Negative-direction regeneration torque Limit	-	-	-	Cn-56			-	-		-
Negative-direction reverse torque limit	-	-	-	Cn-57			-	-		-
Torque limit setting	-	-	-	Cn-53	0	-	-	-	0	KeyPad-1
									1	KeyPad-2
									2	V1
									4	V0
									5	I2
									6	Int 485
									8	FieldBus
PWM Switching mode	H48	0	-	Cn-05	0	-	0	Normal PWM mode	0	Normal PWM mode
							1	2phase PWM mode	1	2phase PWM mode
PID select	H49		-	-	-	-	0	No	-	-
							1	Yes	-	-

14. Parameter Comparison (6)

Function/Parameter	iG5A			G100(G100C)			iG5A		G100(G100C)	
	Display	Default	Unit	Display	Default	Unit	Setting range	Descriptions	Setting range	Descriptions
PID F/B select	H50	0	-	AP-21	2	-	0	Terminal I input (0 ~ 20mA)	0	V1
							1	Terminal V1 input (0 ~ 10V)	2	V0
							2	RS-485 Comm.	3	I2
							-	-	4	Int 485
							-	-	6	FieldBus
P gain for PID	H51	300.0	%	AP-22	300	%	0~999.9		0~999.9	
P gain scale	-	-	-	AP-26	100	%	-	-	0~100	-
Integral time for PID	H52	1.0	sec	AP-23	10	sec	0.1~32	-	0.0~200.0	-
Differential time for PID	H53	0	sec	AP-24	0	msec	0~30.0	-	0~1000	-
PID control mode Select	H54	0	-	AP-01	0	-	0	Normal PID	0	None
							1	Process PID	2	Process PID
PID upper limit Frequency	H55	60.00	Hz	AP-29	60	Hz	0.1~400	-	PID lower limit Freq.~300	-
PID lower limit Frequency	H56	0.50		AP-30	-60		0.1~400	-	-300.00 -PID upper limit frequency	-
PID reference Source	H57	0	-	AP-20	0	-	1	Keypad-1	0	Keypad
							2	Keypad-2	1	V1
							2	V1: 2.0~10 [V]	3	V0
							3	I: 0~20 [mA]	4	I2
							4	RS-485 통신	5	Int 485
									7	Fieldbus
PID controller unit selection	H58	0	-	AP-42	0	-	0	Frequency [Hz]	0	%
							1	%	1	Bar
							-		2	mBar
									3	Pa
									4	kPa
									5	Hz
									6	Rpm
									7	V
PID output inverse	H59	0	-	AP-33	0	-	0	None	0	None
							1	Yes	1	Yes
Self-diagnostic select	H60	0	-	-			0	None	-	
							1	IGBT fault/Ground fault		
							2	Output phase short & open/ Ground fault		
							3	Ground fault (This setting is unable when more than 11kW)		
Sleep delay time	H61	60	sec	AP-37	60	sec	0~2000	-	0.0~999.9	-
Sleep frequency	H62	0.00	Hz	AP-38	0.00	Hz	0~400	-	0.00~Max. Freq.	-
Wake-up level	H63	35.0	%	AP-39	35	%	0~100	-	0~100	-
KEB drive select	H64	0	-	Cn-77	-	-	0	None	0	None
							1	Yes	1	KEB-1
							-	-	2	KEB-2
KEB start level	H65	125.0	%	Cn-78	125	%	110~140	-	110~200	-
KEB stop level	H66	130.0	%	Cn-79	130	%	110~145	-	Cn-78~210	-
KEB gain	H67	1000	-	-	-	-	1~20000	-		-
KEB P gain	-			Cn-80	1000	-	-		0~20000	-
KEB I gain	-			Cn-81	500	-	-		1~20000	-
KEB Slip gain	-			Cn-82	30.0	%	-		0~2000	-
KEB acceleration time	-			Cn-83	10.0	sec	-		0.0~600.0	-

14. Parameter Comparison (7)

Function/Parameter	iG5A			G100(G100C)			iG5A		G100(G100C)	
	Display	Default	Unit	Display	Default	Unit	Setting range	Descriptions	Setting range	Descriptions
Acc/Dec reference	H70	0	-	bA-08	0	-	0	Max Freq(F21)	0	Max Freq(FrM)
							1	Delta Freq	1	Delta Freq
Acc/Dec Time scale Setting	H71	1	-	bA-09	1	-	0	0.01Sec	0	0.01Sec
							1	0.1Sec	1	0.1Sec
							2	1Sec	2	1Sec
Select ranges at power input	H72	0	-	dr-80	0	-	0	Operation frequency	0	Operation frequency
							1	Acceleration time	1	Acceleration time
							2	Deceleration time	2	Deceleration time
							3	Command Source	3	Command Source
							4	Freq. reference source	4	Frequency reference Source
							5	Multi-step speed freq. 1	5	Multi-step speed freq. 1
							6	Multi-step speed freq. 2	6	Multi-step speed freq. 2
							7	Multi-step speed freq. 3	7	Multi-step speed freq. 3
							8	Output current	8	Output current
							9	Motor RPM	9	Motor RPM
							10	Inverter DC voltage	10	Inverter DC voltage
							11	User select signal(H73)	11	User select signal (dr.81)
							12	Currently out of order	12	Currently out of order
							13	Select run direction	13	Select run direction
							14	Output current 2	14	Output current 2
							15	Motor RPM 2	15	Motor RPM 2
							16	Inverter DC voltage 2	16	Inverter DC voltage 2
							17	User select signal 2(H73)	17	User select signal 2 (dr.81)
Select monitor code	H73	0	-	dr-81	0	-	0	Output voltage (V)	0	Output voltage (V)
							1	Output power (kW)	1	Output power (kW)
							2	Torque(kgf ⍰m)	2	Torque(kgf ⍰m)
Rotation count speed gain	H74	100	%	Ad-61	100	%	1~1000	-	0.1~6000.0	-
DB resistor operating rate limit select	H75	1	-	-	-	-	0	Unlimited	-	-
							1	Use DB resistor for the H76 set time		
DB resistor operating rate	H76	10	%	Pr-66	10	%	0-30	-	0~30	warning level
Cooling fan control	H77	0	-	Ad-64	-	-	0	During Run	0	During Run
							1	temp. control /During run	1	Always ON
							2	Temp Control	2	Temp Control
S/W version	H79	-	-	dr-97	-	-	-	-	-	-
2nd motor Accel time	H81	5.0	sec	M2-04	20.0	sec	0~6000	-	0.0~600.0	-
2nd motor decel time	H82	10.0		M2-05	30.0			-		-
2nd moto base frequency	H83	60	Hz	M2-06	60.00	Hz	30~400	-	30.0~400.0	-
2nd motor V/F pattern	H84	0	-	M2-25	0	-	0	Linear	0	Linear
							1	Square	1	Square
							2	User V/F	2	User V/F
2nd motor Forward Torque boost	H85	5.0	%	M2-26	2.0	%	0~15	-	0~15	-
2nd motor Reverse torque boost	H86	5.0		M2-27	-		0~15	-	0.0~15.0	-
2nd motor Stall prevention level	H87	150		M2-28	150		30~150	-	30~150	-
2nd motor Electronic thermal 1 minute rating	H88	150		M2-29	150		50~200	-	100~200	-
2nd motor Electronic thermal continuous rating	H89	100		M2-30	100		50~150	-	50~Electronic thermal 1 minute rating	-
2nd motor Motor rated current	H90	-	A	M2-12	-	A	0.1~100	-	1.0~1000.0	-

14. Parameter Comparison (8)

Function/Parameter	iG5A			G100(G100C)			iG5A		G100(G100C)	
	Display	Default	Unit	Display	Default	Unit	Setting range	Descriptions	Setting range	Descriptions
Parameter read	H91	0	-	-			0~1	-	-	
Parameter write	H92		-	-				-	-	
Smart copier	-	-	-	dr-91	0	-	-		0	None
									1	Smart Download
									3	Smart Upload
									4	Remote Upload
									5	Remote Download
Parameter initialization	H93	0	-	dr-93	0	-	0	No	0	No
							1	All Group	1	All Group
							2	Drive Group	2	dr Group
							3	function group 1	3	bA Group
							4	function group 2	4	Ad Group
							5	I/O group	5	Cn Group
							-		6	In Group
									7	OU Group
									8	CM Group
									9	AP Group
									11	AO Group
									12	Pr Group
									13	M2 Group
									14	run Group
Password register	H94	0	-	dr-94	-	-	0~FFFF	-	0~9999	-
Parameter lock	H95	0	-	dr-95	-	-	0~FFFF	UL(Unlock) L(Lock)		UL(Unlock) L(Lock)
NV input Min voltage	I2	0.00	V				0~-10	-	-	
Frequency corresponding to I2	I3	0.00	Hz	-			0~400	-	-	
NV input Max voltage	I4	10.0	V				0~-10	-	-	
Frequency corresponding to I4	I5	60.00	Hz	-			0~400	-	-	
Frequency for max. analog input	-			In-01	Max. Freq.	Hz	-		Start freq.- Max. freq.(Hz)	-
Torque at maximum analog input	-			In-02	100.0	%	-		0.0~200.0	-
V1 input polarity Selection	-			In-06		-	-		0	Unipolar
									1	Bipolar
V1 Minimum input voltage	-			In-12	0	V	-		-10.00~0.00	When In-06 Bipolar is set.
V1 output at Minimum voltage	-			In-13		%	-		-100.00~0.00	
V1 Maximum input voltage	-			In-14	-10.00	V			-12.00~0.00	
V1 output at Maximum voltage	-			In-15	-100.00	%	-		-100.00~0.00	
Time constant of V1 input filter	I6	10	msec	In-07	100	msec	0~9999	-	0~10000	-
Time constant of V1 input filter	I7	0	V	In-08	0	V	0~10	-	0.00~10.00	-
V1 Minimum input voltage	I8	0.00	Hz	-			0~400	-	-	
V1 output at Minimum voltage				In-09	0	%			0.00~100.00	
V1 Maximum input voltage	I9	10	V	In-10	10	V	0~10	-	0.00~12.00	-
Frequency corresponding to I9	I10	60.00	Hz	-			0~400	-	-	
V1 output at Max. voltage				In-11	100.00	%			0.00~100.00	
Filter time constant For I input	I11	10	msec	In-52	100	msec	0~9999	-	0~10000	-
I input Min current	I12	4.00	mA	In-53	4.00	mA	0~20	-	0.00~20.00	-
Freq. corresponding to I 12	I13	0.00	Hz	-			0~400	-	-	
I2 output at Min.				In-54	0	%			0.00~100.00	

14. Parameter Comparison (9)

Function/Parameter	iG5A			G100(G100C)			iG5A		G100(G100C)	
	Display	Default	Unit	Display	Default	Unit	Setting range	Descriptions	Setting range	Descriptions
I input Max current	I14	20.00	mA	In-55	20	mA	0~20	-	0.00~24.00	-
Frequency corresponding to I 14	I15	60.00	Hz	-			0~400	-	-	
I2 output at Max.current	-			In-56	60	Hz			-	
Criteria for analog Input Signal loss	I16	0	-	Pr-15	0	-	0	Disabled	-	
							1	activated below half of set value	0	Half of x1
							2	activated below set value	1	Below x1
Multi-function input terminal P1 define	I17	1		In-65	1		0	Forward (FX)	1	Forward (FX)
Multi-function input terminal P2 define	I18	2		In-66	2		1	Reverse (RX)	2	Reverse (RX)
Multi-function input terminal P3 define	I19	3		In-67	5		2	Emergency stop (EST)	5	Emergency stop (BX)
Multi-function input terminal P4 define	I20	4		In-68	3		3	Reset when a fault occurs (RST)	3	Reset when a fault occurs (RST)
Multi-function input terminal P5 define	I21	5		In-69	7		4	Jog operation (JOG)	6	Jog operation (JOG)
Multi-function input terminal P6 define	I22	6					5	Multi-Step freq - Low	7	Speed-L
Multi-function input terminal P7 define	I23	7					6	Multi-Step freq - Mid	8	Speed-M
Multi-function input terminal P8 define]	I24	8	-			-	7	Multi-Step freq - High	9	Speed-H
							8	Multi accel/Decel - Low	11	XCEL-L
							9	Multi accel/Decel - Mid	12	XCEL-M
							10	Multi accel/Decel - High	49	XCEL-H
							11	DC brake during stop	-	-
							12	2nd motor select	26	2nd motor select
							15	UP	17	UP
							16	DOWN	18	DOWN
							17	3-wire operation	14	3-wire operation
							18	External trip: A Contact (EtA)	4	External Trip
							19	External trip: B Contact (EtB)	-	-
							20	Self-diagnostic function		
							21	Change from PID operation to V/F operation		
							22	2nd source		
							23	Analog hold	21	Analog hold
							24	Accel/Decel disable	25	Accel/Decel disable
							25	Up/down Save Freq. Initialization	20	U/D Clear
							26	JOG FX	46	JOG FX
							27	JOG RX	47	JOG RX
							-		0	None
									13	RUN Enable
									15	2nd source
									16	Exchange
									22	I-Term Clear
									23	PID Open loop
									24	P Gain2
									27	U/D Enable
									33	Base block
									34	Pre Excite
									38	Timer In
									40	dis Aux Ref
									51	Fire Mode
									52	KEB-1 Select

14. Parameter Comparison (10)

Function/Parameter	iG5A			G100(G100C)			iG5A		G100(G100C)	
	Display	Default	Unit	Display	Default	Unit	Setting range	Descriptions	Setting range	Descriptions
Multi-function input terminal status	I25	-	BIT	In-90	0 0000	Bit	BIT 7:P8, BIT 6:P7, BIT 5:P6, BIT 4:P5, BIT 3:P4, BIT 2:P3, BIT 1:P2, BIT 0:P1		P5~P1	
									0	release(off)
									1	Connection(On)
Output terminal status display	I26	-	BIT	-			BIT 1:3AC, BIT 0:MO			
Filtering time constant for Multi-function Input terminal	I27	4	-	In-84	-	-	1~15	-	P5~P1	
									0	Disable(Off)
									1	Enable(On)
				In-85	10	msec			0~10000	-
				In-86	3	msec			0~10000	-
Multi-step frequency 4	I30	30.00	Hz	bA-53	40.00	Hz	0~400	-	0~Max. Freq.	-
Multi-step frequency 5	I31	25.00		bA-54	50.00					
Multi-step frequency 6	I32	20.00		bA-55	Max. freq.					
Multi-step frequency 7	I33	15.00		bA-56						
Multi-acce time 1	I34	3.0	sec	bA-70	20.0	sec	0~6000	-	0.0~600.0	-
Multi-decel time 1	I35	3.0		bA-71	20.0					
Multi-accel time 2	I36	4.0		bA-72	30.0					
Multi-Decel time 2	I37	4.0		bA-73	30.0					
Multi-Accel time 3	I38	5.0		bA-74	40.0					
Multi-Decel time 3	I39	5.0		bA-75	40.0					
Multi-Accel time 4	I40	6.0		bA-76	50.0					
Multi-Decel time 4	I41	6.0		bA-77	50.0					
Multi-Accel time 5	I42	7.0		bA-78	40.0					
Multi-Decel time 5	I43	7.0		bA-79	40.0					
Multi-Accel time 6	I44	8.0		bA-80	30.0					
Multi-Decel time 6	I45	8.0		bA-81	30.0					
Multi-Accel time 7	I46	9.0		bA-82	20.0					
Multi-Decel time 7	I47	9.0		bA-83	20.0					
Analog output item select	I50	0	-	OU-01	0	-	0	Output freq.	0	Frequency
							1	Output current	1	Output Current
							2	Output voltage	2	Output Voltage
							3	Drive DC link voltage	3	DCLink Voltage
									4	Torque
									5	Output Power
									6	Idse
									7	Iqse
									8	Target Freq
									9	Ramp Freq
									10	Speed Fdb
									12	PID Ref Value
									13	PID Fdb Value
									14	PID Output
									15	Constant
Analog output level adjustment	I51	100	%	OU-02	100	%	10~200	-	-1000.0 ~1000.0	Analog output 1 gain
				OU-03	0	%			-100~100	Analog output 1 bias
				OU-04	5	msec			0~10000	Analog output 1 filter
				OU-05	0	%			0.0~1000.0	Analog constant output1

iG5A→G100 Transition Guide

14. Parameter Comparison (11)

Function/Parameter	iG5A			G100(G100C)			iG5A		G100(G100C)	
	Display	Default	Unit	Display	Default	Unit	Setting range	Descriptions	Setting range	Descriptions
Frequency detection level	I52	30.00	Hz	OU-57	30	Hz	0~400	-	0 ~ Max. freq.	-
Frequency detection bandwidth	I53	10.00		OU-58	10					
Multi-function output terminal select	I54	12	-	OU-32	17	-	0	FDT-1	1	FDT-1
Multi-function relay 1 item	I55	17	-	OU-31	17	-	0	FDT-1	1	FDT-1
							1	FDT-2	2	FDT-2
							2	FDT-3	3	FDT-3
							3	FDT-4	4	FDT-4
							4	FDT-5	23	FDT-5
							5	Overload (OLt)	5	Over Load
							6	Drive overload (IOLt)	6	IOL
							7	Motor stall (STALL)	9	Motor Stall
							8	Over voltage trip (Ovt)	10	Over Voltage
							9	Low voltage trip (Lvt)	11	Low Voltage
							10	Drive overheat (OHt)	12	Over Heat
							11	Command loss	13	Lost Command
							12	During Run	14	Run
							13	During Stop	15	Stop
							14	During constant run	16	Steady
							15	During speed searching	19	Speed searching
							16	Wait time for run signal input	-	-
							17	Multi-function relay select	-	-
							18	Warning for cooling fan trip	8	Fan Warning
							19	Brake signal select	-	-
									7	Under Load
									17	Inverter Line
									18	Comm Line
									21	Regeneration
									22	Ready
									28	Timer Out
									29	Trip
									31	DB Warn %ED
									34	On/Off Control
									35	BR Control
									40	KEB Operating
									42	Minor Fault
Fault output item	I56	2	-	OU-30	b010	-	bit 0: the low voltage trip		Bit	000~111
							bit 1: the trip other than low voltage trip occurs		bit 1	Low voltage
							bit 2: setting the H26 [Number of auto restart try]		bit 2	Any faults other than low voltage
							0	b000	bit 3	Final failure of automatic restart
							1	b001	-	
							2	b010		
							3	b011		
							4	b100		
							5	b101		
							6	b110		
							7	b111		
Output terminal select when communication error occurs	I57	0	-	-			BIT 0:Multi-function output terminal		-	
							BIT 1:Multi-function relay			
							0	b00		
							1	b01		
							2	b10		
							3	b11		
Communication protocol select	I59	0	-	CM-02	0	-	0	Modbus RTU	0	Modbus RTU
							1	LS BUS	2	LS Inv 485
Drive number	I60	1	-	CM-01	1	-	1~250	-	1~250	-

14. Parameter Comparison (12)

Function/Parameter	iG5A			G100(G100C)			iG5A		G100(G100C)	
	Display	Default	Unit	Display	Default	Unit	Setting range	Descriptions	Setting range	Descriptions
Baud rate	I61	3	-	CM-03	3	-	0	1,200 [bps]	0	1,200 [bps]
							1	2,400 [bps]	1	2,400 [bps]
							2	4,800 [bps]	2	4,800 [bps]
							3	9,600 [bps]	3	9,600 [bps]
							4	19,200 [bps]	4	19,200 [bps]
							-	-	5	38,400 [bps]
							-	-	6	56 Kbps
							-	-	7	115 Kbps
Drive mode select after loss of frequency command	I62	0	-	Pr-12	0	-	0	Continuous operation at the frequency before its command is lost	0	None
							1	Free run stop (Output cut-off)	1	Free-Run
							2	Decel to stop	2	Dec
							3	Lose preset	3	Hold Input
									4	Hold Output
									5	Lost Preset
Time to determine speed command loss	I63	1.0	sec	Pr-13	1	sec	0.1~120	-	0.1~120	-
Communication time setting	I64	5	ms	-	-	-	2~100	-	-	-
Parity/stop bit setting	I65	0	-	CM-04	0	-	0	Parity: None, Stop Bit:1	0	D8/PN/S1
							1	Parity: None, Stop Bit:2	1	D8/PN/S2
							2	Parity: Even, Stop Bit:1	2	D8/PE/S1
							3	Parity: Odd, Stop Bit:1	3	D8/PO/S1
Number of Read address	-			CM-30	3	-	-		0~8	Number of output parameters
Read address register 1	I66	5	-	CM-31	000A	-	0~42239	-	0000~ FFFF Hex	-
Read address register 2	I67	6		CM-32	000E					
Read address register 3	I68	7		CM-33	000F					
Read address register 4	I69	8		CM-34	0000					
Read address register 5	I70	9		CM-35						
Read address register 6	I71	10		CM-36						
Read address register 7	I72	11		CM-37						
Read address register 8	I73	12		CM-38						
No. of write address	-			CM-50	2	-	-	-	0~8	Number of input parameters
Write address register 1	I74	5	-	CM-51	0005	-	0~42239	-	0000~ FFFF Hex	-
Write address register 2	I75	6		CM-52	0006					
Write address register 3	I76	7		CM-53	0000					
Write address register 4	I77	8		CM-54						
Write address register 5	I78	9		CM-55						
Write address register 6	I79	10		CM-56						
Write address register 7	I80	11		CM-57						
Write address register 8	I81	12		CM-58						
Brake open current]	I82	50.0	%	Ad-41	50.0	%	0~180		0.0~180	
Brake open delay time	I83	1.00	sec	Ad-42	1.00	sec	0~10		0.00~10.00	

14. Parameter Comparison (13)

Function/Parameter	iG5A			G100(G100C)			iG5A		G100(G100C)	
	Display	Default	Unit	Display	Default	Unit	Setting range	Descriptions	Setting range	Descriptions
Brake open FX frequency	I84	1.00	Hz	Ad-44	1.00	Hz	0~400	-	0.00~ Max. Freq.	-
Brake open RX frequency	I85	1.00		Ad-45	1.00					
Brake close delay time	I86	1.00	sec	Ad-46	1.00	sec	0~10		0.00~10.00	
Brake close frequency	I87	2.00	Hz	Ad-47	2.00	Hz	0~400		0.00~ Max. Freq.	
Operation frequency at speed command loss	I88	30.00		Pr-14	0.00				Start Freq.~ Max. Freq.	

iG5A→G100 Transition Guide

15-1. Input & Output & Ground Wiring Specifications (1)

G100 Power Cable & Ground Cable Specifications (200V)

(kW)	Ground		Power Cable				Terminal Size
	mm²	AWG	R/S/T	U/V/W	R/S/T	U/V/W	
			mm^2		AWG		
0.4	4	12	1.5	1.5	16	16	M3(M3 .5*)
0.75							
1.5	4	12	4	2.5	12	14	M4(M3.5*)
2.2	4	12	4	2.5	12	14	M4
4	6	10	6	6	10	10	M4
5.5	6	10	16	10	6	8	M4
7.5							
11	14	6	16	16	6	6	M5
15			25	25	4	4	
18.5			35	25	2	4	M6
22			35	35	2	2	

* G100C

iG5A Power Cable & Ground Cable Specifications (200V)

(kW)	Ground		Power Cable				Terminal Size
	mm²	AWG	R/S/T	U/V/W	R/S/T	U/V/W	
			mm^2		AWG		
0.4	4	12	2.5	2.5	14	14	M3.5
0.75	4	12	2.5	2.5	14	14	
1.5	4	12	2.5	2.5	14	14	M3.5
2.2	4	12	2.5	2.5	14	14	M4
4	4	12	4	4	12	12	M4
5.5	6	10	6	6	10	10	M5
7.5	6	10	10	10	8	8	
11	16	6	16	16	6	6	M6
15	16	6	25	25	4	4	
18.5	25	4	35	35	2	2	M8
22	25	4	35	35	2	2	

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15-1. Input & Output & Ground Wiring Specifications (2)

G100 Power Cable & Ground Cable Specifications (400V)

kW	Ground		Power Cable				Screw Size
	mm²	AWG	R/S/T	U/V/W	R/S/T	U/V/W	
			mm^2		AWG		
0.4	2.5	14	1.5	1.5	16	16	M3.5
0.75							
1.5							
2.2							
4	6	10	2.5	2.5	14	14	M4
5.5	6	10	10	6	8	10	M4
7.5							
11	14	6	10	10	8	8	M5
15			10	10	8	8	
18.5			16	10	6	8	
22			25	16	4	6	

iG5A Power Cable & Ground Cable Specifications (400V)

(kW)	Ground		Power Cable				Screw Size
	mm²	AWG	R/S/T	U/V/W	R/S/T	U/V/W	
			mm^2		AWG		
0.4	2.5	14	2.5	2.5	14	14	M3.5
0.75	2.5	14	2.5	2.5	14	14	M3.5
1.5	2.5	14	2.5	2.5	14	14	M4
2.2	2.5	14	2.5	2.5	14	14	M4
4	2.5	14	2.5	2.5	14	14	M4
5.5	4	12	4	2.5	12	14	M5
7.5	4	12	4	4	12	12	M5
11	10	8	6	6	10	10	M5
15	10	8	16	10	6	8	M5
18.5	16	6	16	10	6	8	M6
22	14	6	25	16	4	6	M6

iG5A→G100 Transition Guide

15-1. Input & Output & Ground Wiring Specifications (3)

G100 Input/Output Screw Specifications & Tightening Torque

Capacity kW(HP)	200V				400V			
	Terminal screw size	Tightening torque			Terminal screw size	Tightening torque		
		Kgf.cm	N.m	Lb-in		Kgf.cm	N.m	Lb-in
0.4(0.5)	M3(M3.5*)	5.1(10.3*)	0.5(1.0*)	4.35(8.7*)	M3.5	10.3	1.0	8.7
0.75(1.0)								
1.5(2.0)	M4(M3.5*)	12.1(10.3*)	1.2(1.0*)	10.44(8.7*)				
2.2(3.0)	M4	12.1	1.2	10.44				
3.7/4(5.0)	M4	18.4	1.8	15.66	M4	18.4	1.8	15.66
5.5(7.5)	M4	R/S/T : 14.0 U/V/W : 15.0	R/S/T : 1.4 U/V/W : 1.5	R/S/T : 12.18 U/V/W : 13.05		R/S/T : 14.0 U/V/W : 18.4	R/S/T : 1.4 U/V/W : 1.8	R/S/T : 12.18 U/V/W : 15.66
7.5(10.0)	M4	R/S/T : 14.0 U/V/W : 15.0	R/S/T : 1.4 U/V/W : 1.5	R/S/T : 12.18 U/V/W : 13.05		R/S/T : 14.0 U/V/W : 18.4	R/S/T : 1.4 U/V/W : 1.8	R/S/T : 12.18 U/V/W : 15.66
11	M5	25.34	2.5	21.75	M5	25.34	2.5	21.75
15								
18.5	M6	30.5	3	26.1				
22								

* G100C

iG5A Input/Output Screw Specifications & Tightening Torque

Capacity kW(HP)	200V				400V			
	Terminal screw size	Tightening torque			Terminal screw size	Tightening torque		
		Kgf.cm	N.m	Lb-in		Kgf.cm	N.m	Lb-in
0.4(0.5)	M3.5	10	1.0	8.7	M3.5	10	1.0	8.7
0.75(1.0)								
1.5(2.0)					M4	15	1.5	13
2.2(3.0)	M4	15	1.5	13				
3.7/4(5.0)								
5.5(7.5)	M5	32	3.2	28	M5	32	3.2	28
7.5(10.0)								
11	M6	30.7	3.06	26.6	M5	30.7	3.06	26.6
15	M6	30.7	3.06	26.6	M5	30.7	3.06	26.6
18.5	M8	30.5	3.06	26.5	M6	30.5	3.06	26.5
22	M8	30.5	3.06	26.5	M6	30.5	3.06	26.5

15-2. Control Cable Specifications

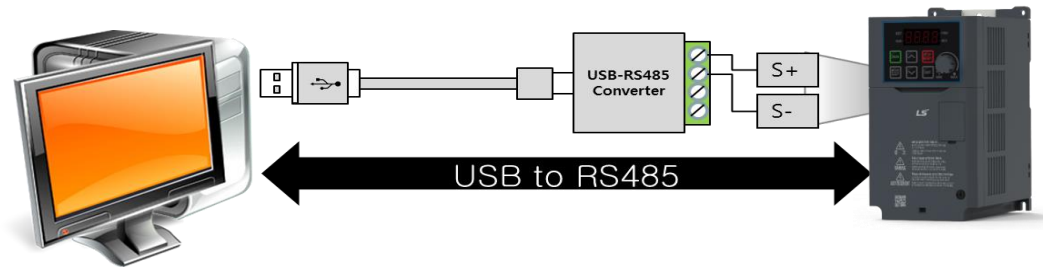
Cable size comparison

Terminal	iG5A					Terminal	G100						
	Screw Size	Cable		Tightening torque			Screw Size	Without crimp terminal connectors (Bare wire)		With crimp terminal Connectors (Bootlace Ferrule)		Tightening torque	
		mm^2	AWG	Kgf.m	N.m			mm^2	AWG	mm^2	AWG	Kgf.Cm	N.m
P1-P8 /CM/VR /AI/AM /S+,S-/24 /SA,SB,SC	M2.6	1.0	17	4.0	0.4	P1-P5 /CM/VR /V1/I2 /AO/24 /S+/S-	M2	0.8	18	0.5	20	2.2 – 2.5	0.22 – 0.25
3A/3B/3C	M2.6	1.0	17	4.0	0.4	A1/B1/C1, A2/C2	M2.6					4.0	0.4

16. Parameter Conversion with DriveView9

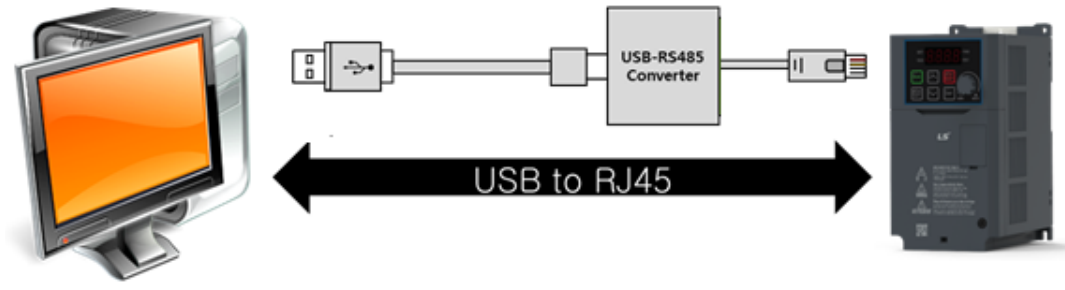
- By using DriveView9, can conveniently convert the parameter used in the iG5A into the parameter corresponding to the G100.

- DriveView9 supports RS485 communication and can be connected using S+,S- of the inverter control terminal.

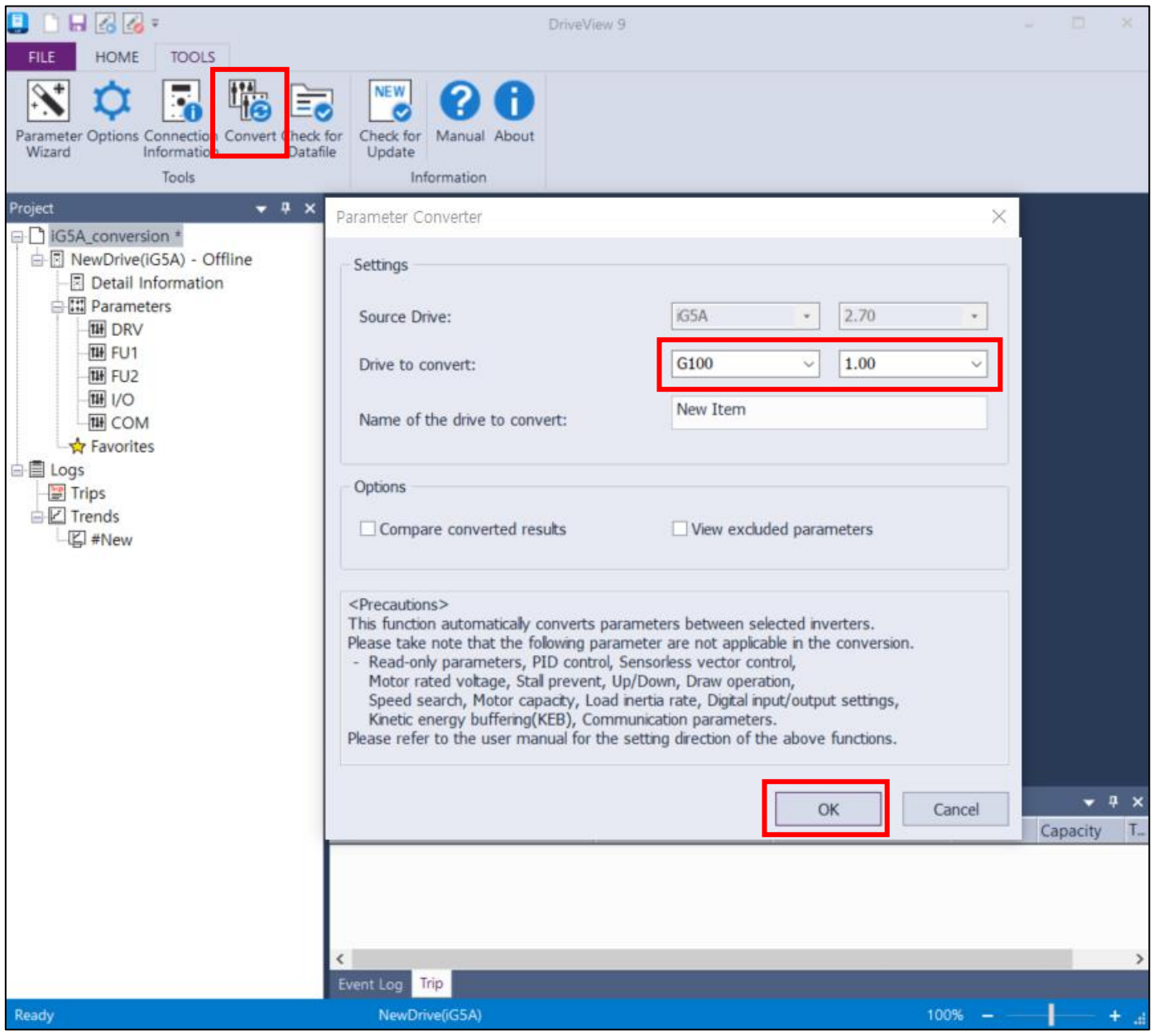


- The G100 model can also communicate using a dedicated USB-RJ45 signal converter (USB to RS485 converter + RS485 to RJ45 cable).
- USB-RJ45 signal converter cable is available as below

Item code	Description
64090354	INV,RS485 to USB Converter,T485-LSLV



- First, Import the original drive project in DriveView9 or create a new project and read parameter. And then select Menu TOOLS -> Convert



* Currently, it is possible to convert from iG5A firmware version 2.70 to G100 version 1.00 only, but it will be updated soon for G100 version 1.xx.