



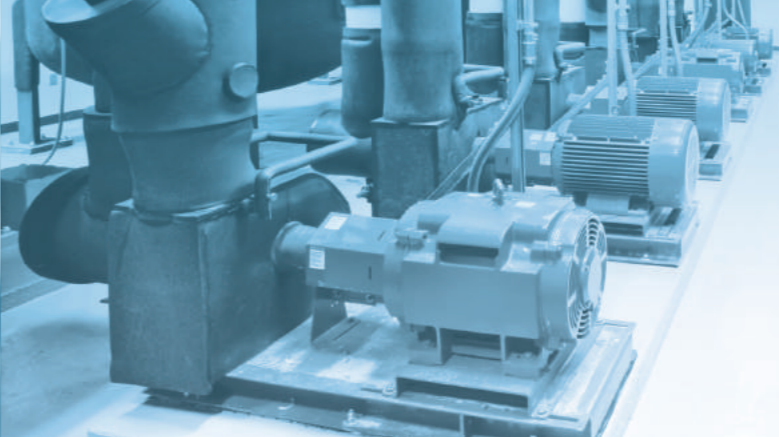
Compact drive for fan & pump

# Starvert iG5H

Three-phase 200~230V 0.4~7.5kW  
Three-phase 380~480V 0.4~7.5kW



# LSIS



# Starvert iG5H

## Competitive solution for simple fan and pump applications

There are growing concerns about environmental problems due to global warming, accelerating the energy saving trends required by buildings, factories and workplaces.

Proper control of airflow and water is essential not only for commercial buildings to serve comfortable climate, but critical facilities such as hospitals, data centers or semiconductor factories to protect the products and the people.

We understand those needs and believe that our new drive, iG5H is able to address and exceed all of these expectations.

iG5H provides a perfect and reliable solution to the needs of customers looking to optimize the performance of fans and pumps used in various applications such as HVAC, water & piping system, eliminating waste through optimal flow rate and airflow controls, and resulting in reducing power consumption and initial product and installation cost through energy saving.

### Compact but robust against harsh ambient conditions

- Ambient air temperature around the drive is up to 50°C without derating
- Coated circuit boards are conforming to class 3C2 (IEC 60721-3-3)

### Main applications

Building HVAC/R	Water & wastewater	Other industries & machines
<ul style="list-style-type: none"> <li>• AHU(Air Handling Unit)</li> <li>• Cooling tower fan</li> <li>• Chilled water pump</li> </ul>	<ul style="list-style-type: none"> <li>• Booster pump</li> <li>• Submersible pump</li> <li>• Aeration blower</li> </ul>	<ul style="list-style-type: none"> <li>• Supply and return fan</li> <li>• Condenser &amp; Evaporator</li> <li>• Boiler fan</li> </ul>



## Stable system control for energy saving with compact design

### Specially designed functions for pumps and fans



#### Dedicated pump features

##### MMC (Multi-Motor Control) & autochange

The drive can control up to 2 auxiliary pumps with relay outputs while monitoring and balancing its operating time automatically for main pump to share duty cycle.

##### Pump alternation

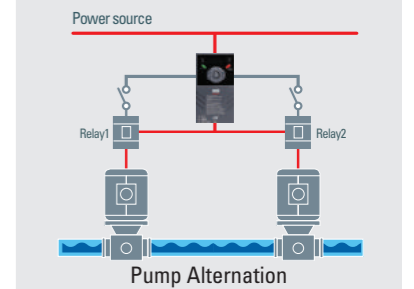
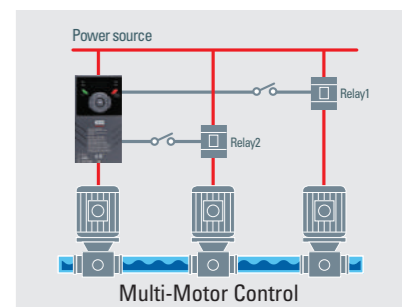
The drive alternates the lead pump with standby pump periodically according to the preset time to increase the lifespan of the system.

##### Advanced sleep & wake-up

This secures no interruptions in the water supply, maximizes the energy savings, reduces noise and extends the lifetime of the system by switching off the pump when not required.

##### Pre-PID & Start/End ramp

Pump quickly reaches minimum speed or PID starting point and fills the system without stressing valves.



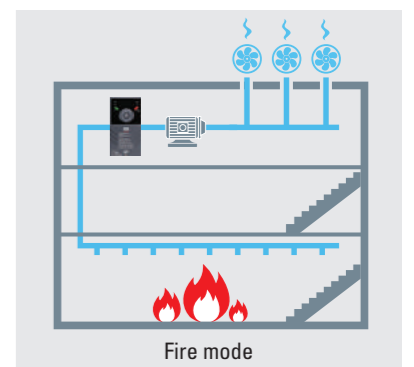
#### Dedicated fan features

##### Fire mode

In the event of a fire, the drive will continue vital fan operation regardless of control signals, warnings or alarms in order to remove smoke to maintain escape routes in commercial or industrial buildings and tunnels.

##### Regeneration avoidance

The drive increases operation frequency automatically to prevent the regenerative overvoltage alarm from occurring when the fan is forcibly rotated by another one in the duct system.



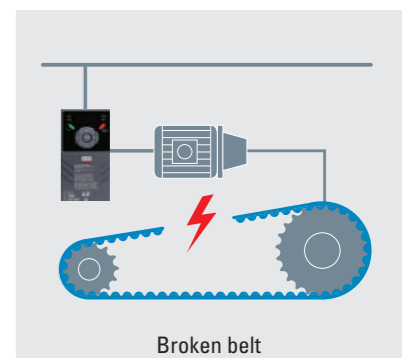
#### Dedicated system protection features

##### Pipe broken

The drive detects a leak water pipe or burst air duct and sets off an alarm while monitoring pressure.

##### Broken belt

The drive detects a broken fan belt or damaged pump coupling and sets off an alarm while monitoring motor torque.



## Options



## Technical data

### 200V Class

SV □□□ iG5H-2	004	008	015	022	037	040	055	075	
Applied motor (kW) <sup>1)</sup>	0.4	0.75	1.5	2.2	3.7	4	5.5	7.5	
Rated output	Drive capacity (kVA) <sup>2)</sup>	0.95	1.9	3.0	4.5	6.1	9.1	12.2	
	Output current (A)	2.5	5.0	8.0	12.0	16.0	17.0	24.0	
	Output frequency (Hz)	0-400Hz							
Rated input	Output voltage (V)	Three-phase 200-230V							
	Input voltage (V)	Three-phase 200-230V (-15%~+10%)							
	Input frequency (Hz)	50-60Hz (±5%)							
Cooling method	Self-cooled	Fan cooled							
Dynamic braking transistor	Built-in								

### 400V Class

SV □□□ iG5H-4	004	008	015	022	037	040	055	075	
Applied motor (kW) <sup>1)</sup>	0.4	0.75	1.5	2.2	3.7	4	5.5	7.5	
Rated output	Drive capacity (kVA) <sup>2)</sup>	0.95	1.9	3.0	4.5	6.1	6.9	9.1	
	Output current (A)	1.25	2.5	4.0	6.0	8.0	9.0	12.0	
	Output frequency (Hz)	0-400Hz							
Rated input	Output voltage (V)	3-phase 380-480V							
	Input voltage (V)	3-phase 380-480V (-15%~+10%)							
	Input frequency (Hz)	50-60Hz (±5%)							
Cooling method	Self-cooled	Fan cooled							
Dynamic braking transistor	Built-in								

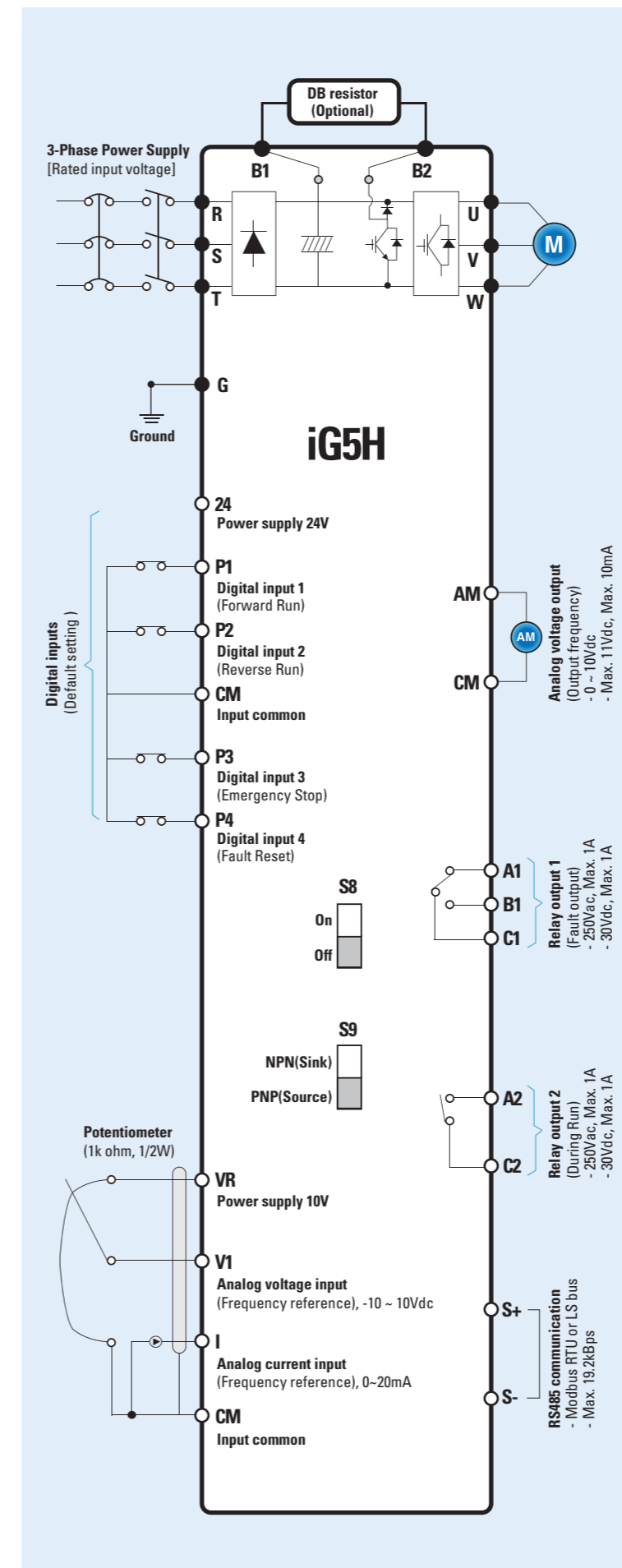
1) Indicates the maximum applicable motor capacity when using a 4-pole standard motor.

2) Drive capacity is based on 220V for 200V class and 440V for 400V class.

## Common specifications

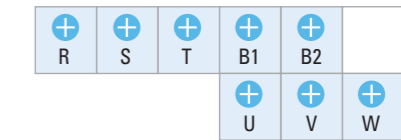
Control	Control method	V/f, Slip compensation
	Frequency setting resolution	Digital command: 0.01Hz Analog command: 0.05Hz/50Hz(10 bit)
	Frequency accuracy	Digital command: 0.01% of Maximum output frequency Analog command: 0.1% of Maximum output frequency
	V/f Pattern	Linear, Squared, User V/f, High starting torque 1 & 2
	Overload capacity	120% for 1minute (Normal Duty)
	Torque boost	Manual / Auto torque boost
Environment	Protection degree	IP20, NEMA 1(Optional)
	Ambient temperature	-10~50°C
	Storage temperature	-20~65°C
	Humidity	Below 90% RH (no condensation)
	Altitude & Vibration	Below 1,000m, 5.9m/sec <sup>2</sup> (0.6G)
	Atmospheric pressure	70~106 kPa
	Area of Use	Indoors without corrosive gas, combustible gas, oil mist or dust
	Aggressive environment	Designed for coated/standard 3C2(IEC 60721-3-3)

## Standard connection diagram

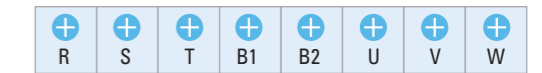


## Main Circuit terminals

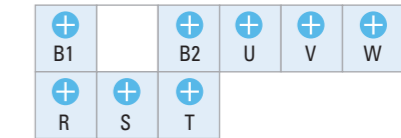
0.4~1.5kW



2.2~4kW

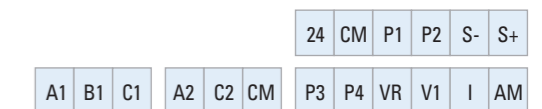


5.5~7.5kW



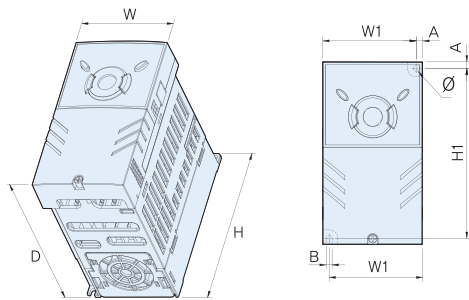
Type	Terminal	Description
Main circuit power supply input	R	Connects line power to the drive
	S	
	T	
DB resistor connection	B1	For connection to DB resistor
	B2	
Drive output	U	Connects to the motor
	V	
	W	
Ground	G	Ground terminal

## Control circuit terminals

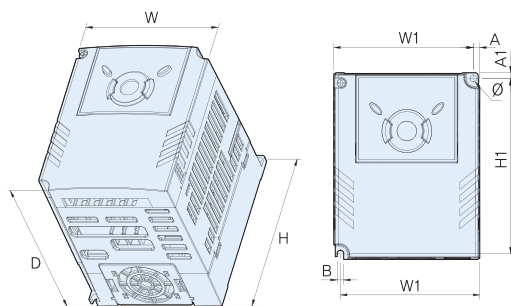


Type	Terminal	Description
Input terminals	P1-P4	Digital input 1-4
	CM	Input common
	24	Digital input power supply 24V
	VR	Power supply for external potentiometer
	V1	Analog input (Voltage)
Output terminals	I	Analog input (Current)
	AM	Analog output (Voltage)
	A1	A contact output of relay 1
	B1	B contact output of relay 1
RS485 terminals	C1	Common for relay 1
	C2	Common for relay 2
Dip switch	S+	Communications input (+)
	S-	Communications input (-)
Dip switch	S8	NPN/PNP mode selection
	S9	Termination resistor On/Off

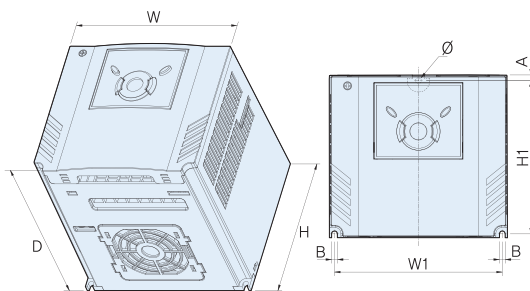
## Dimensions



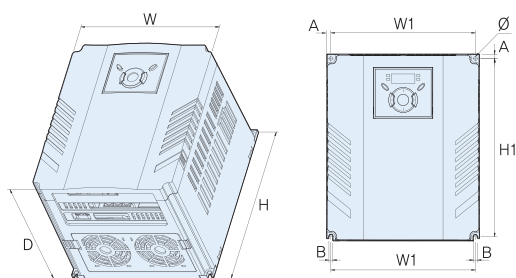
									Unit (mm)
Model no.	W	W1	H	H1	D	Ø	A	B	Weight
SV004iG5H-2	70.0	65.5	128.0	119.0	130.0	4.0	4.5	4.0	0.76kg
SV004iG5H-4									0.77kg
SV008iG5H-2									
SV008iG5H-4									



									Unit (mm)
Model no.	W	W1	H	H1	D	Ø	A	B	Weight
SV015iG5H-2	100.0	95.5	128.0	120.0	130.0	4.5	4.5	4.5	1.12kg
SV015iG5H-4									



									Unit (mm)
Model no.	W	W1	H	H1	D	Ø	A	B	Weight
SV022iG5H-2	140.0	132.0	128.0	120.5	155.0	4.5	4.5	4.5	1.84kg
SV022iG5H-4									1.89kg
SV037iG5H-2									
SV037iG5H-4									
SV040iG5H-2									
SV040iG5H-4									



									Unit (mm)
Model no.	W	W1	H	H1	D	Ø	A	B	Weight
SV055iG5H-2	180.0	170.0	220.0	210.0	170.0	4.5	4.5	4.5	3.66kg
SV055iG5H-4									
SV075iG5H-2									
SV075iG5H-4									

### ■ HEAD OFFICE

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



According to The WEEE Directive,  
 please do not discard the device with your household waste.