



High Torque Performance and Precise Control

**STARVERT *iS7***

0.75~75kW 3Phase 200 ~ 230Volts

0.75~375kW 3Phase 380 ~ 480Volts

**LS** *IS*



# User-Friendly Options

Diverse communication options, expansion I/O options,  
PLC options, encoder options, IP54 enclosure options



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iS7 generates a more powerful performance through its superior V/F control, V/F PG, slip compensation, and sensorless vector control. The iS7 focuses on a user-friendly interface and environment-friendly features including a wide graphic LCD keypad, user & macro group support, electro-thermal functions for motor protection, and protection for input/output phase loss.



The iS7 sets the world standard for drives (VFDs) because of its features that meet all of your needs in AC drives. The iS7 offers powerful performance, flexibility through diverse options, and a more convenient and user-friendly interface. The iS7 offers more than you can imagine.



ISO14001, ISO9001



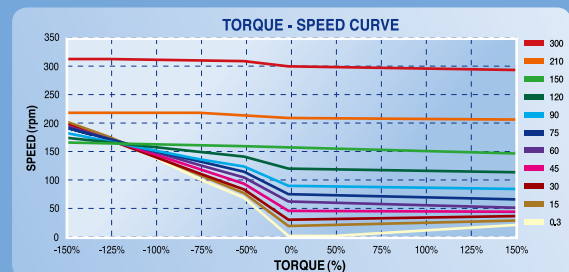
**iS7** is dependable because it has high performance and reliability.



iS7 Feature | Reliability & High Performance

# Reliability

- ▶ Powerful electric current type sensorless vector control  
Our iS7 technology includes a competitive and strong low-speed torque control and a speed-precision-driven vector algorithm.
- Speed control range 100:1
- Extremely low torque control capability: 0.1Hz/150% real torque
- Max. torque control capability within the restoration range

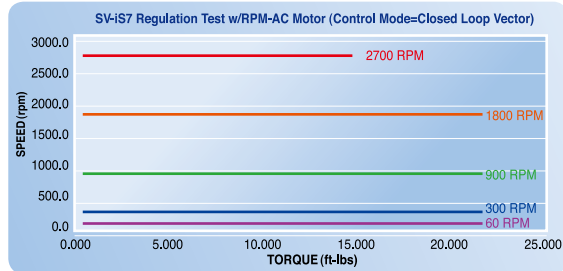


# High Performance

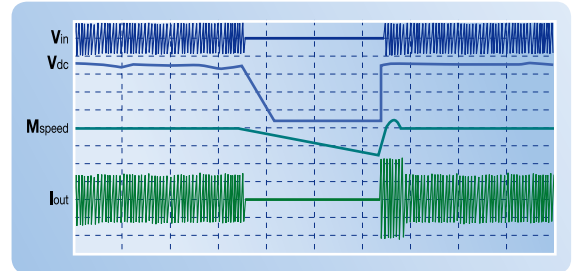
### ➤ Sensored vector realizing precise speed/torque control

In the entire speed range including zero speed, powerful torque (more than 250%) performance is materialized through receiving Max. 200kHz frequency pulse via encoder-dedicated board.

- Speed control range 1000:1
- Instant Max. torque control capability 250%
- 50Hz speed control response



### ➤ Ride-through (LV trip delay) for sudden power loss

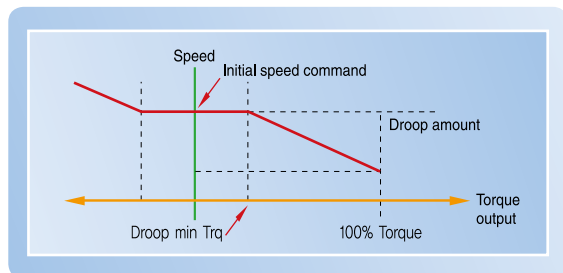


## Powerful Performance

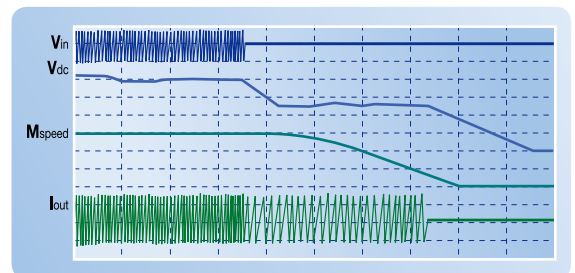
V/F control, V/F PG, slip compensation, sensorless vector control

### ➤ Automatic torque balance droop control

Droop control algorithm adjusts changeable torque driven by speed. This algorithm is easily applicable to open loop linking driving and load sharing driving.



### ➤ Kinetic Energy Buffering (KEB) for a stable system stop in case of power loss or failure



### ➤ Easy start parameter setting



### ➤ Power and flux braking for maximum deceleration

**iS7** is flexible because it is easily expandable.

## User-Friendly Options

Diverse communication options, expansion I/O options, PLC options, encoder options, IP54 enclosure options

iS7 Feature | **Flexibility & Expansion**

# Flexibility

▼ **iS7 offers options with flexibility and expandability.**

- Built-in Built in RS485 & Modbus-RTU communication
- Profibus-DP, DeviceNet, LonWorks options
- Expandable I/O options: Max. input 11 points, Max. output 6 points
- PLC options: Max. input 14 points, Max. output 7 points for Master-K platform
- Encoder options
- IP54 enclosure options

▼ **PLC Card**

- Master-K 120S platform
- Normal input 6 points (Sink/Source selectable), Max. input 14 points when expanded
- Normal output 4 points (N.O. Relay), Max. output 7 points when expanded
- RTC (Real Time Clock)
- KGL WIN operating system



▼ **Encoder Card**

- Closed loop control
- Pulse train reference
- 5/12/15 V insulated power supply
- Line driver or open collector
- 200kHz Max. input frequency
- Signal loss detection



▼ **Profibus-DP Card**

- Profibus dedicated connector
- Max. 12Mbps communication speed
- Max. 32 stations per segment
- Bus topology
- Enhanced on-line diagnosis



#### Ethernet Card

- Modbus TCP, Ethernet IP Protocol support
- 10Mbps, 100Mbps communication speed
- Half duplex, full duplex support
- Auto negotiation
- Max. 100m(328ft.) transmission distance
- CSMA/CD communication access method



#### LonWorks

- 78kbps communication speed
- Free/bus topology
- Resistance built-in per topology
- Max. 2700m (8858 ft.) connection distance (bus topology)



#### DeviceNet

- Communication speed: 125kbps, 250kbps, 500kbps
- Free/Bus topology
- Max. 64 node connection points
- Max. 500m (1640 ft.) transmission distance (125kbps)



#### I/O Expansion Card

- Insulated I/O 3 points each
- Ext-1  
Analog voltage (-10~10V) I/O 1 point  
Analog current (0~20mA) I/O 1 point
- Ext-2  
Analog voltage (-10~10V) I/O 2 points  
Analog current (0~20mA) I/O 2 points



#### R-Net Card

- 1Mbps Communication speed
- Manchester Biphase-L Frame synchronization
- Max. 64 node connection points
- Max. 750m transmission distance (segment each)



#### Built-in RS485 & Modbus-RTU

- Multi drop link focused RS485, Modbus built-in
- Connecting up to 16 AC drives
- Max. 1200m (3937 ft.) communication distance (valid distance: 700m (2297 ft.))
- Protection algorithm under command lost
- Real time running and monitoring with drive view software

#### CanOpen Card

- 1Mbps communication speed
- Bus Topology
- Max. 64 node connection points (include master)
- PDO, SDO, Sync, NMC communication support
- Support profile:  
PDO1 (CiA402 drive & motion control device profile)  
PDO3 (LS Profile)



#### CC-Link Card

- 10Mbps communication speed
- Connecting up to 42 AC drives
- Station type: Remote device station
- 1 connection point for 1 AC drive

#### Drive Copy Unit (UX-07V1)

- Support products: iS7, iE5
- Support function:  
Parameter copy, RS485 converter
- Copy speed: 9,600bps (iE5) / 19,200bps (iS7)
- Max. save parameter: 5 Sets
- Converter support speed:  
1,200 / 2,400 / 9,600 / 19,200 / 38,400 bps

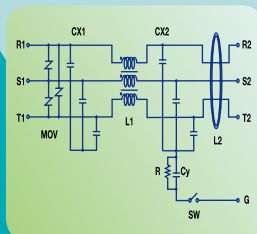
**iS7** is convenient because it has a user friendly interface.



iS7 Feature | Convenience & Environment

# Convenience Environment

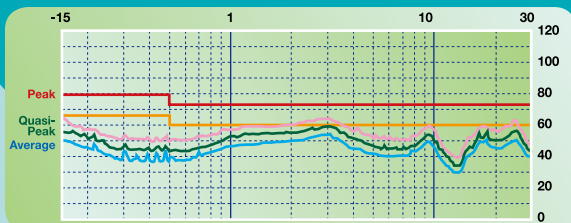
- EMC filter (in conformity with EN61800-3) built-in for protection from excessive electronic distortion



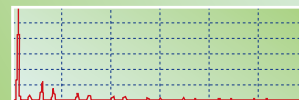
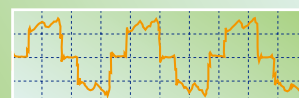
- DC reactor built-in for harmonic reduction and power factor improvement



| Overloading rate | 110% (VT rated standard) |
|------------------|--------------------------|
| THD              | 18 ~ 37%                 |
| power factor     | 94 ~ 96%                 |
| IP Level         | IP21                     |
| Insulation Class | 155°C (300°F)            |

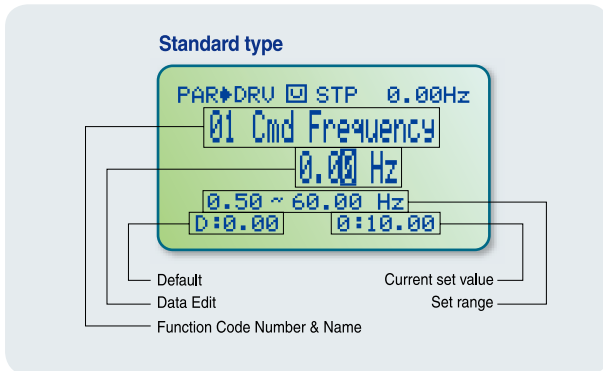


Input current and THD analysis

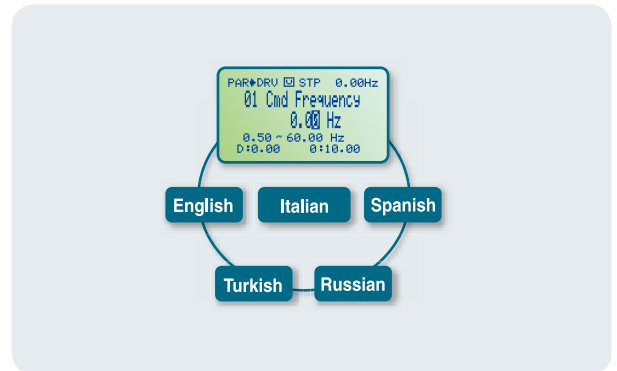


THD : 29.3%      PF : 95.9%

➤ Widened graphic LCD keypad

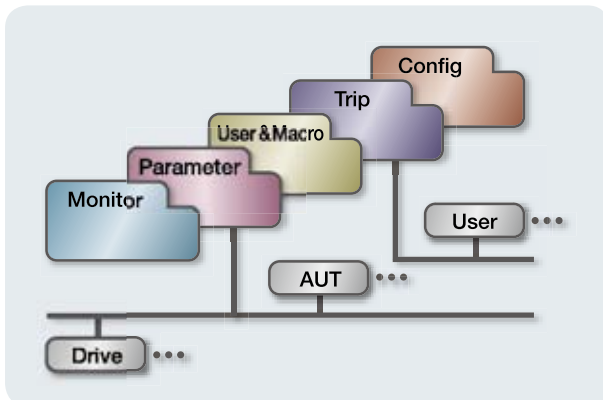


➤ Multi-language support (5 languages)

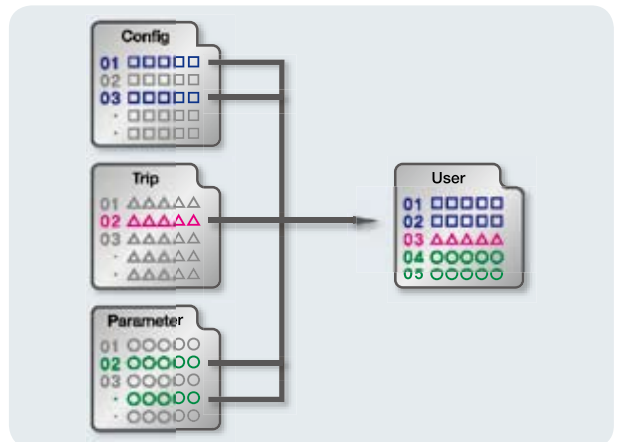


# Convenience through User-friendly Interface

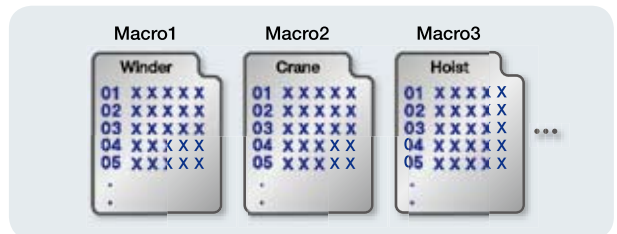
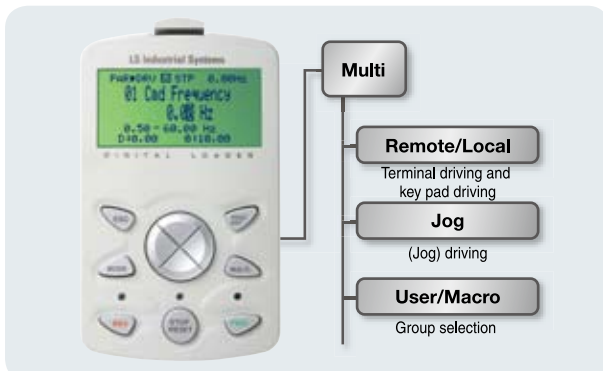
➤ Efficient architecture of 5-mode 15-parameter groups



➤ User & macro group support



➤ Multi-function key



➤ Protective functions dedicated motor control



## Model and Type

| Applied motors | 220V class       | 400V class       |
|----------------|------------------|------------------|
| 0.75kW         | SV0008 iS7-2NOFD | SV0008 iS7-4NOFD |
| 1.5kW          | SV0015 iS7-2NOFD | SV0015 iS7-4NOFD |
| 2.2kW          | SV0022 iS7-2NOFD | SV0022 iS7-4NOFD |
| 3.7kW          | SV0037 iS7-2NOFD | SV0037 iS7-4NOFD |
| 5.5kW          | SV0055 iS7-2NOFD | SV0055 iS7-4NOFD |
| 7.5kW          | SV0075 iS7-2NOFD | SV0075 iS7-4NOFD |
| 11kW           | SV0110 iS7-2NOFD | SV0110 iS7-4NOFD |
| 15kW           | SV0150 iS7-2NOFD | SV0150 iS7-4NOFD |
| 18.5kW         | SV0185 iS7-2NOFD | SV0185 iS7-4NOFD |
| 22kW           | SV0220 iS7-2NOFD | SV0220 iS7-4NOFD |
| 30kW           | SV0300 iS7-2SO   | SV0300 iS7-4NOD  |
| 37kW           | SV0370 iS7-2SO   | SV0370 iS7-4NOD  |
| 45kW           | SV0450 iS7-2SO   | SV0450 iS7-4NOD  |
| 55kW           | SV0550 iS7-2SO   | SV0550 iS7-4NOD  |
| 75kW           | SV075 iS7-2SO    | SV0750 iS7-4NOD  |
| 90kW           |                  | SV0900 iS7-4SOD  |
| 110kW          |                  | SV1100 iS7-4SOD  |
| 132kW          |                  | SV1320 iS7-4SOD  |
| 160kW          |                  | SV1600 iS7-4SOD  |
| 185kW          |                  | SV1850iS7-4SOD   |
| 220kW          |                  | SV2200iS7-4SOD   |
| 280kW          |                  | SV2800iS7-4SO    |
| 315kW          |                  | SV3150iS7-4SO    |
| 375kW          |                  | SV3750iS7-4SO    |

| SV                                   | 008                          | iS7                  | - | 2                       | N                          | O                       | F               | D               | W                   |
|--------------------------------------|------------------------------|----------------------|---|-------------------------|----------------------------|-------------------------|-----------------|-----------------|---------------------|
| LS<br>Inverter<br>Starvert<br>Series | Capacity of<br>Applied Motor | Series<br>Name       |   | Input Voltage           | Keypad                     |                         |                 | DCR             | Web version         |
|                                      | 0008 0.75 [kW]               | Wide-Use<br>Inverter |   | 2 3-Phase<br>200~230[V] | N NON                      |                         |                 | Blank NON       | Blank Normal        |
|                                      | 0015 1.5 [kW]                |                      |   | 4 3-Phase<br>380~480[V] | S GLCD<br>(Graphic Loader) |                         |                 | D DC<br>Reactor | W Web<br>Customized |
|                                      | 0022 2.2 [kW]                |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 0037 3.7 [kW]                |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 0055 5.5 [kW]                |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 0075 7.5 [kW]                |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 0110 11 [kW]                 |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 0150 15 [kW]                 |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 0185 18.5 [kW]               |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 0220 22 [kW]                 |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 0300 30 [kW]                 |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 0370 37 [kW]                 |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 0450 45 [kW]                 |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 0550 55 [kW]                 |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 0750 75 [kW]                 |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 0900 90[kW]                  |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 1100 110[kW]                 |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 1320 132[kW]                 |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 1600 160[kW]                 |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 1850 185kW                   |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 2200 220kW                   |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 2800 280kW                   |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 3150 315kW                   |                      |   |                         |                            |                         |                 |                 |                     |
|                                      | 3750 375kW                   |                      |   |                         |                            |                         |                 |                 |                     |
|                                      |                              |                      |   |                         |                            | UL                      |                 |                 |                     |
|                                      |                              |                      |   |                         |                            | O Open                  | Blank NON       |                 |                     |
|                                      |                              |                      |   |                         |                            | E Enclosed<br>UL Type1  | F EMC<br>Filter |                 |                     |
|                                      |                              |                      |   |                         |                            | P Enclosed<br>UL Type12 |                 |                 |                     |

## Specification

### Rated Input and Output: Input voltage of 200V class (0.75~22kW)

| Type: SV □□□ iS7-2 □         |                                     | 0008                                | 0015 | 0022 | 0037 | 0055 | 0075 | 0110 | 0150 | 0185 | 0220 |
|------------------------------|-------------------------------------|-------------------------------------|------|------|------|------|------|------|------|------|------|
| Motor Applied <sup>*1)</sup> | [HP]                                | 1                                   | 2    | 3    | 5    | 7.5  | 10   | 15   | 20   | 25   | 30   |
|                              | [kW]                                | 0.75                                | 1.5  | 2.2  | 3.7  | 5.5  | 7.5  | 11   | 15   | 18.5 | 22   |
| Rated Output                 | Rated Capacity [kVA] <sup>*2)</sup> | 1.9                                 | 3.0  | 4.5  | 6.1  | 9.1  | 12.2 | 17.5 | 22.9 | 28.2 | 33.5 |
|                              | Rated Current [A] <sup>*3)</sup>    | CT                                  | 5    | 8    | 12   | 16   | 24   | 32   | 46   | 60   | 74   |
|                              |                                     | VT                                  | 8    | 12   | 16   | 24   | 32   | 46   | 60   | 74   | 88   |
|                              | Output Frequency [Hz]               | 0 ~ 400 [Hz] <sup>*4)</sup>         |      |      |      |      |      |      |      |      |      |
|                              | Output Voltage [V]                  | 3-phase 200 ~ 230V <sup>*5)</sup>   |      |      |      |      |      |      |      |      |      |
| Rated Input                  | Available Voltage [V]               | 3-phase 200 ~ 230 VAC (-15% ~ +10%) |      |      |      |      |      |      |      |      |      |
|                              | Frequency [Hz]                      | 50 ~ 60 [Hz] (±5%)                  |      |      |      |      |      |      |      |      |      |
|                              | Rated Current [A]                   | CT                                  | 8.3  | 12.9 | 18.6 | 24   | 32.9 | 41.4 | 58   | 69   | 88   |
|                              |                                     | VT                                  | 7    | 10.6 | 14.8 | 21.5 | 28   | 42   | 52   | 60   | 75   |

### 2.1.2 Rated Input and Output: Input voltage of 200V class (30~75kW)

| Type: SV □□□ iS7-2 □         |                                     | 0300                                                                                     | 0370 | 0450 | 0550 | 0750 | -   | - | - | - | - |
|------------------------------|-------------------------------------|------------------------------------------------------------------------------------------|------|------|------|------|-----|---|---|---|---|
| Motor Applied <sup>*1)</sup> | [HP]                                | 40                                                                                       | 50   | 60   | 75   | 100  | -   | - | - | - | - |
|                              | [kW]                                | 30                                                                                       | 37   | 45   | 55   | 75   | -   | - | - | - | - |
| Rated Output                 | Rated Capacity [kVA] <sup>*2)</sup> | 46                                                                                       | 57   | 69   | 84   | 116  | -   | - | - | - | - |
|                              | Rated Current [A] <sup>*3)</sup>    | CT                                                                                       | 116  | 146  | 180  | 220  | 288 | - | - | - | - |
|                              |                                     | VT                                                                                       | 146  | 180  | 220  | 288  | 345 | - | - | - | - |
|                              | Output Frequency [Hz]               | 0 ~ 400 [Hz] <sup>*4)</sup> (Sensorless -1: 0 ~ 300Hz, Sensorless -2, Vector. 0 ~ 120Hz) |      |      |      |      |     |   |   |   |   |
|                              | Output Voltage [V]                  | 3-phase 200 ~ 230V <sup>*5)</sup>                                                        |      |      |      |      |     |   |   |   |   |
| Rated Input                  | Available Voltage [V]               | 3-phase 200 ~ 230 VAC (-15% ~ +10%)                                                      |      |      |      |      |     |   |   |   |   |
|                              | Input Frequency                     | 50 ~ 60 [Hz] (±5%)                                                                       |      |      |      |      |     |   |   |   |   |
|                              | Rated Current [A]                   | CT                                                                                       | 121  | 154  | 191  | 233  | 305 | - | - | - | - |
|                              |                                     | VT                                                                                       | 152  | 190  | 231  | 302  | 362 | - | - | - | - |

※ Non DCR products are provided warranty service when used in CT (Heavy duty) load rating only.

### Rated Input and Output: Input voltage of 400V class (0.75~22kW)

| Type: SV □□□ iS7-4 □         |                                     | 0008                                | 0015 | 0022 | 0037 | 0055 | 0075 | 0110 | 0150 | 0185  | 0220 |
|------------------------------|-------------------------------------|-------------------------------------|------|------|------|------|------|------|------|-------|------|
| Motor Applied <sup>*1)</sup> | [HP]                                | 1                                   | 2    | 3    | 5    | 7.5  | 10   | 15   | 20   | 25    | 30   |
|                              | [kW]                                | 0.75                                | 1.5  | 2.2  | 3.7  | 5.5  | 7.5  | 11   | 15   | 18.5  | 22   |
| Rated Output                 | Rated Capacity [kVA] <sup>*2)</sup> | 1.9                                 | 3.0  | 4.5  | 6.1  | 9.1  | 12.2 | 18.3 | 22.9 | 29.7  | 34.3 |
|                              | Rated Current [A] <sup>*3)</sup>    | CT                                  | 2.5  | 4    | 6    | 8    | 12   | 16   | 24   | 30    | 39   |
|                              |                                     | VT                                  | 4    | 6    | 8    | 12   | 16   | 24   | 30   | 39    | 45   |
|                              | Output Frequency [Hz]               | 0 ~ 400 [Hz] <sup>*4)</sup>         |      |      |      |      |      |      |      |       |      |
|                              | Output Voltage [V]                  | 3-phase 380 ~ 480V <sup>*5)</sup>   |      |      |      |      |      |      |      |       |      |
| Rated Input                  | Available Voltage [V]               | 3-phase 380 ~ 480 VAC (-15% ~ +10%) |      |      |      |      |      |      |      |       |      |
|                              | Frequency                           | 50 ~ 60 [Hz] (±5%)                  |      |      |      |      |      |      |      |       |      |
|                              | Rated Current [A]                   | CT                                  | 4.3  | 7.2  | 10.6 | 15.4 | 21   | 25.8 | 38.7 | 43.85 | 57.4 |
|                              |                                     | VT                                  | 3.5  | 5.3  | 7.3  | 10.8 | 13.8 | 22.5 | 26.1 | 33.2  | 40   |

<sup>\*1)</sup> Motor Applied indicates the maximum capacity of a standard 4 pole OTIS-LG motor.

<sup>\*2)</sup> Rated Capacity: the input capacity of a 200V class is based on 220V and that of a 400V class is based on 440V. The current rating is based on CT current.

<sup>\*3)</sup> The output of rated current is limited according to the setting of the carrier frequency (CON-04).

<sup>\*4)</sup> You can set the frequency at up to 300Hz by selecting 3, 4 Sensorless-1, Sensorless-2 as the control mode (DRV-09 Control Mode).

<sup>\*5)</sup> The maximum output voltage does not go over the supplied power voltage. You can select the output voltage as you want below the supplied power voltage.



## Specifications

### Rated Input and Output: Input voltage of 400V class (30~375kW)

| Type: SV □□□iS7-4 □          |                                     |      | 0300                                                                                   | 0370 | 0450 | 0550 | 0750 | 0900 | 1100 | 1320 | 1600 | 1850 | 2200 | 2850 | 3150 | 3750 |
|------------------------------|-------------------------------------|------|----------------------------------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Motor Applied <sup>*1)</sup> |                                     | [HP] | 40                                                                                     | 50   | 60   | 75   | 100  | 120  | 150  | 180  | 225  | 250  | 300  | 375  | 420  | 500  |
|                              |                                     | [kW] | 30                                                                                     | 37   | 45   | 55   | 75   | 90   | 110  | 132  | 160  | 185  | 220  | 285  | 315  | 375  |
| Rated Output                 | Rated Capacity [kVA] <sup>*2)</sup> |      | 46                                                                                     | 57   | 69   | 84   | 116  | 139  | 170  | 201  | 248  | 286  | 329  | 416  | 467  | 557  |
|                              | Rated Current [A] <sup>*3)</sup>    | CT   | 61                                                                                     | 75   | 91   | 110  | 152  | 183  | 223  | 264  | 325  | 370  | 432  | 547  | 613  | 731  |
|                              |                                     | VT   | 75                                                                                     | 91   | 110  | 152  | 183  | 223  | 264  | 325  | 370  | 432  | 547  | 613  | 731  | 877  |
|                              | Output Frequency [Hz]               |      | 0 ~ 400 [Hz] (Sensorless-1: 0 ~ 300Hz, Sensorless-2, Vector: 0 ~ 120Hz) <sup>*4)</sup> |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                              | Output Voltage [V]                  |      | 3-phase 380 ~ 480V <sup>*5)</sup>                                                      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Rated Input                  | Available Voltage [V]               |      | 3-phase 380 ~ 480 VAC (-15% ~ +10%)                                                    |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                              | Frequency [Hz]                      |      | 50 ~ 60 [Hz] (±5%)                                                                     |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                              | Rated Current [A]                   | CT   | 57                                                                                     | 69   | 83   | 113  | 154  | 195  | 239  | 286  | 362  | 404  | 466  | 605  | 674  | 798  |
|                              |                                     | VT   | 90                                                                                     | 109  | 123  | 162  | 195  | 237  | 282  | 350  | 403  | 463  | 590  | 673  | 796  | 948  |

<sup>\*1)</sup> Motor Applied indicates the maximum capacity of a standard 4 pole OTIS-LG motor.

<sup>\*2)</sup> Rated Capacity: the input capacity of a 200V class is based on 220V and that of a 400V class is based on 440V. The current rating is based on CT current.

<sup>\*3)</sup> The output of rated current is limited according to the setting of the carrier frequency (CON-04).

<sup>\*4)</sup> You can set the frequency at up to 300Hz by selecting 3, 4 Sensorless-1, Sensorless-2 as the control mode (DRV-09 Control Mode).

<sup>\*5)</sup> The maximum output voltage does not go over the supplied power voltage. You can select the output voltage as you want below the supplied power voltage.

### Control

|                              |                                                                                                                      |
|------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Control Method               | V/F control, V/F PG, slip compensation, sensorless vector control, vector control                                    |
| Frequency Setting Resolution | Digital command: 0.01Hz<br>Analog command: 0.06Hz (maximum frequency: 60Hz)                                          |
| Frequency Tolerance          | Digital command operation: 0.01% of the maximum frequency<br>Analog command operation: 0.1% of the maximum frequency |
| V/F Pattern                  | Linear, double reduction, user V/F                                                                                   |
| Overload Capacity            | CT current rating :150% for 1 minute, 200% for 22 seconds, VT current rating :110% for 1 minute                      |
| Torque Boost                 | Manual torque boost, automatic torque boost                                                                          |

## Specifications

### Specifications

|                    |                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                  |
|--------------------|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Operating Method   |                                                                  | Selectable among keypad/terminal block/communication operation                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                  |
| Frequency Setting  |                                                                  | Analog: 0 ~ 10[V], -10 ~ 10[V], 0 ~ 20[mA]<br>Digital: keypad                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                  |
| Operating Function |                                                                  | PID control, up-down operation, 3-wire operation, DC brake, frequency limit, frequency jump, second function, slip compensation, reverse rotation prevention, auto restart, inverter by-pass, auto tune flying start, energy buffering, power braking, flux braking, leakage current reduction, MMC, easy start                                                                                                                                                                                                  |                                                  |
| Input              | Multi-function terminal<br>(8 points)<br>P1 ~ P81 <sup>*1)</sup> | NPN / PNP selectable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                  |
|                    |                                                                  | Function: forward operation; reverse operation; reset; external trip; emergency stop; jog operation; sequential frequency-high; medium and low; multi-level acceleration and deceleration-high; medium and low; D.C. control during stop; selection of a second motor; frequency increase; frequency decrease; 3-wire operation; change to general operation during PID operation; main body operation during option operation; analog command frequency fixation; acceleration and deceleration stop selectable |                                                  |
| Output             | Multi-function open collector terminal                           | Inverter fault output                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Below DC 24V 50mA                                |
|                    | Multi-function relay terminal                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Below (N.O., N.C.) AC250V 1A,<br>Below DC 30V 1A |
|                    | Analog output                                                    | 0 ~ 10 Vdc (below 10mA): selectable from frequency, current, voltage, direct current voltage                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                  |

<sup>\*1)</sup> The Functions for Multi-function terminal available according to IN-65~72 parameter setting of IN Group.

### Protective Functions

|                                           |                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Trip                                      | Over voltage, low voltage, over current, over current detection, inverter overheat, motor thermal protection, phase loss protection, overload protection, communication error, frequency command loss, hardware failure, cooling fan failure, pre-PID failure, no motor trip, external brake trip. etc |
| Alarm                                     | Stall prevention, overload, diminished load, encoder error, fan failure, keypad command loss, speed command loss.                                                                                                                                                                                      |
| Instantaneous Interruption <sup>*2)</sup> | Below CT class 15 msec (VT class 8 msec): operation continues<br>(within rated input voltage, rated output)<br>Over CT class 15 msec (VT class 8 msec): automatic restart                                                                                                                              |

<sup>\*2)</sup> Operation at the CT (Heavy Duty) current rating

### Structure and Use Environment

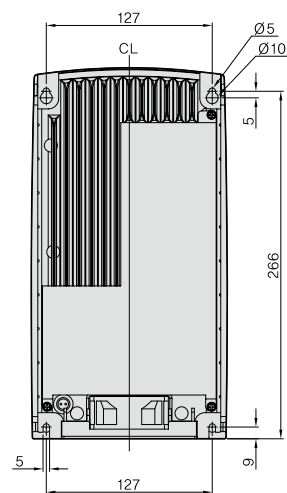
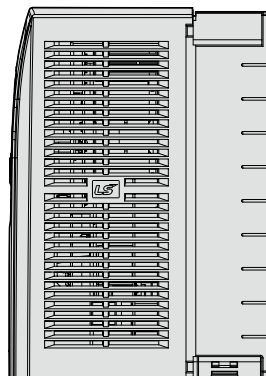
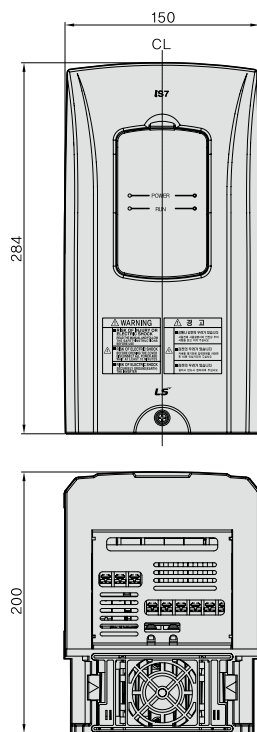
|                          |                                                                                                                                                                                                                                                                                                 |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cooling Method           | Forced air blast cooling: 0.75 ~ 15kW (200/400V class), 22kW (400V class)<br>Inhalation cooling: 22 ~ 75kW (200V class), 30 ~ 160kW (400V class)                                                                                                                                                |
| Protection Structure     | Below 75kW: Open Type(IP21), UL enclosed type 1(Option) <sup>*3)</sup><br>30 ~ 75kW 200V, Above 90kW: Open type(IP00)<br>The others (Below 22kW): Enclosed IP54 type, UL enclosed type 12                                                                                                       |
| Surrounding Temperature  | CT (Heavy Duty) load: -10 ~ 50°C, (14 ~ 122°F) without ice or frost<br>VT (Normal Duty) load: -10~ 40°C (14 ~ 122°F) without ice or frost<br>(It is recommended that you use less than 80% load when you use VT load at 50°C (122°F))<br>IP54 product: -10~40°C (14~122°F) without ice or frost |
| Preservation Temperature | -20 ~ 65°C (-4 ~ 149°F)                                                                                                                                                                                                                                                                         |
| Surrounding Humidity     | Below 90% RH of relative humidity (with no dew formation)                                                                                                                                                                                                                                       |
| Altitude, Vibration      | Below 1,000m (3280 ft), below 5.9m/sec 2 (19.36 ft/sec 2, 0.6G)                                                                                                                                                                                                                                 |
| Environment              | There should be no corrosive gas, flammable gas, oil mist or dust.<br>Pollution Degree 2 Environment                                                                                                                                                                                            |

<sup>\*3)</sup> UL Enclosed type 1 with conduit box installed



## Dimensions

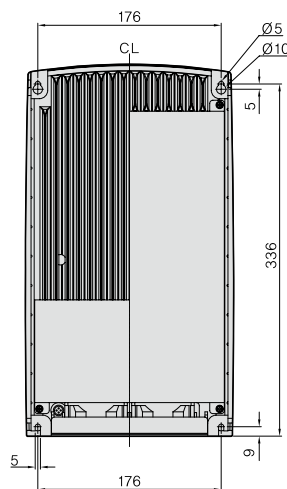
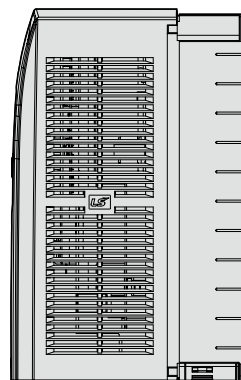
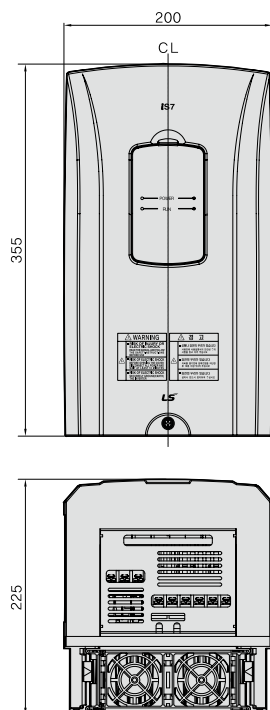
### SV0008 ~ 0037iS7 (200V/400V)



| Applied inverters | W (mm) | H (mm) | D (mm) | W (kg) |
|-------------------|--------|--------|--------|--------|
| SV0008iS7-2/4     | 150    | 284    | 200    | 5.5    |
| SV0015iS7-2/4     |        |        |        |        |
| SV0022iS7-2/4     |        |        |        |        |
| SV0037iS7-2/4     |        |        |        |        |

\* The weight above represents the total weight including EMC filter and DCL.

### SV0055 ~ 0075iS7 (200V/400V)

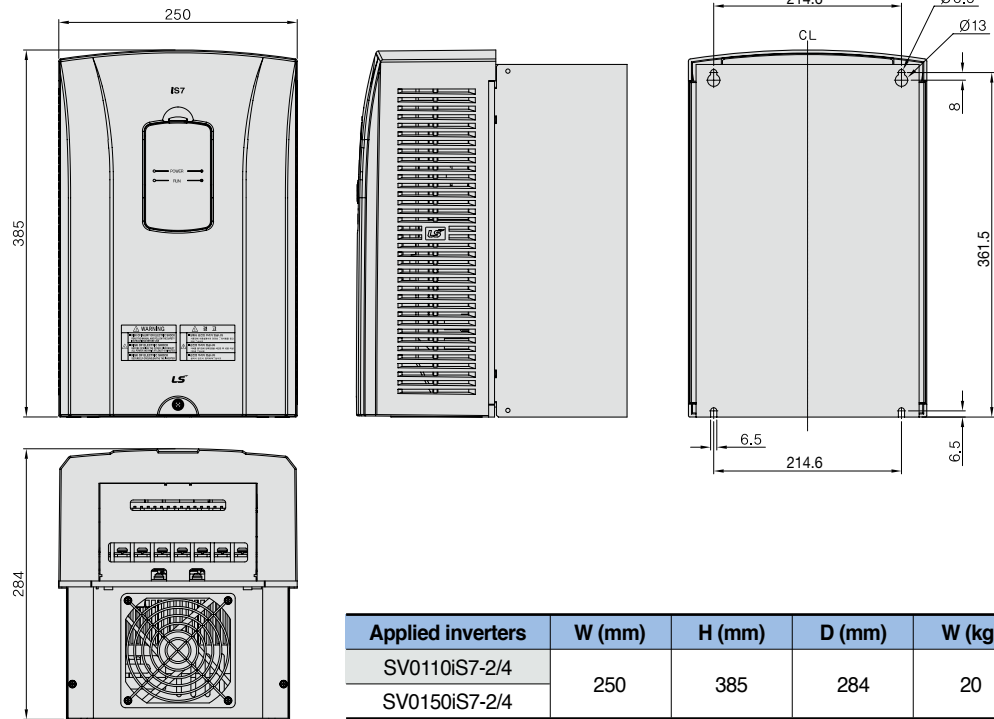


| Applied inverters | W (mm) | H (mm) | D (mm) | W (kg) |
|-------------------|--------|--------|--------|--------|
| SV0055iS7-2/4     | 200    | 355    | 225    | 10     |
| SV0075iS7-2/4     |        |        |        |        |

\* The weight above represents the total weight including EMC filter and DCL.

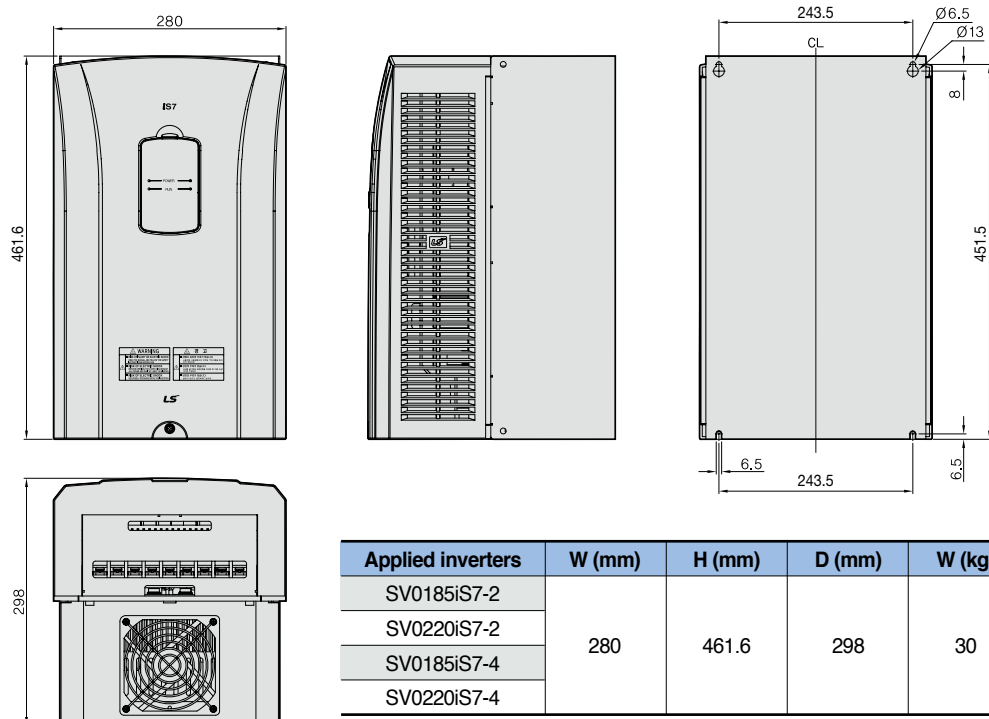
## Dimensions

### SV0110 ~ 0150iS7 (200V/400V)



\* The weight above represents the total weight including EMC filter and DCL.

### SV0185 ~ 0220iS7 (200V/400V)

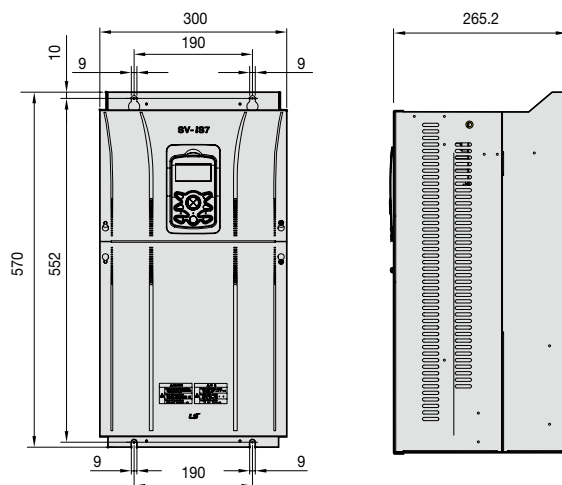


\* The weight above represents the total weight including EMC filter and DCL.

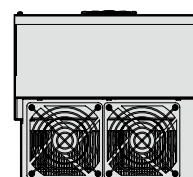
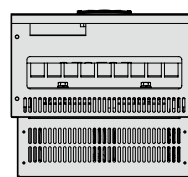


## Dimensions

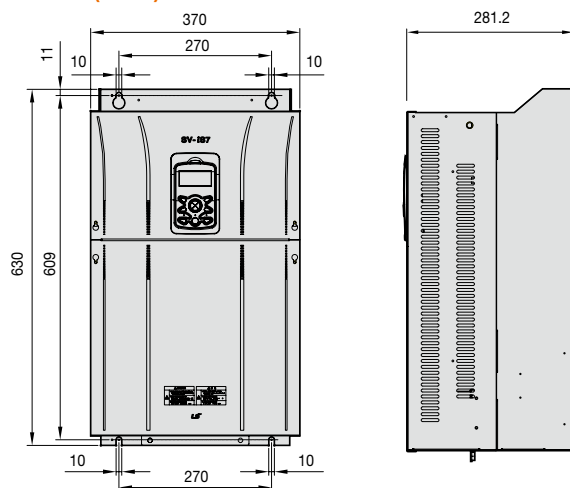
### SV0300iS7 (200V)



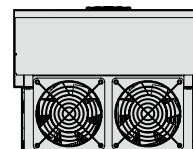
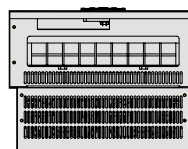
| Applied inverters | W (mm) | H (mm) | D (mm) | W (kg) |
|-------------------|--------|--------|--------|--------|
| SV0300iS7-2       | 300    | 570    | 265.2  | 29.5   |



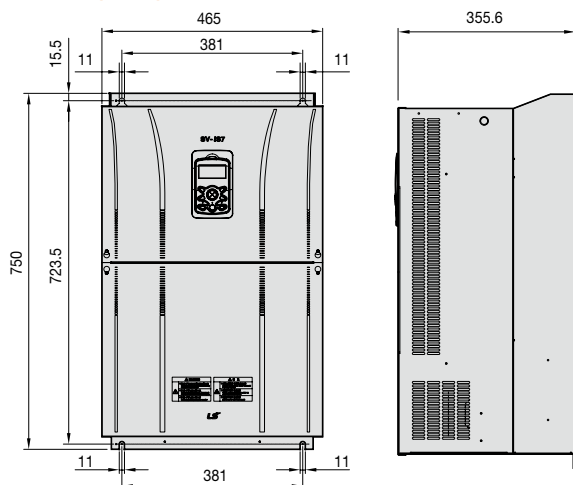
### SV0370 ~ 0450iS7 (200V)



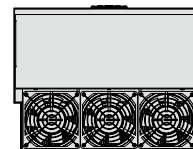
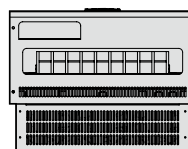
| Applied inverters | W (mm) | H (mm) | D (mm) | W (kg) |
|-------------------|--------|--------|--------|--------|
| SV0370iS7-2       | 370    | 630    | 281.2  | 44     |
| SV0450iS7-2       |        |        |        |        |



### SV0550 ~ 0750iS7 (200V)

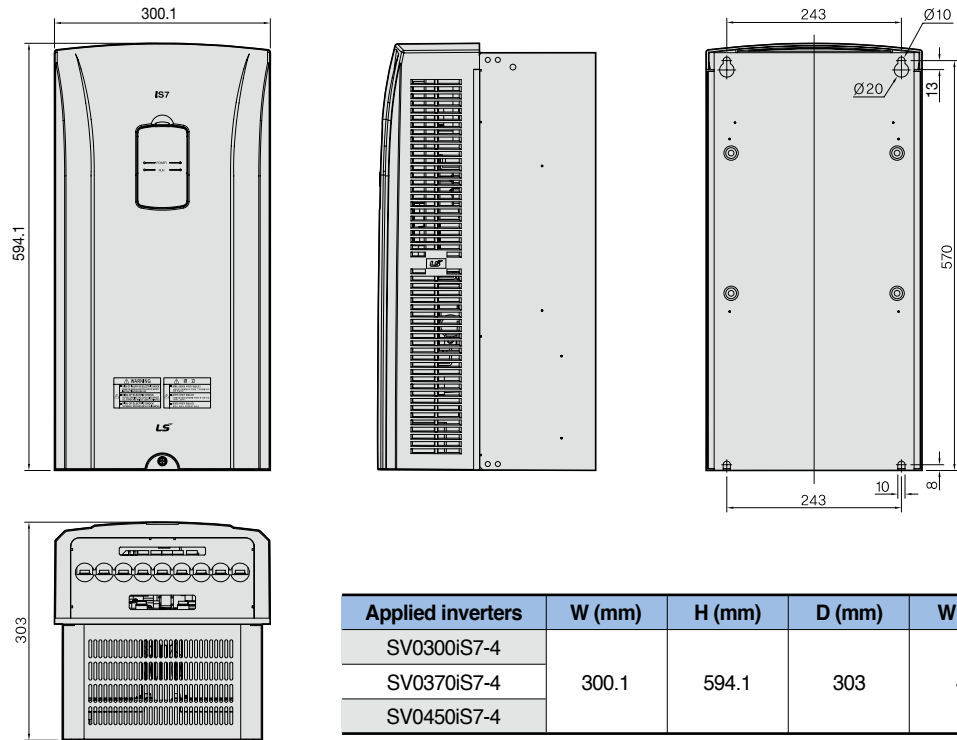


| Applied inverters | W (mm) | H (mm) | D (mm) | W (kg) |
|-------------------|--------|--------|--------|--------|
| SV0550iS7-2       | 465    | 750    | 355.6  | 72.5   |
| SV0750iS7-2       |        |        |        |        |

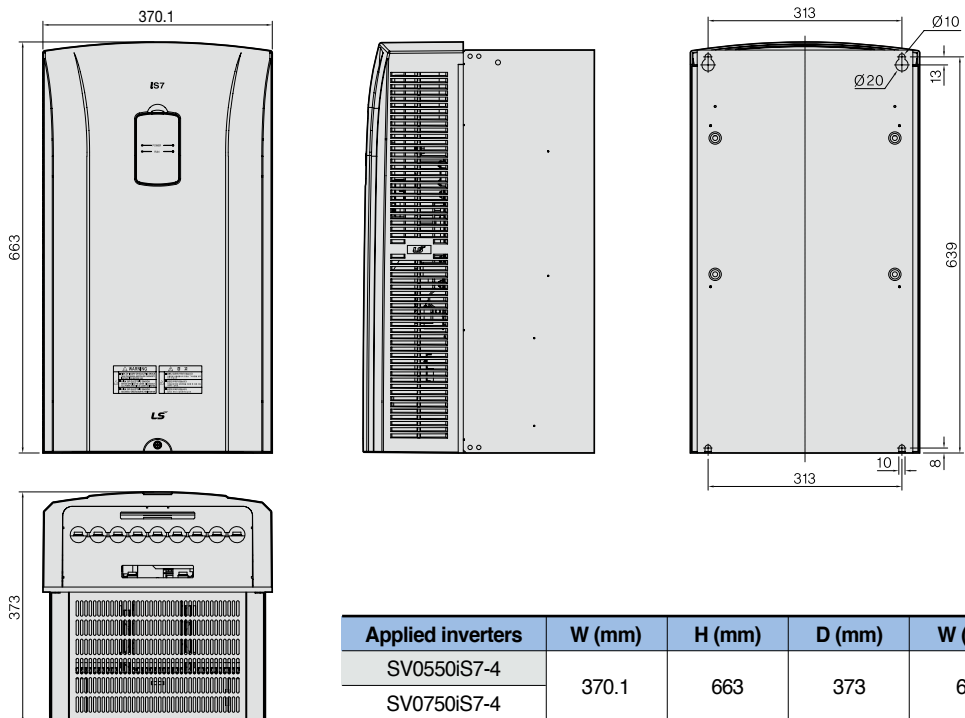


## Dimensions

### SV0300 ~ 0450iS7 (400V)



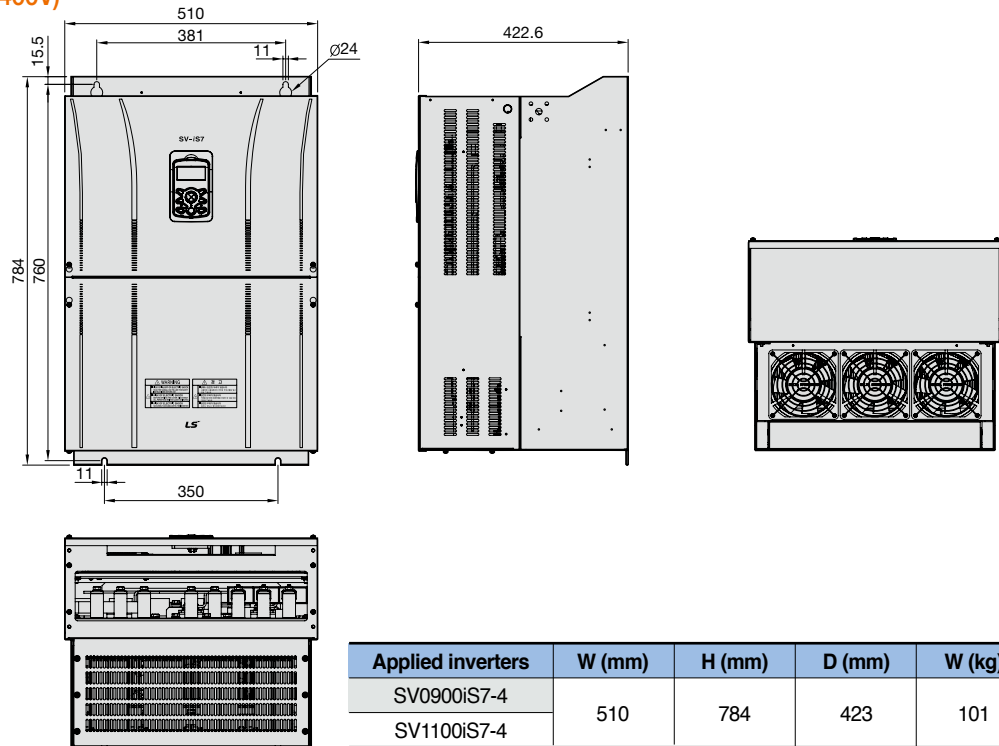
### SV0550 ~ 0750iS7 (400V)



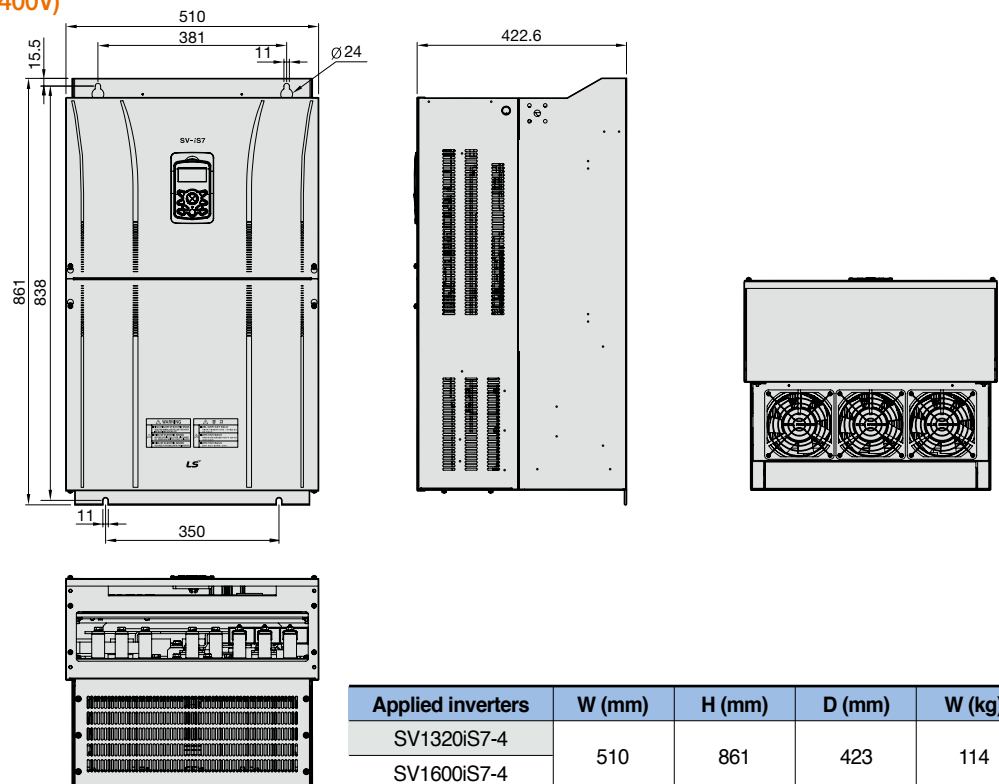


## Dimensions

### SV0900 ~ 1100iS7 (400V)

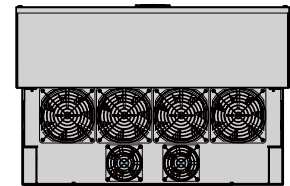
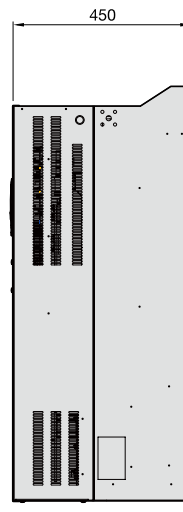
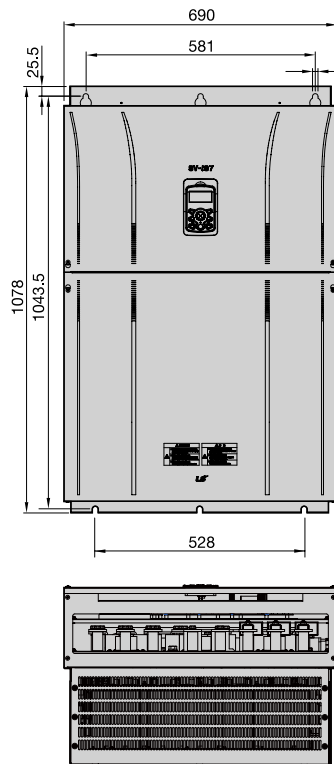


### SV1320 ~ 1600iS7 (400V)



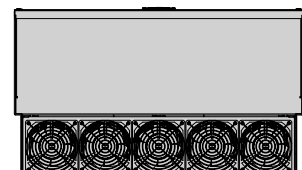
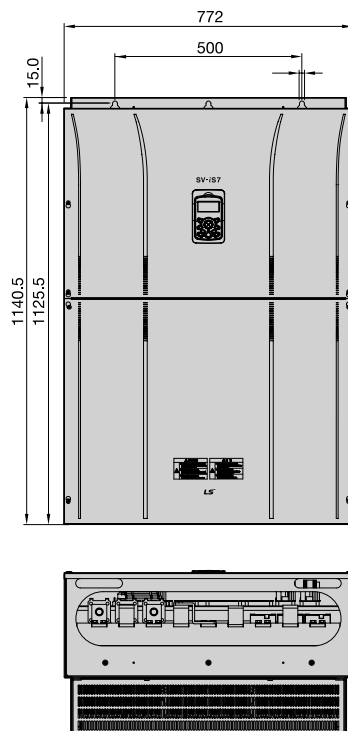
## Dimensions

### SV1850 ~ SV2200iS7 (400V)



| Applied inverters | W (mm) | H (mm) | D (mm) | W (kg) |
|-------------------|--------|--------|--------|--------|
| SV1850iS7-4       | 690    | 1078   | 450    | 200    |
| SV2200iS7-4       |        |        |        |        |

### SV2800iS7 (400V)

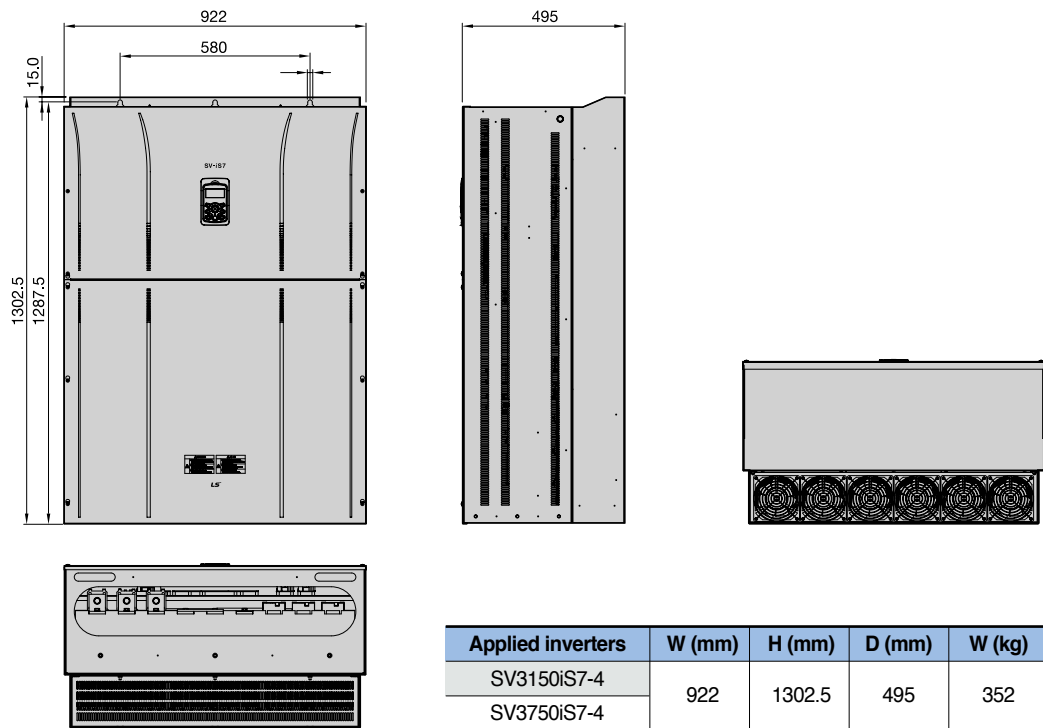


| Applied inverters | W (mm) | H (mm) | D (mm) | W (kg) |
|-------------------|--------|--------|--------|--------|
| SV2800iS7-4       | 771    | 1138   | 440    | 252    |



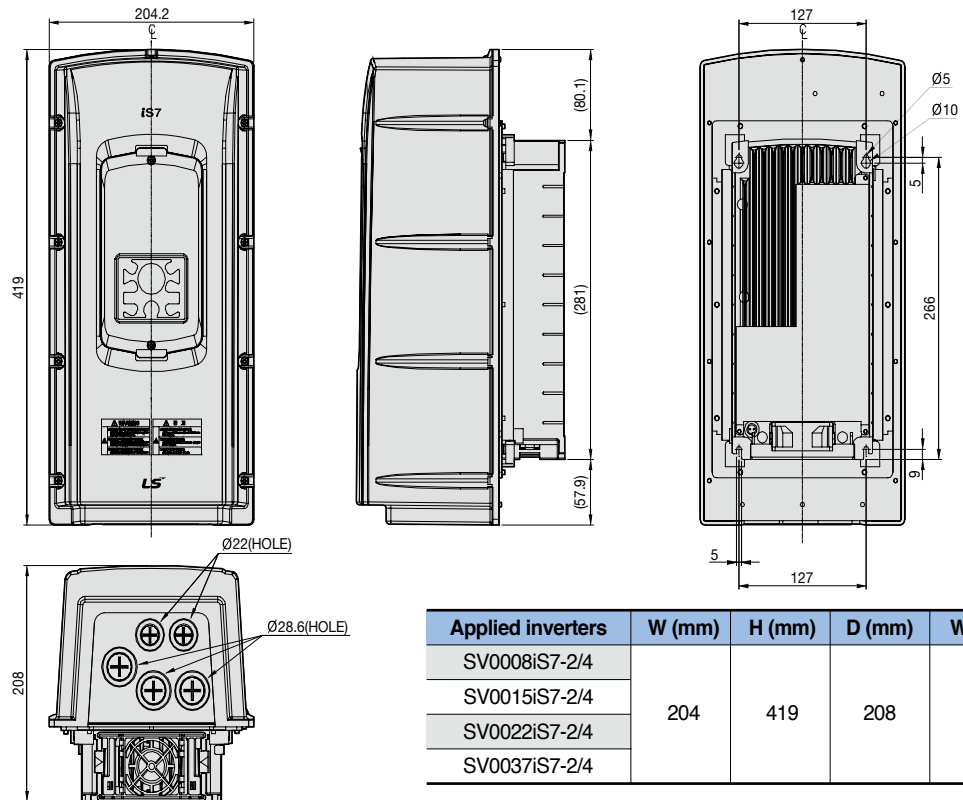
## Dimensions

### SV3150 ~ 3750iS7 (400V)

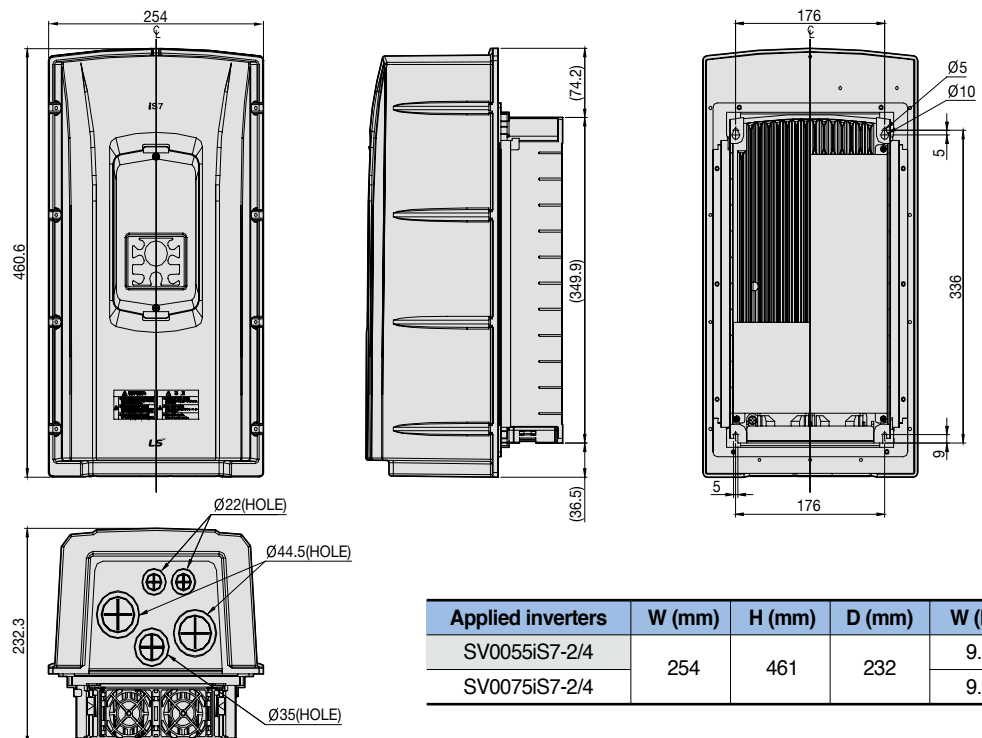


## Dimensions (IP54)

### SV0008 ~ 0037iS7 (200V/400V)



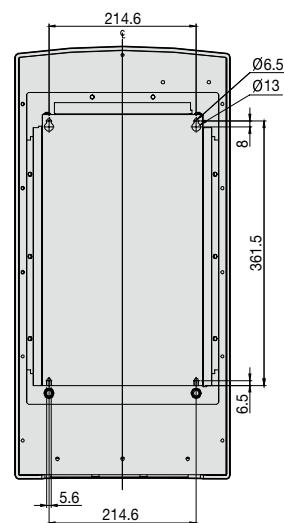
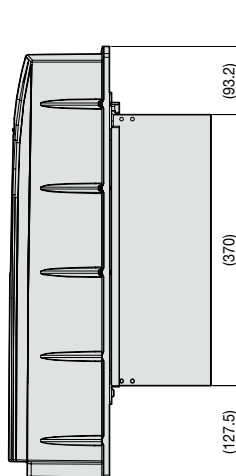
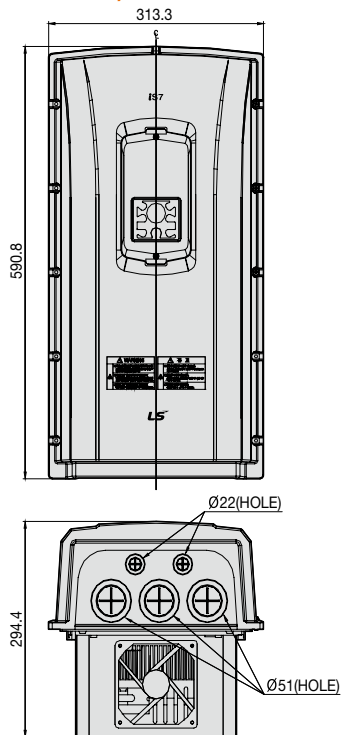
### SV0055 ~ 0075iS7 (200V/400V)





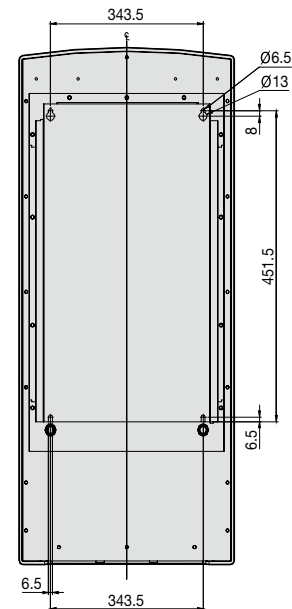
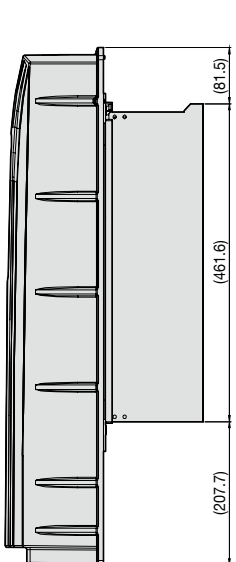
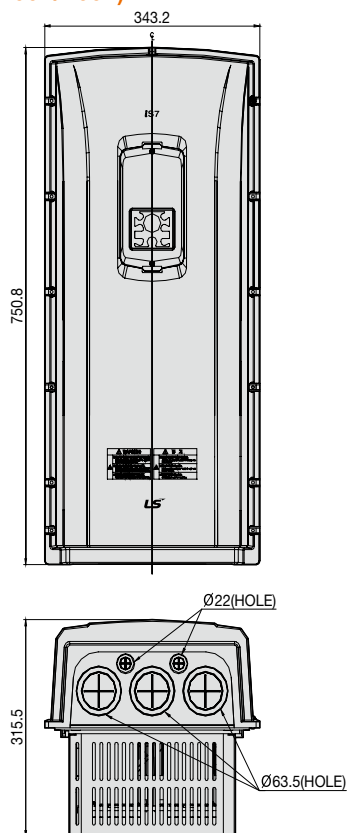
## Dimensions (IP54)

### SV0110 ~ 0150iS7 (200V/400V)



| Applied inverters | W (mm) | H (mm) | D (mm) | W (kg) |
|-------------------|--------|--------|--------|--------|
| SV0110iS7-2/4     | 313    | 591    | 294    | 19.6   |
| SV0150iS7-2/4     |        |        |        | 19.9   |

### SV0185 ~ 0220iS7 (200V/400V)



| Applied inverters | W (mm) | H (mm) | D (mm) | W (kg) |
|-------------------|--------|--------|--------|--------|
| SV0185iS7-2       | 343    | 571    | 316    | 29.9   |
| SV0220iS7-2       |        |        |        | 27.1   |
| SV0185iS7-4       |        |        |        |        |
| SV0220iS7-4       |        |        |        | 27.1   |

**Memo**

## Green Innovators of Innovation



### Safety Instructions

- For your safety, please read user's manual thoroughly before operating.
- Contact the nearest authorized service facility for examination, repair, or adjustment.
- Please contact a qualified service technician when you need maintenance.  
Do not disassemble or repair by yourself!
- Any maintenance and inspection shall be performed by the personnel having expertise concerned.

## LSIS Co., Ltd.

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Specifications in this catalog are subject to change without notice due to continuous product development and improvement.