

HITACHI VARIABLE FREQUENCY DRIVES



SJ700 series
High performance with
Many useful Functions
and User Friendly



SJ300 series
Full Feature Performance
for Applications Requiring
High Starting Torque and
Functional Versatility



SJ200 series
The Compact Inverter
with High-Torque and
User-friendliness









L300P series
Enhanced Energy-saving Function
for General Applications



X200 series
Simple, Trip-less and
Environment-friendly
Compact Inverter

Hitachi Has Developed Intelligent and Sophisticated Variable Frequency Drives to Meet Various Requirements from a Wide Range of Demanding Applications!

Specifications

| Series | | X200 | SJ700 | SJ200 | | SJ300 | L300P | L100 |
|------------------------------------|-----------------------------------|---|--|--|--------------------------------|--|--|---|
| Appearance | |  |  |  | |  |  |  |
| Power Source | Rated input voltage | 1-phase | 200–240V +10%/–15%, 50/60Hz +/-5% | — | 200–240V +/-10%, 50/60Hz +/-5% | — | — | 100–115V +/-10%, 50/60Hz +/-5% |
| | | 3-phase (200V) | 200–240V +10%/–15%, 50/60Hz +/-5% | 200–240V +10%/–15%, 50/60Hz +/-5% | 200–240V +/-10%, 50/60Hz +/-5% | 200–240V +/-10%, 50/60Hz +/-5% | 200–240V +/-10%, 50/60Hz +/-5% | — |
| | | 3-phase (400V) | 380–480V +10%/–15%, 50/60Hz +/-5% | 380–480V +10%/–15%, 50/60Hz +/-5% | 380–480V +/-10%, 50/60Hz +/-5% | 380–480V +/-10%, 50/60Hz +/-5% | 380–480V +/-10%, 50/60Hz +/-5% | 380–480V +/-10%, 50/60Hz +/-5% |
| Applicable motor | | 0.2–7.5kW | 0.4–400kW | 0.2–7.5kW | | 0.4–150kW | 11–132kW | 0.2–0.75kW |
| Output frequency range | | 0.5–400Hz | 0.1–400Hz | 0.5–400Hz | | 0.1–400Hz | 0.1–400Hz | 0.5–360Hz |
| Starting torque | | 100% or greater (Torque boost mode) | 200 (180)*1, or greater(at 0.3Hz) 150 (130)*1 at around 0Hz | 200% or greater(at 1Hz) (3.7kW and above : 180% or greater) | | 200(180)*1%, or greater(at 0.5Hz) 150(130)*1% at around 0Hz | 100% or greater (Torque boost mode) | 100% or greater (Torque boost mode) |
| Braking torque | Dynamic brake(capacitor feedback) | 20–50% | 10–20% | 20–50% | | 10–20% | 10–20% | 20–100% |
| | DC brake | Variable operating frequency, time, and braking force | Variable operating frequency, time, and braking force | Variable operating frequency, time, and braking force | | Variable operating frequency, time, and braking force | Variable operating frequency, time, and braking force | Variable operating frequency, time, and braking force |
| Overload capacity | | 150%, 60sec. | 150%, 60sec., 200,3sec. | 150%, 60sec. | | 150%,60sec., 200(180)*1%,0.5sec. | 120%, 60sec., 150%, 0.5sec. | 150%, 60sec. |
| Acceleration/deceleration time | | 0.01–3,000sec. | 0.01–3,600sec. | 0.01–3,000sec. | | 0.01–3,600sec. | 0.01–3,600sec. | 0.1–3,000sec. |
| Multispeed operation | | Max. 16-stage | Max. 16-stage (Bit command also available) | Max. 16-stage | | Max. 16-stage (Bit command also available) | Max. 16-stage (Bit command also available) | Max. 16-stage |
| Analog input for frequency control | | 0–10VDC, 4–20mA | 0–10VDC, 4–20mA –10 to +10VDC | 0–10VDC, 4–20mA | | 0–10VDC, 4–20mA –10 to +10VDC | 0–10VDC, 4–20mA –10 to +10VDC | 0–10VDC, 4–20mA |
| Protective functions | | Over-current, over-voltage, under-voltage, overload, overheat, ground fault at power-on, input over-voltage, external trip, EEPROM error, CPU error, USP error, Termister error, Driver error, Emergency stop | Overcurrent protection, overvoltage protection, undervoltage protection, electronic thermal protection, temperature error protection, instantaneous power failure protection, phase loss input protection, braking-resistor overload protection, ground-fault current detection at power-on, USP error, external trip, emergency stop trip, CT error, communication error, option board error | Over current protection, overload protection, braking resistor overload, over voltage protection, EEPROM error, under-voltage error, CPU error, external trip, USP, ground fault, input over-voltage protection, inverter thermal trip, gate array error and thermistor | | Over-current protection, overload protection, braking resistor overload protection, over-voltage protection, EEPROM error, under-voltage error, CT(Current transformer) error, CPU error, external trip, USP error,ground fault, input over-voltage protection, instantaneous power failure, expansion card 1 error, expansion card 2 error, inverter thermal trip, phase failure detection, IGBT error, themistor error | Over-current protection, overload protection, braking resistor overload protection, over-voltage protection, EEPROM error, under-voltage error, CT(Current transformer)error, CPU error, external trip, USP error, ground fault, input over-voltage protection, instantaneous power failure, option 1 connection error, option 2 connection error, inverter thermal trip, phase failure detection, IGBT error, themistor error | Over-current protection, over-voltage protection, under-voltage protection, overload protection, temperature error,CPU error, EEPROM error, ground fault, external trip, input over-voltage protection, USP error, PTC error |
| Other functions | | AVR(Automatic Voltage Regulation), V/f characteristic selection, accel./decel. curve selection, frequency upper/lower limit, 16 stage multispeed, PID control, frequency jump, external frequency input bias start/end, jogging, cooling fan On/Off, trip history | Free V/f setting(7 breakpoints), frequency upper/lower limit, jump(center) frequency, acceleration/deceleration according to characteristic curve, manual torque boost level/breakpoint, energy-saving operation, analog meter adjustment, start frequency setting, carrier frequency adjustment, electronic thermal function(available also for free setting), external start/end frequency/frequency rate, analog input selection, retry after trip, restart after instantaneous power failure, output of various signals, starting with reduced voltage, overload restriction, initial-value setting, automatic deceleration at power failure, AVR function, fuzzy acceleration/deceleration, online/offline auto-tuning, high-torque multi-motor operation (sensorless vector control of two motors by one inverter) | AVR function, V/f characteristic selection, accel./decel curve selection, frequency upper/lower limit, PID control, frequency jump, accel./decel. curve selection, external frequency input bias start/end, jogging, retry after trip, restart after instantaneous power failure, various signal outputs, overload restriction, automatic torque boost, cooling fan On/Off, trip history | | V/f free-setting(up to 7 points), frequency upper/lower limit, frequency jump, accel./decel. curve selection, manual torque boost value and frequency adjustment, analog meter tuning, start frequency, carrier frequency, electronic thermal protection level, external frequency output zero/span reference, external frequency input bias start/end, analog input selection, retry after trip, restart after instantaneous power failure, various signal outputs, reduced voltage soft start, overload restriction, default value setting, deceleration and stop after power failure, AVR function, fuzzy accel./decel., auto tuning(on-line/off-line), high-torque multi-operation | V/f free-setting(up to 7 points), frequency upper/lower limit, frequency jump, accel./decel. curve selection, manual torque boost value and frequency adjustment, analog meter tuning, starting frequency, carrier frequency, electronic thermal protection level, external frequency output zero/span reference, external frequency input bias start/end, analog input selection, retry after trip, reduced voltage soft start, overload restriction, automatic energy-saving | AVR function, frequency upper/lower limit, PID control, carrier frequency change, frequency jump, electronic thermal level adjustment, fine adjustment of start frequency, gain/bias setting, retry, automatic torque boost, trip history |
| Environmental conditions | Ambient operating temperature | –10 to 50 degrees C*2 | –10 to 50 degrees C*2 | –10 to 50 degrees C*2 | | –10 to 50 degrees C*2 | –10 to 40 degrees C*2 | –10 to 50 degrees C*2 |
| | Humidity | 20 to 90%RH(No condensation) | 20 to 90%RH(No condensation) | 20 to 90%RH(No condensation) | | 20 to 90%RH(No condensation) | 20 to 90%RH(No condensation) | 20 to 90%RH(No condensation) |
| | Location | Less than 1,000m of altitude, indoors (no corrosive gas nor dust) | Less than 1,000m of altitude, indoors (no corrosive gas nor dust) | Less than 1,000m of altitude, indoors (no corrosive gas nor dust) | | Less than 1,000m of altitude, indoors (no corrosive gas nor dust) | Less than 1,000m of altitude, indoors (no corrosive gas nor dust) | Less than 1,000m of altitude, indoors (no corrosive gas nor dust) |

*1 : 75kW and over

*2 : See derating data and carrier frequency adjustment in instruction manual when ambient operating temperature is 40 degrees C or over.

Product Range

| Model | kW (HP) | 0.2 (1/4) | 0.4 (1/2) | 0.55 (3/4) | 0.75 (1) | 1.1 (1.5) | 1.5 (2) | 2.2 (3) | 3 (4) | 3.7 (5) | 4 (5) | 5.5 (7.5) | 7.5 (10) | 11 (15) | 15 (20) | 18.5 (25) | 22 (30) | 30 (40) | 37 (50) | 45 (60) | 55 (75) | 75 (100) | 90 (125) | 110 (150) | 132 (175) | 150 (200) | 185 (250) | 315 (400) | 400 (500) | | |
|---------|-----------------------|-----------|-----------|------------|----------|-----------|---------|---------|--------|---------|-------|-----------|----------|---------|---------|-----------|---------|---------|---------|---------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|--|--|
| X200*1 | 1-/3-phase 200V class | | | Note 3 | Note 3 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3-phase 200V class | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3-phase 400V class | | | | | | | | Note 3 | | | | | | | | | | | | | | | | | | | | | | |
| SJ700 | 3-phase 200V class | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3-phase 400V class | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SJ200*1 | 1-/3-phase 200V class | | | Note 3 | Note 3 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3-phase 200V class | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3-phase 400V class | | | | | | | | Note 3 | | | | | | | | | | | | | | | | | | | | | | |
| SJ300 | 3-phase 200V class | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3-phase 400V class | | | | | | | | | | | | | | | | | | | | | | | | | | | Note 2 | Note 2 | | |
| L300P | 3-phase 200V class | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3-phase 400V class | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L100 | 1-phase 100V class** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

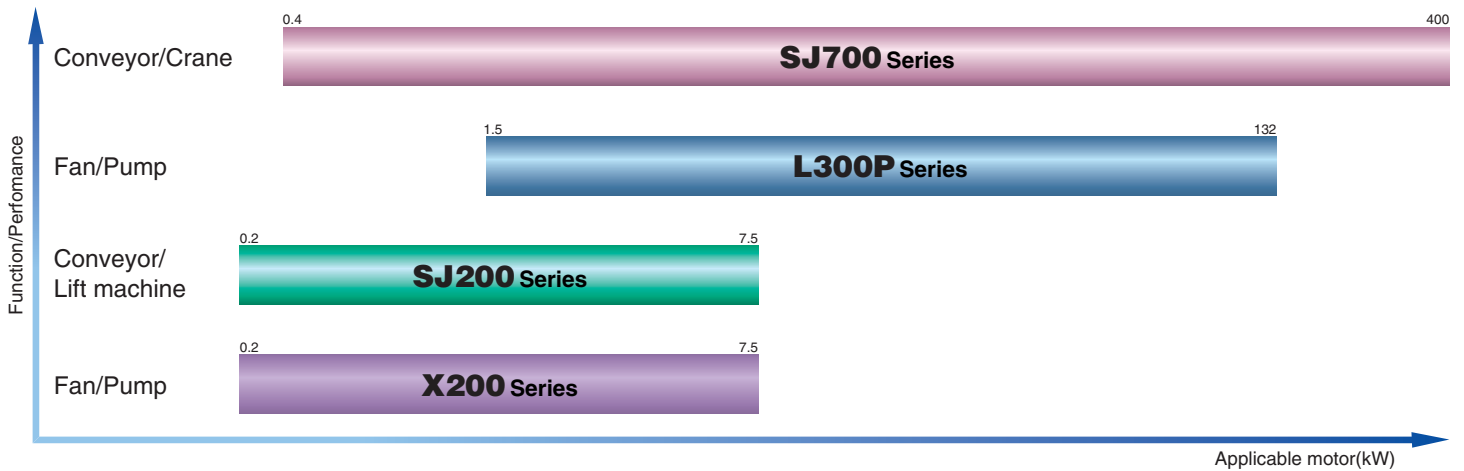
Note 1 : European version have EMC filter as standard.

Note 2 : European version does not have 150kW model.US version does not have 132kW model.

Note 3 : Available only for European version

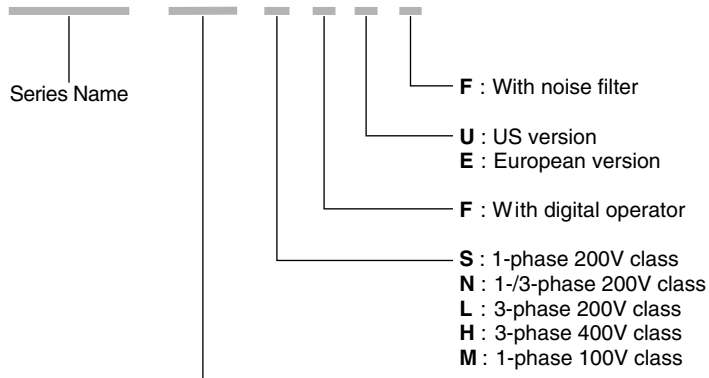
Note 4 : Available only for US version

Note 5 : DN(DeviceNet™)version available for each product range



Model Name Indication

SJ200 - 004 N F E F



Applicable Motor Capacity in kW (HP)

| | |
|------------------|------------------|
| 002 - 0.2 (1/4) | 185 - 18.5 (25) |
| 004 - 0.4 (1/2) | 220 - 22 (30) |
| 005 - 0.55 (3/4) | 300 - 30 (40) |
| 007 - 0.75 (1) | 370 - 37 (50) |
| 011 - 1.1 (1.5) | 450 - 45 (60) |
| 015 - 1.5 (2) | 550 - 55 (75) |
| 022 - 2.2 (3) | 750 - 75 (100) |
| 030 - 3 (4) | 900 - 90 (125) |
| 037 - 3.7 (5) | 1100 - 110 (150) |
| 040 - 4 (5) | 1320 - 132 (175) |
| 055 - 5.5 (7.5) | 1500 - 150 (200) |
| 075 - 7.5 (10) | 1850 - 185 (250) |
| 110 - 11 (15) | 3150 - 315 (400) |
| 150 - 15 (20) | 4000 - 400 (500) |

X200 Series

Simple, Trip-less and Environment-friendly Compact Inverter



Feature

Environment-friendly

- Cost and space reduction compared with external EMC filter (European version only).
Single-phase input : EN61800-3 cat.C1
Three-phase input : EN61800-3 cat.C2
- RoHS compliance for all models.
- Micro Surge Voltage suppress function (Patent registered).
- Standard adoption of the varnish coating of an internal PC board is carried out, and it is improvement of environment.

Useful functions of fan and pump

- Improved Trip Avoidance Function (Over-current, over-voltage).
- Automatic energy-saving function delivers "realtime" energy-saving operation for fan and pump applications.
- Improved PID control.
- Stops the motor using regenerative energy from the motor even though the power is not supplied.

Ease of Maintenance and space reduction

- Easy-removable Cooling Fan.
- Cooling fan ON/OFF control lead more long life.
- Side-by-side installation.
- Emergency Stop Function.

Global Performance

- CE, UL, c-UL and c-Tick approvals.



< CE >



< UL, c-UL >



< c-Tick >

- Logic input terminal apply sink and source logic.
- Wide Input power voltage range (Input voltage 240V for 200V class and 480V for 400V class as standard).
- RS-485 is provided as standard for Modbus® RTU serial communication. PROFIBUS®, CAN open option modules are available soon.

| X200 Series Applicable motor rating in kW (HP) | | 0.2 (1/4) | 0.4 (1/2) | 0.55 (3/4) | 0.75 (1) | 1.1 (1.5) | 1.5 (2) | 2.2 (3) | 3.0 (4) | 3.7 (5) | 4.0 (5) | 5.5 (7.5) | 7.5 (10) |
|---|------|--------------|--------------|---------------|-------------|--------------|------------|------------|------------|------------|------------|--------------|-------------|
| 1-phase 200V | SFEF | ● | ● | ● | ● | ● | ● | ● | | | | | |
| | NFU | ● | ● | ● | ● | ● | ● | ● | | | | | |
| 3-phase 200V | LFU | | | | | | | | | ● | ● | ● | ● |
| | LFRF | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 3-phase 400V | HFEF | | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● |
| | HFU | | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● |
| | HFRF | | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● |

● : Available

● LONWORKS is a registered trademark of Echelon Corporation.
● PROFIBUS is a registered trademark of Profibus Nutzer Organization.

● Modbus is a registered trademark of Modicon Inc. (Schneider Automation International).

SJ700 Series

High performance with Many useful Functions and User Friendly



Feature

High starting Torque, Powerful Drive and easy setting

- High Starting Torque 200% at 0.3Hz.
- Hitachi original 0Hz Domain sensorless vector control.
- High accuracy & Useful Auto-tuning function.
- Full Vector Control with Feedback option (Torque Control, Position Control).

Many useful Functions

- Over current & voltage suppress function.
- Inverter control by Built-in Programming function.
- EMI Filter will be installed (Category C3 up to 132kW).
- Internal Braking Circuit will be installed up to 22kW.
- Emergency Stop Function.
- Dc Bus AVR Function During Deceleration.

Long lifetime components & Ease of Maintenance

- Long lifetime components & Lifetime warning function.
- Field replacement of cooling fan(s) and Dc bus capacitor can be accomplished in a fraction of the time.
- Using Logic terminal move to SJ700 without wiring change.
- Read SJ300 Parameter by SRW remote operator and write them in to SJ700.

Easy Operation

- A display of only the parameter changed from the default is possible Data comparison function.
- Indication User setting 12 Parameters as U001-U012 User selected function.
- Basic mode Indication for common used Parameters.

Environmental Friendliness

- Micro Surge Voltage suppress function (Patent registered).
- EU RoHS compliant by restricting to use hazardous substances (except solder in power module).
- Varnish coating of internal PC board & plating of main circuit copper bus bar as standard.

Global standards

- Conformity to global standards.CE, UL, c-UL, C-Tick approvals.



- RS-485 communication port with Modbus® RTU protocol is available as standard for all models.
- Compatibility with networks such as DeviceNet™ and PROFIBUS®, with communication options.
- Logic input & output Terminal apply sink & source logic.
- Wide Input power voltage range.

SJ700 Series

Applicable motor rating in kW (HP)

| | 0.4 (1/2) | 0.75 (1) | 1.5 (2) | 2.2 (3) | 3.7 (5) | 4.0 (5) | 5.5 (7.5) | 7.5 (10) | 11 (15) | 15 (20) | 18.5 (25) | 22 (30) | 30 (40) | 37 (50) | 45 (60) | 55 (75) | 75 (100) | 90 (125) | 110 (150) | 132 (175) | 150 (200) | 185 (250) | 315 (400) | 400 (500) | |
|--------------------|--------------|-------------|------------|------------|------------|------------|--------------|-------------|------------|------------|--------------|------------|------------|------------|------------|------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---|
| 3-phase 200V LFUF2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ○ | ○ | | | | | | |
| 3-phase 400V HFEF2 | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 3-phase 400V HFUF2 | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

●: Available
○: Plan model

●DeviceNet is a trademark of Open DeviceNet Vendor Association. ●PROFIBUS is a registered trademark of Profibus Nutzer Organization.
●Modbus is a registered trademark of Modicon Inc. (Schneider Automation International).

SJ200 Series

The Compact Inverter with High-torque and User-friendliness



Feature

Powerful and Easy Operation with Cutting-Edge Technology

- High starting torque of 200% or greater at 1Hz.
- Trip suppression at acceleration and deceleration.

Ease of Installation

- Easy removable Control Circuit Terminal.
- Removable Digital Operator (Keypad).
- Easy removable Cooling fan.
- Removable Potentiometer Knob.
- Side-by-side installation.
- Frequency and run command input selection switch.

Advanced Functions Condensed in One Unit

- Pure analog output terminal (8bit 0-10VDC).
- Improved PID control.
- 16-stage multispeed operation.
- Restart after instantaneous power failure.
- Intelligent input/output terminal system.
- Fan ON/OFF selection.
- Inrush current prevention circuit.
- 3 wire start and stop function.
- Analog input disconnect defect.
- Analog setpoint calculate functions.

Simple Operation by Integrated Keypad or via an External Input

- Operation can be started just by pressing RUN key or via an external input signal.
- Motor speed can be controlled by using potentiometer or via an external input signal.
- Functions are divided into groups for quick and easy settings.

Modern Control Functions

- Logic and output timing functions provide logic operation, AND, OR and XOR for output terminals.
- Improved PID controls which include reverse PID and upper/lower limit from target value improve design and operation flexibility.

Compact Size to Save Space

- Installation area is same as our SJ100 and L100 series except 200V/1.5 to 7.5kW and 400V/3.0 to 7.5kW model (smaller than L100/SJ100), contributing to downsizing of the system.
- Potentiometer knob can be removed.

Network Compatibility

- RS-485 communication port with Modbus® RTU protocol is available as standard for all models.

Global Performance

- CE, UL, c-UL, C-Tick approvals.



- EMC filters are available as an option.
- Built in EMC filters Category C3 as standard for European version (NFEF and HFEF type).
- Net work compatibility. PROFIBUS®, CAN open option module can be used.

SJ200 Series

Applicable motor rating in kW (HP)

| | | 0.2 (1/4) | 0.4 (1/2) | 0.55 (3/4) | 0.75 (1) | 1.1 (1.5) | 1.5 (2) | 2.2 (3) | 3.0 (4) | 3.7 (5) | 4.0 (5) | 5.5 (7.5) | 7.5 (10) |
|-------------------|-------|--------------|--------------|---------------|-------------|--------------|------------|------------|------------|------------|------------|--------------|-------------|
| 1-3-phase 200V | NFEF2 | ● | ● | ● | ● | ● | ● | ● | | | | | |
| | NFU2 | ● | ● | | ● | | ● | ● | | | | | |
| 3-phase 200V | LFU2 | | | | | | | | | ● | | ● | ● |
| 3-phase 400V | HFEF2 | | ● | | ● | | ● | ● | ● | | ● | ● | ● |
| | HFU2 | | ● | | ● | | ● | ● | | | ● | ● | ● |

●: Available

• Modbus is a registered trademark of Modicon Inc. (Schneider Automation International). • PROFIBUS is a registered trademark of Profibus Nutzer Organization.

SJ300 Series

Full Feature Performance for Applications Requiring High Starting Torque and Functional Versatility



Feature

Powerful Operation with Advanced Sensorless Vector Control

- High starting torque of 200% (180%: 75kW and above) or greater at 0.5Hz.
- Rotational fluctuation at low speed has been drastically reduced to enhance process stability and precision.
- High torque of 150% (130%: 75kW and above) at 0Hz domain with a smaller motor by one frame size.
- High torque multi-motor operation.
- On-line/off-line auto-tuning.

Versatile Functions Encompass More Applications

- Intelligent input/output terminal system.
- Analog output terminals in addition to the pulse output monitor.
- Auxiliary speed input.
- Third motor constants setting.
- Fan ON/OFF selection.
- PID operation.
- Deceleration and stop at power failure.
- UP/DOWN function.
- Frequency scaling conversion.
- 3-wire function.
- P/PI control selection.

Ease of Maintenance

- Easy-removable Cooling Fan and DC Bus Capacitor.
- Removable Control Circuit Terminals.

Environmental Friendliness

- EMI Filters (Optional).
- Reduced Noise from Control Power Supply.

Ease of Operation

- Removable Digital Operator.
- Multilingual Operator with Copy Function.
- User Selection of Command Functions ("Quick Menu").
- Built-in RS-485.
- Optional PC Drive Configuration Software.

Protection for Various Installation Environments

- Standard Enclosure: IP20 (NEMA1*), IP00 (75kW and above).
- IP54 (NEMA12), please contact Hitachi sales office.

Global Performance

- CE, UL, c-UL, C-Tick approvals (EMC filters are available as an option.).



- Compatibility with networks such as DeviceNet™, PROFIBUS®, LONWORKS®, Modbus® RTU*2, and Ethernet™*3 with communication options.

Note 1 : Up to 22kW.

An optional conduit box is required for 30kW to 55kW to meet NEMA1.

Note 2, 3 : Being planned.

SJ300 Series

Applicable motor rating in kW (HP)

| | | | | | | | | | | | | | | | | | | | | |
|--------------|-------------|------------|------------|------------|------------|--------------|-------------|------------|------------|--------------|------------|------------|------------|------------|------------|-------------|-------------|--------------|--------------|--------------|
| 0.4 (1/2) | 0.75 (1) | 1.5 (2) | 2.2 (3) | 3.7 (5) | 4.0 (5) | 5.5 (7.5) | 7.5 (10) | 11 (15) | 15 (20) | 18.5 (25) | 22 (30) | 30 (40) | 37 (50) | 45 (60) | 55 (75) | 75 (100) | 90 (125) | 110 (150) | 132 (175) | 150 (200) |
|--------------|-------------|------------|------------|------------|------------|--------------|-------------|------------|------------|--------------|------------|------------|------------|------------|------------|-------------|-------------|--------------|--------------|--------------|

| | | | | | | | | | | | | | | | | | | | | | |
|--------------|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3-phase 200V | LFU | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | HFE | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 3-phase 400V | HFU | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

● : Available

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 ● LONWORKS is a registered trademark of Echelon Corporation.
 ● Ethernet is a trademark of Xerox Corporation.

● PROFIBUS is a registered trademark of Profibus Nutzer Organization.
 ● Modbus is a registered trademark of Modicon Inc. (Schneider Automation International).

L300P Series

Enhanced Energy-Saving Function for General Applications



Feature

Wide Range of Application Specific Functions for Optimal Operation

- Automatic Energy-saving Function.
- Enhanced Input/output Terminals.
- Analog Output Monitor.
- Intelligent Input/output Terminal System.
- Easy-to-use Operator Panel.

Ease of Maintenance

- Easy-removable Cooling Fan and DC Bus Capacitor.
- Removable Control Circuit Terminals.

Compact Design

- Installation area is reduced by approximately 30% from that of our previous model [Comparison of 11kW(15HP)].

User-friendly Operation

- Ease of Operation with Digital Operator.
- User Selection of Command Functions ("Quick Menu").
- Built-in RS-485.
- Optional PC Drive Configuration Software.

Environmental Friendliness

- EMI Filters (Optional).
- Reduced Noise from Control Power Supply.

Protection for Various Installation Environments

- Standard Enclosure: IP20 (NEMA1*1), IP00 (75kW and above).
- IP54 (NEMA12), please contact Hitachi sales office.

Global Performance

- CE, UL, c-UL, C-Tick approvals (EMC filters are available as an option.).



- Compatibility with networks such as DeviceNet™, PROFIBUS®, LONWORKS®, Modbus® RTU*2, and Ethernet™*3, with communication options.

Note 1 : Up to 30kW.

An optional conduit box is required for 37kW to 55kW and 200V 75kW to meet NEMA1.

Note 2, 3 : Being planned.

L300P Series

Applicable motor rating in kW (HP)

| | | 1.5 (2) | 2.2 (3) | 3.7 (5) | 4.0 (5) | 5.5 (7.5) | 7.5 (10) | 11 (15) | 15 (20) | 18.5 (25) | 22 (30) | 30 (40) | 37 (50) | 45 (60) | 55 (75) | 75 (100) | 90 (125) | 110 (150) | 132 (175) | |
|--------------|------|------------|------------|------------|------------|--------------|-------------|------------|------------|--------------|------------|------------|------------|------------|------------|-------------|-------------|--------------|--------------|---|
| 3-phase 200V | LFU2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 3-phase 400V | HFE2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | HFU2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

● : Available

● DeviceNet is a trademark of Open DeviceNet Vendor Association.
 ● LONWORKS is a registered trademark of Echelon Corporation.
 ● Ethernet is a trademark of Xerox Corporation.

● PROFIBUS is a registered trademark of Profibus Nutzer Organization.
 ● Modbus is a registered trademark of Modicon Inc. (Schneider Automation International).

Dimensions [Unit: mm(inch)] (Inches for reference only)

| | | | | | | |
|--------------|--------------------------|-----|---------------------------|---------------------------|---------------------------|-----------|
| X200- | SFEF | 002 | 004 | 005, 007 | 011-022 | - |
| | HFEF | - | - | 004 | 007-040 | 055, 075 |
| | NFU | 002 | 004 | 007 | 015,022 | - |
| | LFU | - | - | - | 037 | 055, 075 |
| | HFU | - | - | 004 | 007-040 | 055, 075 |
| Width | 80(3.15) | | 80(3.15) | 110(4.33) | 110(4.33) | 180(7.09) |
| Height | 155(6.10) | | 155(6.10) | 189(7.44) | 189(7.44) | 250(9.84) |
| Depth | 93(3.66) ⁽⁺¹⁾ | | 107(4.21) ⁽⁺¹⁾ | 128(5.04) ⁽⁺¹⁾ | 155(6.10) ⁽⁺¹⁾ | 165(6.50) |

| | | | | | | | | | | | | |
|---------------|------------|---------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|
| SJ700- | HFEF2 | 007-040 | 055-110 | 150-220 | 300 | 370-550 | - | 750, 900 | 1100, 1320 | 1850 | 3150 | 4000 |
| | LFUF2 | 004-037 | 055-110 | 150-220 | 300 | 370-450 | 550 | - | - | - | - | - |
| | HFUF2 | 007-040 | 055-110 | 150-220 | 300 | 370-550 | - | 750, 900 | 1100, 1500 | 1850 | 3150 | 4000 |
| Width | 150(5.91) | | 210(8.27) | 250(9.84) | 310(12.20) | 390(15.35) | 480(18.90) | 390(15.35) | 480(18.90) | 695(27.36) | 680(26.77) | 1050(41.34) |
| Height | 255(10.04) | | 260(10.24) | 390(15.35) | 540(21.26) | 550(21.65) | 700(27.56) | 700(27.56) | 740(29.13) | 995(39.17) | 1300(51.18) | 1700(66.93) |
| Depth | 140(5.51) | | 170(6.69) | 190(7.48) | 195(7.68) | 250(9.84) | 250(9.84) | 270(10.63) | 270(10.63) | 370(14.57) | 450(17.72) | 450(17.72) |

| | | | | | | |
|---------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| SJ200- | NFEF2 | 002 | 004,005 | 007, 011 | 015, 022 | - |
| | HFEF2 | - | - | 004 | 007-040 | 055, 075 |
| | NFU2 | 002 | 004 | 007 | 015, 022 | - |
| | LFU2 | - | - | - | 037 | 055, 075 |
| | HFU2 | - | - | 004 | 007-040 | 055, 075 |
| Width | 80(3.15) | | 80(3.15) | 110(4.33) | 110(4.33) | 180(7.09) |
| Height | CE | 140(5.51) ⁽⁺²⁾ | 140(5.51) ⁽⁺²⁾ | 155(6.10) ⁽⁺²⁾ | 155(6.10) ⁽⁺²⁾ | 250(9.84) |
| | UL | 120(4.72) ⁽⁺²⁾ | 120(4.72) ⁽⁺²⁾ | 130(5.12) ⁽⁺²⁾ | 130(5.12) ⁽⁺²⁾ | 220(8.66) |
| Depth | 103(4.06) ⁽⁺³⁾ | | 117(4.61) ⁽⁺³⁾ | 139(5.47) ⁽⁺³⁾ | 166(6.54) ⁽⁺³⁾ | 155(6.10) ⁽⁺³⁾ |

| | | | | | | | | | |
|---------------|------------|---------|------------|------------|----------------------------|----------------------------|----------------------------|------------|------------|
| SJ300- | HFE | 007-055 | 075, 110 | 150-220 | 300 | 370-550 | - | 750, 900 | 1100, 1320 |
| | LFU | 004-055 | 075, 110 | 150-220 | 300 | 370, 450 | 550 | - | - |
| | HFU | 007-055 | 075, 110 | 150-220 | 300 | 370-550 | - | 750, 900 | 1100, 1500 |
| Width | 150(5.91) | | 210(8.27) | 250(9.84) | 310(12.20) | 390(15.35) | 480(18.90) | 390(15.34) | 480(18.90) |
| Height | 255(10.04) | | 260(10.24) | 390(15.35) | 540(21.26) ⁽⁺⁴⁾ | 550(21.65) ⁽⁺⁵⁾ | 700(27.56) ⁽⁺⁶⁾ | 700(27.56) | 740(29.13) |
| Depth | 140(5.51) | | 170(6.69) | 190(7.48) | 195(7.68) | 250(9.84) | 250(9.84) | 270(10.63) | 270(10.63) |

| | | | | | | | | | |
|---------------|---------------------------|---------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| L300P- | HFE2 | 015-055 | 075-150 | 185-300 | 370 | 450-750 | - | 900, 1100 | 1320 |
| | LFU2 | 015-055 | 075-150 | 185-300 | 370 | 450, 550 | 750 | - | - |
| | HFU2 | 015-055 | 075-150 | 185-300 | 370 | 450-750 | - | 900, 1100 | 1320 |
| Width | 150(5.91) | | 210(8.27) | 250(9.84) | 310(12.20) | 390(15.35) | 480(18.90) | 390(15.35) | 480(18.90) |
| Height | 255(10.04) | | 260(10.24) | 390(15.35) | 540(21.26) ⁽⁺⁴⁾ | 550(21.65) ⁽⁺⁵⁾ | 700(27.56) ⁽⁺⁶⁾ | 700(27.56) | 740(29.13) |
| Depth | 140(5.51) ⁽⁺⁷⁾ | | 170(6.69) ⁽⁺⁷⁾ | 190(7.48) ⁽⁺⁷⁾ | 195(7.68) ⁽⁺⁷⁾ | 250(9.84) ⁽⁺⁷⁾ | 250(9.84) ⁽⁺⁷⁾ | 270(10.63) ⁽⁺⁷⁾ | 270(10.63) ⁽⁺⁷⁾ |

| | | | |
|--------------|-----------------------------|----------|-----------------------------|
| L100- | MFU | 002, 004 | 007 |
| Width | 128(5.04) ⁽⁺⁸⁾ | | 128(5.04) ⁽⁺⁸⁾ |
| Height | 130(5.12) ^(+2,9) | | 180(7.09) ^(+2,9) |
| Depth | 110(4.33) ⁽⁺³⁾ | | 110(4.33) ⁽⁺³⁾ |




- Note 1: Add 4.4mm (0.17inch) for potentiometer.
- Note 2: Add 10mm (0.39inch) for ground terminal
- Note 3: Add 7mm (0.28inch) for potentiometer
- Note 4: Add 100mm (3.94inches) for conduit box
- Note 5: Add 80mm (3.15inches) for conduit box
- Note 6: Add 70mm (2.76inches) for conduit box
- Note 7: Add 8.5mm (0.33inch) for potentiometer
- Note 8: Add 4mm (0.16inch) for hinges
- Note 9: Add 1mm (0.04inch) for top cover
- Note 10: Add 16mm (0.63inch) for ground terminal



Information in this brochure is subject to change without notice.

For further information, please contact your nearest sales representative.

Hitachi Industrial Equipment Systems Co., Ltd.

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| <p>ISO 14001</p>    | <p>Hitachi variable frequency drives (inverters) in this brochure are produced at the factory registered under the ISO 14001 standard for environmental management system and the ISO 9001 standard for inverter quality management system.</p> |
| <p>ISO 9001 JQA-1153</p> | |