

Frequency Inverters SJ700 Series

Powerful Inverter

NEW!

HITACHI

Inspire the Next



Powerful

- Position Control
- 0.3 Hz 200 % starting torque
- Trip-less

Easy

- Parameter handling assistance
- Integrated EMC Filter, Brake unit to 22 kW
- Hardware & software backwards compatibility

Flexible

- “Easy Sequence” programming function
- Fieldbus interfaces for Profibus, DeviceNet and CANopen

Frequency Inverters

SJ700 Series

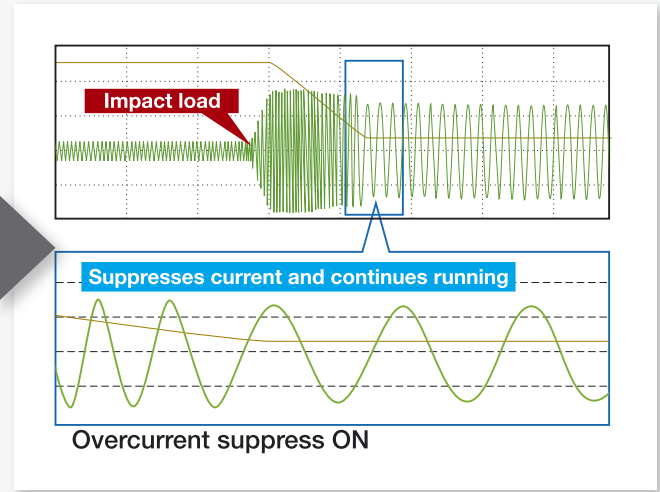
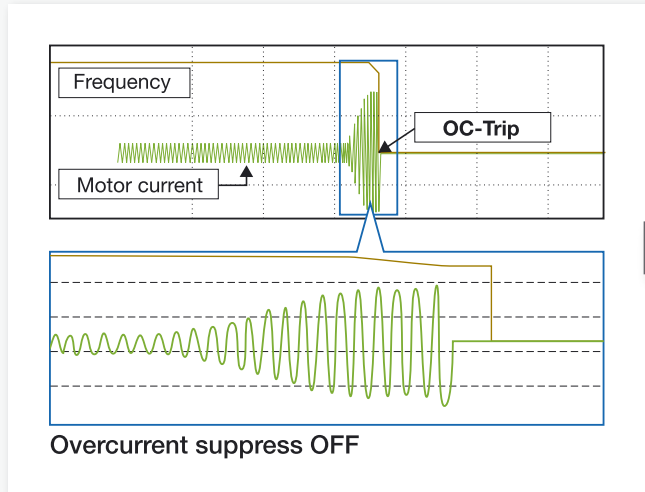
Powerful Inverter

Trip Avoidance

Overcurrent & Voltage Suppression function

A combination of fast internal processing speed, improved current control and the overcurrent and over-

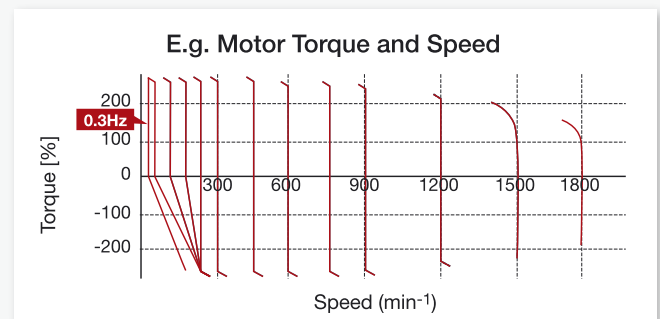
voltage suppression functions leads to the avoidance of inverter trip during acceleration and deceleration.



High starting torque, powerful drive and easy set-up

Improvements to the Sensorless Vector Control allow for the realization of 200% starting torque at 0.3Hz. Auto-tuning makes adjustment of the motor constants easy.

Ideally suited for applications where high torque is needed such as cranes, extruders or lifts.



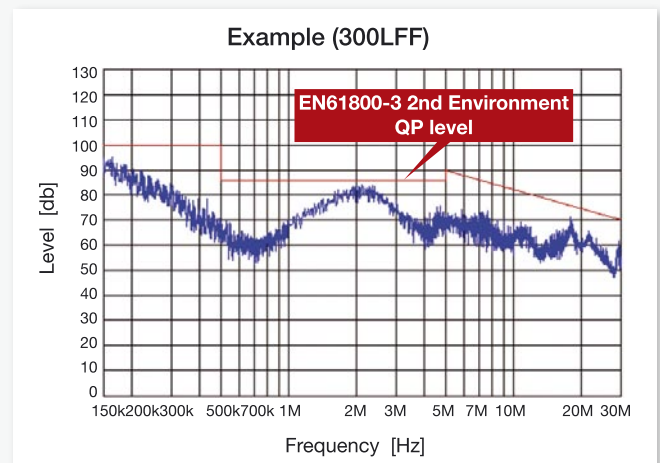
Integrated Features

Built-in EMC filter, Brake Unit

Installation cost and space can both be reduced due to the integration of an EMC filter and braking unit.

The integrated filter meets the EN61800-3-2nd Environment standard.

The braking unit is integrated in units up to 22 kW



[EzSQ: Easy Sequence] Programming function

Logical control of an application via the inverter-integrated programming function

- Basic-like high level language
- Max. 512 Steps
- Position Control (with encoder)

Complex logic sequences are programmed using EzSQ and then downloaded to the SJ700 inverter.

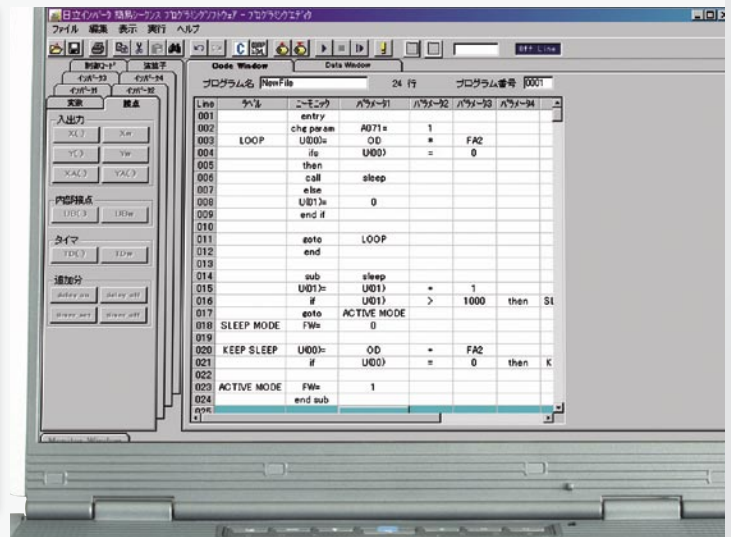
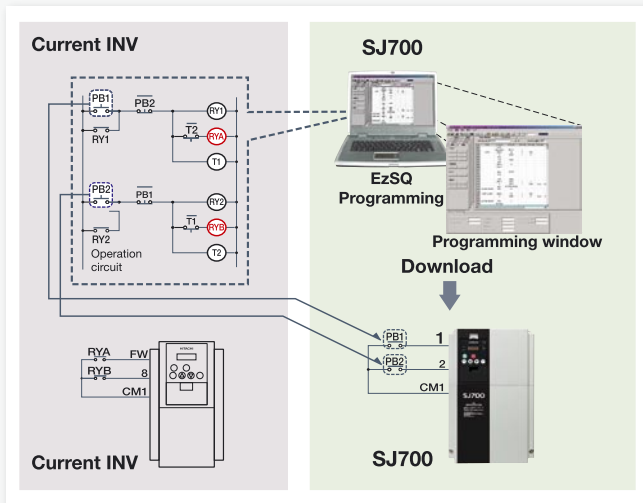
External logic using a PLC or relays can be avoided.

Examples of use include automatic speed control based on load, such as the swift-lift function of a crane. Other examples include:

- Sleep Mode
 - Load Distribution
- and many more

Usage example

Replace relay sequence through software



Easy Parameter Handling

Basic Mode

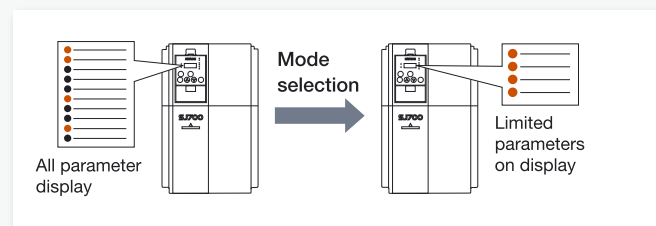
- Display only basic parameters

User mode

- Display only user selected parameters

Compare mode

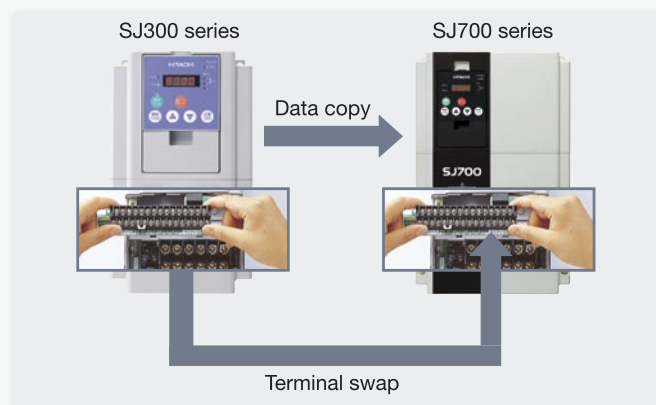
- Display only adjusted parameters



Backwards Compatibility

Data from existing Hitachi SJ300 drives can be copied and downloaded via the remote operator (SRW-OJ) to an SJ700 drive.

The terminal blocks of the SJ300 and SJ700 are identical and can be seamlessly transferred.



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All features at a glance

Inverter SJ700		400V class									
		055 HFEF	075 HFEF	110* HFEF	150 HFEF	185 HFEF	220 HFEF	300 HFEF	370 HFEF	450 HFEF	550 HFEF
Applicable motor (kW)		5.5	7.5	11	15	18.5	22	30	37	45	55
Rated output current (A)		14	19	25	32	38	48	58	75	90	110
Rated input voltage		3 ~ 380 ... 480 V, +10%, -15%, 50/60 Hz ±5 %									
Rated output voltage		3 ~ 380 ... 480 V (Corresponding to input voltage)									
Line filter PFPB or BTFB		032		064			80	115		125	
Output frequency range		0.1...400 Hz									
Frequency accuracy (at 25 °C ±10 °C)		Analogue setting: ±0.2 %, digital setting: ±0.01 %									
Frequency setting resolution		Analogue setting: Maximum frequency/4000, digital setting: 0.01 Hz									
V/f characteristics		V/f (constant torque, reduced torque, free setting curve), sensorless vector control, closed loop vector									
Overload capacity		150 % for 60 s, 200 % for 3 s									
Acceleration/deceleration time		0.01 - 3600 sec. (Linear/curve, accel./decel. Selection), Two stage accel./decel.									
Starting torque		200 % at 0.3 Hz (SLV mode) 180 % at 0.5 Hz (SLV mode)									
Revolution accuracy		±0.5 % at sensorless vector control									
Braking	Dynamic braking	Built-in BRD circuit					external dynamic braking unit (option)				
	Minimum Resistor size in Ohms	70	50	50	24	24	20	-	-	-	-
	DC braking	braking force, time and operating frequency									
Inputs	Intelligent input terminals	8 Inputs, NO or NC, PNP or NPN logic									
	Analogue inputs	3 Inputs, 0...10 V, 4...20 mA, -10...+10 V									
Outputs	Digital outputs	5 outputs, Type „Open Collector“, NO or NC, PNP or NPN logic									
	Analogue outputs	3 Outputs, 0...10 V, 4...20 mA; 1 PWM 0...10 V									
	Relay output	Single Changeover Contact									
PID loop operation		air velocity, temperature etc.									
Serial port		RS485, RS422									
Remote control up and down		Integrated motorised potentiometer with/without setpoint storage									
Bus systems (optional)		Profibus, CANopen, DeviceNet									
Standards		CE, UL, cUL, c-Tick									
Thermal motor protection		Thermistor input PTC or NTC									
Protection		Overcurrent, overvoltage, undervoltage, overload, extreme high temperature, ground fault protection at startup, electronic thermal overload protection etc.									
Environmental conditions	Temperature / humidity	10...+50 °C temperature, 20...90 % humidity (non condensing)									
	Vibration / Installation	5.9 m/s ² SJ700-055...220 HFE, 2.94 m/s ² SJ700-300...550 HFE, 10...55 Hz, altitude 1000 m or less indoors, no corrosive gases or dust									
CE		IEC/EN 61800-3 (industrial environment; IEC/EN 61800-3 (EN 55011 Group 1, Class B)									
Options		remote operator, copy unit, cable for digital operator, Profibus, CANopen, DeviceNet, encoder feedback, reactor for improving power factor, noise filter, ProDrive Software, EzSQ Software									
Protection class		IP20 IP00									
Weight kg (approx.)		7			14			22	30		

SJ700 Series Dimensions

	SJ700	055HFEF	150HFEF	300HFEF	370HFEF
		075HFEF	185HFEF		450HFEF
		110HFEF	220HFEF		550HFEF
Width	mm	210	250	310	390
Height	mm	260	390	540	550
Depth	mm	170	190	195	250

Specifications are subject to change without notice

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