

## SJ100 SERIES

Inverter



## Technical Data

### Compact Inverter with Vector Control

- Capacity range: 0.2 – 7.5 kW
- Compact size
- Modular design for versatile applications
- Global standards to CE, UL, c-UL, CTick
- Internal RS422 interface
- Internal brake chopper
- Sensorless Vector Control (SLV)
- Motor autotuning
- 200% starting torque
- Motor potentiometer
- PID-Control
- Automatic voltage regulation
- Motor thermistor input
- Digital display with potentiometer



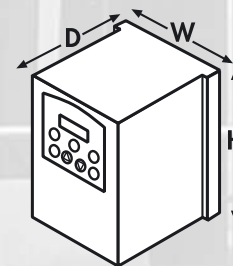
## All features at a glance

Inverter SJ100	200V-Series							400V-Series								
	002 NFE	004 NFE	005 NFE	007 NFE	011 NFE	015 NFE	022 NFE	004 HFE	007 HFE	015 HFE	022 HFE	030 HFE	040 HFE	055 HFE	075 HFE	
Protective structure	IP20															
Maximum motor size (4P) in kW	0.2	0.4	0.55	0.75	1.1	1.5	2.2	0.4	0.75	1.5	2.2	3.0	4.0	5.5	7.5	
Input supply phase	Single / Three phase							Three phase								
Rated input voltage	200VAC -10% ~ 240VAC +5% 50/60Hz +/-5%							380VAC -10% ~ 460VAC +10% 50/60Hz +/-5%								
Rated output voltage	Three phase 200 ~ 240VAC (Corresponds to input voltage)							Three phase 380 ~ 460VAC (Corresponds to input voltage)								
Rated output current in A	1.4	2.6	3.0	4.0	5.0	8.0	11.0	1.5	2.5	3.8	5.5	7.8	8.6	13.0	16.0	
Output frequency range	0.5 ~ 360 Hz															
Frequency accuracy (at 25°C +/-10°C)	Digital command: +/-0.01% of maximum frequency Analogue command: +/-0.1% of maximum frequency															
Frequency setting resolution	Digital setting: 0.1 Hz Analogue setting: max. frequency / 1000															
Voltage/frequency characteristic	Constant, reduced or high starting torque (SLV)															
Overload current capacity	150% during 60 seconds (once per 10 minutes)															
Acceleration/deceleration time	0.1 ~ 3000 s in selectable linear and non-linear mode (second acceleration/deceleration usable)															
Starting torque (using SLV)	> 200% > 180%															
Braking torque	Dynamic braking, feedback to capacitor	approx. 100%			approx. 70%		> 200%		approx. 100%		appr. 70%		approx. 20%		approx. 30%	
	External braking resistor	approx. 150%			appr. 100%		appr. 100%		approx. 150%		approx. 100%		approx. 80%			
DC injection braking		Braking is on at the minimum frequency or less (minimum frequency, braking time and braking force can be set)														
Inputs	Frequency setting	Digital operator		Settings using keys $\odot$ $\ominus$ or potentiometer												
		External signals		0-10VDC (input impedance 10k Ohm); 4-20mA (input impedance 250 Ohm); Potentiometer 1k-2k Ohm, 1W (055 ~ 075LFR/LFR: 2W)												
	Forward / Reverse run	Digital operator		Via keys RUN (for start) and STOP/RESET (for stop) (Default setting: forward run)												
		External signals		Intelligent input terminals configurable as FW and RV												
Intelligent input terminals programmable as		FW: Forward run start/stop RV: Reverse run start/stop CF1-CF4: Multistage speed JG: Jogging command AT: Analogue current input selection 2CH: 2nd Accel./decel. time FRS: Free run stop EXT: External trip USP: USP function RS: Reset SFT: Software lock PTC: Thermal protection DB: Ext. DB input SET: 2nd setting active UP: Acceleration (Remote) DWN: Decelerate (Remote)														
Outputs	Intelligent output terminals programmable as	FA1/FA2: Frequency arrival signal RUN: Motor running signal OL: Overload signal OD: Deviation signal at PID control AL: Alarm signal														
	Frequency and current monitoring	Connection of external analogue meter (0-10VDC, max. 1mA) for frequency or current; connection of external digital frequency meter														
Fault alarm contact		On when the inverter trips (1c contact). Alternatively usable as intelligent output terminal														
Other functions		Autotuning, Automatic voltage regulation, retry; analogue gain/bias adjustment, frequency jump, upper/lower limiter, output frequency display, trip history monitoring, carrier frequency setting, PID control, automatic torque boost, USP function, 2nd Setting function, ON/OFF control of cooling fan														
Protection functions		Overcurrent, overvoltage, undervoltage, electronic thermal, temperature abnormality, ground fault, overload, CT error, BRD error														
Environmental	Ambient temperature	-10 ~ 50°C; > 40°C Current derating														
	Storage temperature and humidity	-25 ~ 70°C (during short term transportation period only) 20 ~ 90% RH (no dew condensation)														
	Options	Remote operator, copy unit, cable for digital operator, reactor for improving power factor, noise filter, OPE-I, Bus Communication (Profibus, DeviceNet, CanOpen)														
Overall weight (approx.) in kg		0.7	0.8	1.3	2.3	2.8	1.3	1.7	2.8	5.5	5.7					

## SJ100 Series Dimensions

Type SJ100	002 NFE 004 NFE 005 NFE	004 HFE 007 NFE 011 NFE	007 HFE 015 HFE 022 HFE	015 NFE	022 NFE 030 HFE 040 HFE	055 HFE 075 HFE
Width mm	84	114	114	140	140	182
Height mm	130	130	130	180	180	257
Depth mm	100*/114	136	163	160	171	177

\*for 002 NFE



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