

Nooyi[®] 诺易

Provide Power Solutions



CFP 变频电源

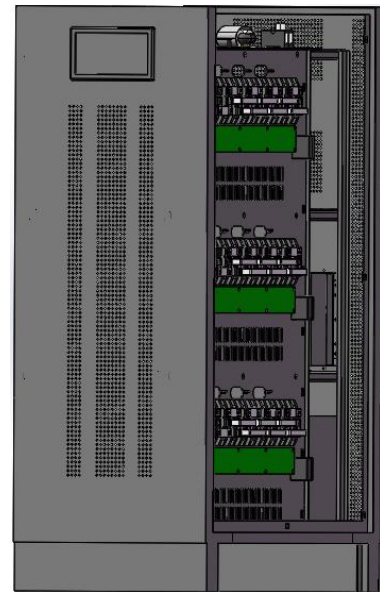
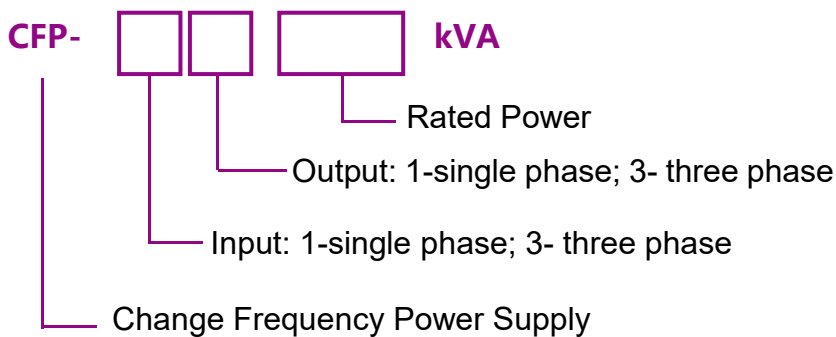
CFP Change Frequency Power Supply

Introduction

The CFP variable frequency power supply is designed by Nooyi with ARM's new generation 32-bit processor as the core, IGBT as the executive element, and isolation transformer for voltage conversion.

The CFP variable frequency power supply adopts the AC-DC-AC method to convert the input power into any power supply in the world through SPWM (sine wave pulse width modulation) conversion to meet the needs of different voltages and different frequencies.

Type designation



Features

- Controlled by ARM-32-bit microprocessor, reliable, stable and highly intelligent
- Fast dynamic response and stabilization
- Three-phase vector control, three-phase voltage automatic balance
- High voltage regulation accuracy
- High frequency stability
- Using 7-inch touch screen display and control, beautiful interface, multi-parameter display
- VF working curve, specially designed for motor testing, with the soft start function of the frequency converter, and a pure sine wave of the frequency conversion power supply
- RS485 communication interface, standard MODBUS-RTU protocol, optional TCP/IP interface, remote control through mobile APP

Application

- Testing of export equipment
- Frequency conversion of imported equipment
- Marine frequency stabilization and voltage stabilization
- Energy consumption environment test in laboratory
- Places where frequency, stable frequency and stable voltage need to be changed

Input Parameter

Input	Index	Note
Rated Voltage	Three phase 380V/400V Single phase 220V/230V can customize any voltage	3Φ3W (L1, L2, L3) + ground wire (PE) 1Φ2W (L, N) + ground wire (PE)
Input Range	±15% (can customize other range)	
Input Frequency	40-70Hz	

Input Parameter

Parameter	Index	Note
Modulation	IGBT/SPWM sinusoidal pulse width modulation	
Output voltage	Three-phase 0-520v (adjustable), single phase 0-300v (adjustable) (can customize higher voltage)	
Stability of output voltage (average)	±1% (can customize higher precision)	
Response time	2mS (for input voltage)	
Voltage waveform distortion THD	< 2%(linear load)	
Output frequency	47Hz-63Hz (adjustable), 50/60/Hz(fixed) (Optional: 100Hz/200Hz/400Hz, Customize:5-1000Hz)	
Frequency stability	< 0.1%	
Phase shift	< + 1% when the load is three-phase balanced or no-load; three- phase unbalance: < +4%	
Three-phase unbalance factor	Automatic balance	
Isolated transformer	△/Y	

Control Parameter

Parameter	Index	Note
Main control	The main measurement and control chip adopts ARM32-bit processor, and the inverter element adopts IGBT	
Carrier frequency	4K;8K;12K;16K optional	
Control voltage and current acquisition method	Valid value	
Control method	Voltage closed-loop control or current closed-loop control or VF curve control	
Interface	RS485, MODBUS-RTU protocol	Optional TCP/IP, GPRS

Display Parameters

Parameter	Index	Note
Display screen	7-inch touch screen or 192*64 (LCD)	
Display rated parameter	Input three-phase voltage and frequency; Output three-phase line voltage and frequency; Average value of output line voltage; output power factor; output three-phase current; Output active power, apparent power	
Fault diagnosis & display	Overload and short-circuit fault, IGBT module fault, over- temperature fault, fuse fault,	
Parameter display resolution	1.0 grade	
Voltage parameter resolution	0.1V	Can customize higher resolution
Current parameter resolution	0.1A	Can customize higher resolution

Protection Parameters

Parameter	Index	Note
Protection Type	Input & output with MCB, the circuit can detect over-current, over- voltage, overload, over-temperature, short-circuit, start tripping protection and alarm	
Protection method	Cut off the output	

Physical Parameters

Parameter	Index	Note
Cooling method	Free cooling or forced air cooling	
Protection grade	Indoor IP20; outdoor IP33 or higher	

Three phase specification

Specification	Capacity (kVA)	Output current (A)		Size W×D×H (mm)
		HV	LV	
CFP-13003 /CFP-33003	3	4.2	8.4	350×650×670 (with wheel)
CFP-13006 /CFP-33006	6	8.4	16.8	
CFP-13010/CFP-33010	10	15	30	
CFP-13015/CFP-33015	15	23	46	460×700×1170 (with wheel)
CFP-13020 /CFP-33020	20	30	60	
CFP-33030	30	45	90	
CFP-33045	45	68	136	780×650×1450
CFP-33060	60	91	182	
CFP-33075	75	114	228	
CFP-33090	90	137	274	950×700×1600
CFP-33120	120	183	366	
CFP-33150	150	228	456	
CFP-33200	200	304	608	1200×750×1800
CFP-33250	250	380	760	
CFP-33300	300	456	912	
CFP-33350	350	532	1064	1500×1050×2200
CFP-33400	400	608	1216	
CFP-33500	500	760	1520	
CFP-33600	600	912	1824	2400×1200×2200
CFP-33800	800	1216	2432	
CFP-331000	1000	1520	3040	
CFP-331200	1200	1823	3646	1500×1050×2200 two cabinets three cabinets

- Note: 1. There is a high and low pressure switch for 90kVA and below, and one of the high pressure gear and low pressure gear is optional when ordering above 90kVA;
 2. The current in the table is calculated when the online voltage is 380V, and the actual use should calculate the current according to the highest voltage of the selected equipment;
 3. The parallel series can choose input and output switch cabinets as needed

Single phase specification

Model	Capacity (kVA)	Output current (A)		Size W×D×H(mm)
		HV	LV	
CFP-11500W	0.5	4.2	2.1	425×436×173 (rack mount)
CFP-11001	1	4.2	8.4	
CFP-11002	2	8.5	17	350×650×670 (with wheel)
CFP-11003	3	13	26	
CFP-11005	5	21	42	
CFP-11010 /CFP-31010	10	42	84	
CFP-11015 /CFP-31015	15	63	126	460×700×1170 (with wheel)
CFP-11020/CFP-31020	20	84	168	
CFP-11030 /CFP-31030	30	126	252	
CFP-11045 /CFP-31045	45	189	378	780×650×1450
CFP-31060	60	252	504	
CFP-31075	75	315	630	950×700×1600
CFP-31090	90	378	756	
CFP-31120	120	504	1008	1200×750×1800
CFP-31150	150	630	1260	
CFP-31200	200	840	1680	1400×800×2000
CFP-31300	300	1350	2700	

Note: 1. There is a high and low pressure switch for 90kVA and below, and one of the high pressure gear and low pressure gear is optional when ordering above 90kVA;

2. The current in the table is calculated when the voltage is 220V. In actual use, the current should be calculated according to the highest voltage of the selected device.

Note: The product is constantly being upgraded, and the update may lag. This technical information is for reference only.

Products

- DC power supply 交流稳压电源
- DC voltage regulator 直流稳压电源
- UPS 不间断电源

- Grid connected inverter 并网逆变器
- Static var generator 无功补偿
- Dynamic voltage restorer 电源跌落补偿

■ Solve the problems of frequency conversion, frequency stabilization, voltage stabilization, voltage regulation, and voltage transformation

- Strong impact resistance, can withstand 2-3 times the load impulse current instantaneously
- Optional input APF correction, small input harmonic current, high power factor
- Good frequency stabilization accuracy, frequency stability < 0.1%
- Imported IGBT power module, good impact resistance
- Wide frequency range, output frequency 5-1000Hz selectable
- Intelligent IGBT drive module and high isolation power supply, strong protection function
- High voltage regulation accuracy, the voltage regulation accuracy reach $\pm 1\%$ or higher
- Complete parameter display, easy to check each working point of the power supply in time
- Fast response time, input voltage jump, output response time < 2ms
- Adopt IGBT/PWM method, small size and low noise
- Wide voltage range, input voltage $\pm 20\%$, output voltage 0-1000V customizable
- Transformer isolated output, strong anti-interference ability
- Good output waveform, pure sine wave output, waveform distortion < 2% (except non-linear load)
- Three-phase voltage vector control, can tolerate three-phase unbalanced loads
- 32-bit ARM processor digital control, pure sine wave output using isolated voltage, current sensor, reliable detection

■ Optional Function

- Program-controlled variable frequency power supply RS232 interface, with PC or PLC monitoring interface, with standard RS232 interface (can be converted to RS485/CAN/RJ45), compliant with MODBUS-RTU protocol, convenient for remote monitoring. You can set working condition groups and store several groups of voltage, frequency, working time, etc.;
- The DC28V interface of the military intermediate frequency power supply has a DC28V DC input interface and a control switch, and the DC28V power supply can be embedded in the cabinet to form a whole, which is convenient, beautiful and reasonable;
- Input harmonic current suppression components, optional 12-pulse rectifier, 18-pulse rectifier and 3-21th harmonic filter, reduce the input harmonic current of the variable frequency power supply, improve the power factor, and avoid the interference of the variable frequency power supply to other equipment in the network;
- The protection grade of marine shore power supply, the outdoor IP65 protection grade shell can be selected, and it is directly used outdoors. thermal layer, etc.;
- Wide range input function, optional voltage input range $\pm 50\%$, frequency input 25Hz-100Hz, especially suitable for small thermal power or small hydraulic power generation occasions. The output can stabilize frequency and voltage regulation.

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