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Ideal Power Solution

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IFP Series Intermediate Frequency AC Power Supply

- Power range: 500VA ~ 600KVA
- Voltage range: 0 ~ 150Vac / 0 ~ 300Vac
- Static 400Hz output.
- Precise voltage and current setting and measurement capabilities
- Small size, high efficiency and low energy consumption.
- OVP, OCP, OTP and short circuit protections etc.

Overview

The IFP series is AC power supplies with a constant 400Hz output frequency and adjustable output voltage, based on the same technical principle as the adjustable AC power supplies of SPWM method, IGBT module design and D/A conversion technology. The difference is that the output frequency of the Intermediate Frequency AC Power Supplies is constant at 400 Hz, it is a replacement product of unit type variable frequency power supplies with higher output frequency accuracy and stability.

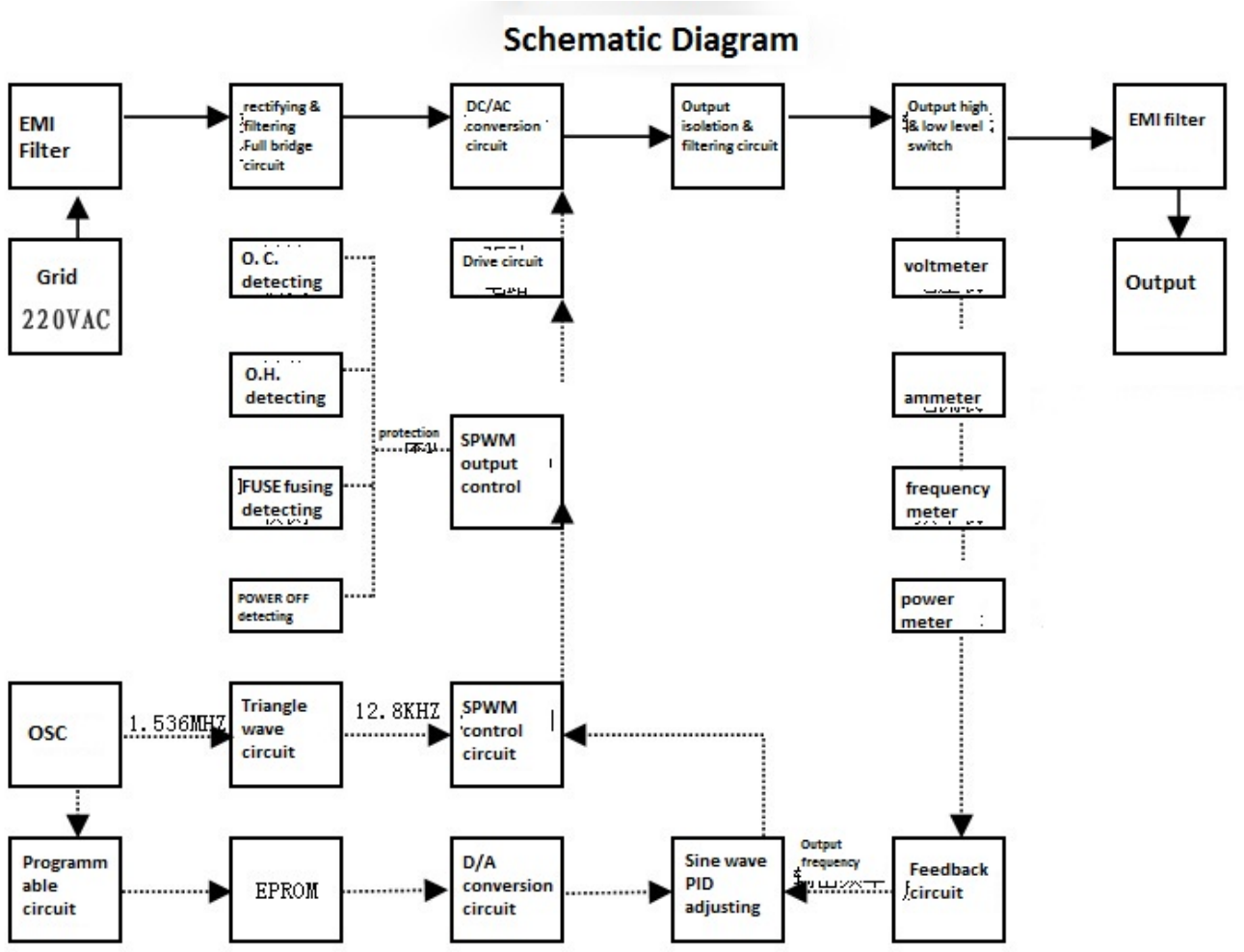
According to the difference in the number of output phases, the Intermediate Frequency AC Power Supplies can be divided into single-phase and three-phase Intermediate Frequency AC power supplies.

The output power of single-phase Intermediate Frequency AC Power Supplies ranges from 500VA to 200KVA, and the output power of three-phase Intermediate Frequency AC Power Supplies ranges from 3KVA to 600KVA. The output voltage of both types can be divided into 0 ~ 150Vac, 150 ~ 300Vac with 400Hz fixed output frequency. This series of AC power supplies are featured for high precision, stable output, high display resolution, low waveform distortion and

complete protection functions.

Through the friendly operation panel, you can read the output data such as output voltage, output current, output power, power factor, etc., providing accurate data records for your test, and can add RS485 interfaces as standard, following the MODBUS-RTU international communication protocol, which can realize remote control and operating status monitoring of the power supplies, Currently, the Intermediate Frequency AC Power Supplies are mainly used for aircraft and mechanical equipment, radar, navigation and other military electronic equipment and other occasions that require 400Hz intermediate frequency output.

Block diagram



Features

- Unique instantaneous value double-loop control mode adopted, with high control precision and good waveform quality, which can be applied to various loads.
- IGBT high-frequency static inversion, small size, light weight, low noise, high efficiency, and low interference to the surroundings.

- Microprocessor control, online adjustment of output voltage and frequency, clear monitoring of operation and fault status.
- LED digital display on operation panel, flexible and convenient to use.
- The output isolation transformer is safe and reliable, and can withstand the reverse electromotive force generated at the load end.
- Perfect protection function: over current, over voltage, over temperature, short circuit protection and alarm.
- Strong overload capacity.
- Three-phase independent, can withstand three-phase unbalanced load.

Optional functions

- 0 ~ 5V / 0 ~ 10V / 4 ~ 20mA analog signal control. (DB port) (+AC)
- RS communication interface (RS232 / RS485 optional) (+RC)

Application

- Airdrome ground establishment, radar, ship, spaceflight, and military electronic manufacturing & debugging.
- Other situations which need intermediate frequency (400Hz).

Specifications

Output phase		Single-phase	Three-phase
Output capacity		500VA~200KVA	3KVA~600KVA
Circuit mode		SPWM mode	
Input		Single-phase 220Vac ± 10% / 50Hz, 60Hz ± 6%	Three-phase 380Vac ± 10% / 50Hz, 60Hz ± 6%
Input power factor		≥0.8	
Output	Voltage	110V system: 0.0 ~ 150.0V (Low level) 220V system: 0.0 ~ 300.0V (High level)	Phase voltage: 0V ~ 150V (Line voltage: 0 ~ 260V) Phase voltage: 0v ~ 300V (Line voltage: 0V ~ 520V)

	Frequency	400Hz±20%
CV stability		±0.5%
Frequency stability		≤0.1%
Harmonic distortion		Pure sine wave, ≤±1.5% (linear load)
Crest factor		3:1
Over-loading ability		125% 10min, 150% 1S
Dynamic characteristics		<5% (0~100% load variance)
Output display		Voltage, Current, Power, Frequency & Power factor LED 4-bits display, precision: 1%
Protections		Auto tripping and alarm when over voltage, over load, over temp, over current and short-circuit.
Cooling mode		Forced air-cooling type
Working temperature		10°C ~ 60°C
Relative Humidity		0 ~ 90% (non-condensing)

- **The product can be customized on demand.**

Maintenance

- Check whether the bolts or moisture loosen regularly
- Check whether water leakage at pipe connection regularly
- Check whether any leaking of water pipe connection regularly.
- Regularly open the box side plate, cleaning dust inside.
- Regularly with clip-on ammeter check three-phase input current that it is abnormal and serious drift phenomenon, if abnormal, contact the supplier in time.
- Specially assigned person for equipment maintenance.

Installation environment

- Ambient temperature: Please have the power source working in safe temperature range (0℃ ~ 45℃) or it would affect life of power source.
- Please install the power source at least 50cm distant from surroundings to have better ventilation.
- Please install the power source away from vibration (less than 0.6G), especially equipment like puncher.
- Keep the power source away from direct sunshine, humidity or place with water globule.
- Keep the power source from corrosive, flammable & explosive gas.
- Keep the power source away from oil stain, dust & metallic dust.