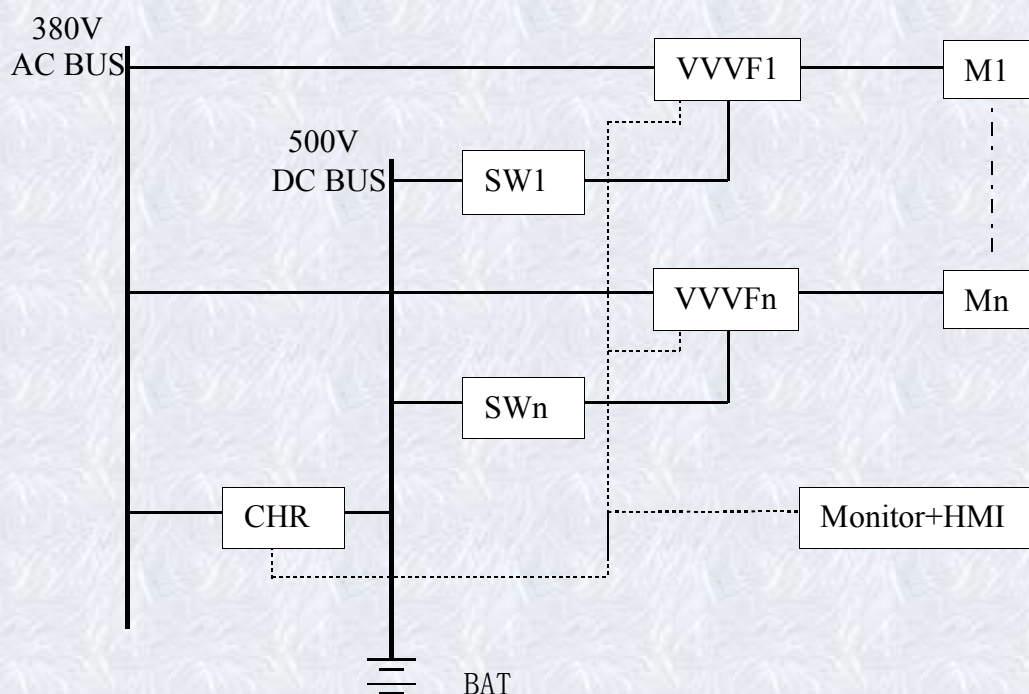


Motor Un-interruptable Power Supply

Application

MUPS is a UPS of low voltage motor group, specially be used in continual production of chemical, iron and steel, chemical fiber, integrated circuit and glass etc. While the power supply failed, the MUPS can pledge the key motor groups operating continuously. The production course can be emergently treated, stopped safely or run continuously.

System frame



VVVF1-n: Variable-Voltage, Variable Frequency

M1-n: Motors

Monitor+HMI: Programming logical controller and interface

SW1-n: Static switch

CHR: Charger

BAT: Batteries

Working mode

Normal: The net power drives the motor through VVVF with double-change and soft switch on. The batteries are floating charged.

Power outage: The static switches turn on. The batteries drive the motor through VVVF. When net power supplies again, the system returns to normal automatically. The transforming process doesn't interrupt.

PLCs monitor the DC system through HMI.

Motor Un-interruptable Power Supply

MUPS Characteristics

- Simple and reliable in structure
- Changing the structure of regular UPS supplying VVVF to the structure of direct current system supplying VVVF, reducing the hardware, and enhancing the reliability. The power of regular UPS must be over 1.2 times power of VVVF.
- System charger charges the batteries only, it's power is 10% of regular UPS rectifier charger (the regular UPS rectifier charger both charges the batteries and supports the direct current to contra-changer with full power). The cost is lower , the reliability is higher.
- This system contains all starting, controlling and protecting elements of connecting motors.
- The motors can be switched on softly and adjusted it's speed. The system contains the protective characteristics of short circuit, ground connecting or overload trouble.
- The charges possess the function of steadying voltage and limiting current, and possess the compensative function of float charging temperature.
- Programming the control and protect function of switching and stopping to each motor, and of stopping discharge of batteries.
- Each circuit of system is wholly independence, to overhaul VVVF or the controlling and protecting devices of one circuit, doesn't stop other circuits.
- Adopting IGBT contra-change elements and micro-processor.
- Adopting trace on line, self-control voltage. Pledging zero time exchange while main power cutting off.

Environment conditions

- Inside house with no fire, no explode
- Without gas or steam of corroding metal and destroying insulation.
- Place without electric conductive dust
- Place with no violent shocking or blasting, vertical gradient $< 5^{\circ}$
- Temperature in transport and storage $-25^{\circ}\text{C} \text{ -- } +55^{\circ}\text{C}$

Ordering notice

The user must provide the following documents:

1. General electrical system drawing and cabinets arrangement for MUPS.
2. Total amounts of motor and rated power in system, indicating the technical parameters and running control mode for every continuous operating motor.
3. Reserve time of battery discharge.
4. Other requirements.

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Technical parameters

AC input	voltage	380V±10%
	frequency	45 --- 65Hz
Frequency converter	standard voltage	530Vdc
DC sharing		
Charger	steady voltage scope	450 --- 530V
	adjust voltage scope	400 --- 550V
	limit current	0.1C10
	waveform	±1%
Battery	type	Maintain-free lead-acid battery or sealed lead-acid battery
	discharge stop voltage	~1.8V /per cell
	recharge continued time	18 – 24 hours
	capacity	According to support time and motor's capacity of system required by user
System output	voltage	380V(0 – 380VAC adjusting speed)
	frequency	50Hz(0 – 400Hz adjusting speed)
	power	One circuit 2 – 800KW, circuit's number according to use
Characters of adjust speed	permanent moment of rotation	under specified frequency
	Permanent power	above specified frequency
Microprocessor controller	PLC + HMI	
Remote monitor	RS232/ RS485 interface (option)	
Operating temperature	0 --- 40°C	
Relative humidity	90% no dewing	
Altitude	≤1000m	
Protection	IP20	