LDZZ Fast Power Automatic Conversion Device

Overview

In order to ensure the continuity and reliability of power supply for important loads on board, the power supply mode of two power sources automatic conversion is usually adopted. When the two power sources are asynchronous, the traditional power conversion device will produce a large back electronic manufacturing facility on the load side and a large impulse current when switching. LDZZ fast power automatic conversion device can switch accurately, quickly and reliably in case of main power failure, with small switching current, small impact on power grid, short switching time and uninterrupted load power supply. It can be applied to motor, inductive, resistive and other loads.

Product features

- Split phase input technology: when two power sources are switched, the impact current to the power grid is small, and the impact current does not exceed the motor load starting current.
- Fast switching technology: the load power down time is less than 10ms, which can ensure the continuous work of important loads.
- Wide load adaptability: suitable for resistive, inductive, hybrid loads and motor.
- Main and standby power can be set: the user can set the main and standby power remotely.
- Hardware interlock: ensure the logic of opening before closing, and ensure that the two power supplies are always isolated.
- Fault self check: real-time detection of status information of power electronic devices.
- High protection level: the protection level of the shell can be Ip44.
- Redundant cooling: even if the fan fails, the equipment can continue to operate normally, and can be self cooled without fan when the current level is below 160A.
- Emergency power supply: in case of main circuit failure or electronic control circuit failure, emergency power supply can be realized through manual emergency transfer switch.

Product function

- Instant conversion: when the load is resistive, the main power is directly switched to the standby power after power loss.
- Phase controlled delay conversion: when the load is inductive, the phase difference between the residual voltage of the load and the standby voltage is judged after the power loss of the main power, which is switched by the control mode of phase judgment. This condition is usually triggered when the load voltage drops to 80%-90%, and the device is switched to the standby power when the phase is "Quasi synchronous", and the impulse current is small.

■ Phase controlled instant conversion: load and control mode are similar to "phase controlled delay conversion". This condition is usually triggered when the load voltage drops rapidly below 80%, and the device is switched to standby power when the phase is "Coarse synchronous", so as to ensure that the impulse current will not exceed the starting current of the motor during the switching process.

■ Reset conversion: when the main voltage returns to normal, the device triggers the reset conversion function. When the voltage phase amplitude of main power supply and standby power supply reaches "Quasi synchronous", the device is switched back to main power supply, and the impulse current is very small.

Product composition

LDZZ fast power automatic conversion device is composed of main switching circuit, control unit, analog detection unit, cooling system and external interface unit.

Technical Index

Type	LDZZ Type				
Rated voltage	380V±10%				
Rated frequency	50Hz±10%				
Rated current	10	50	160	250	400
Rated efficiency	97%	98%			
Power type	3P (three-phase three-wire)				
Working mode	Continuous				
Overload capacity	5min at 125% overload				
Current impact	1600% rated current impact within 1s				
Short-time withstand current	10kA@20ms	50kA@20ms			
Current impact on load	(Not exceeding motor starting current, except manual emergency switching)				
Conversion time	≤10ms (Except manual emergency switching)				

Standard sizes

Type	Outline dimensions (mm)			Remarks
	Width	High	Depth	
LDZZ 10	300	450	250	Fig.1
LDZZ 50	600	800	300	Fig.2
LDZZ-160	600	1000	350	
LDZZ-250	700	1200	400	
LDZZ-400				

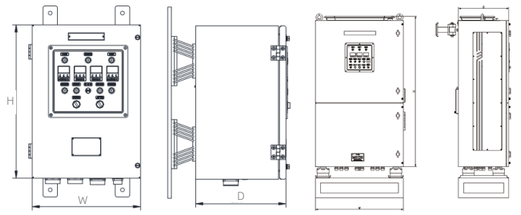

Fig.1 Fig.2
LDZZ fast power automatic conversion device

Model naming

Fast power automatic conversion device	LDZZ-	□

Rated current: 10/50/160/250/400A

Selection description

For example: LDZZ-160

It means that the rated current of LDZZ fast power automatic conversion device is 160A.

Functional block diagram