

Electric Release Device of Synchronous Engine without Engine Room

Use Instructions of EPB-110

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Specification of the Electric Release Device of Synchronous Engine without Engine Room

I. Outline

The electric release device of synchronous engine FPB-110 is a device designed to automatically control the braking and release in case of power failure or malfunction.

II. Working Principles

The device monitors the availability of the utility. In case the utility is available, the device stops working, or else, the door lock circuit works without failure. In order to start up the device, the two buttons on the operation box shall be held down together.

III. Main Performance and Characteristics of the Product

- ① The product introduces a high-current MOSFET(3710) with great drive, little heat generated and high efficiency.
- ② The circuit is designed to be charged, limit the current, constant voltage and float charged, the functions are switched automatically; the voltage of the batteries is detected automatically and the batteries are protected from being overcharged or over-discharged to prolong the life of the batteries.
- ③ The input voltage of the product is AC220V. When the grid is normal, the batteries are charged, and in case of power off, DC110V is output for braking according to the control signals input.
- ④ The product has the characteristics of compactness, high efficiency, convenient installation, easy connection, maintenance free lead acid batteries and simple maintenance.
- ⑤ When the product is idle (neither being charged nor is output started up), the system will isolate the batteries and other equipment connected with the batteries to prevent the batteries from being discharged

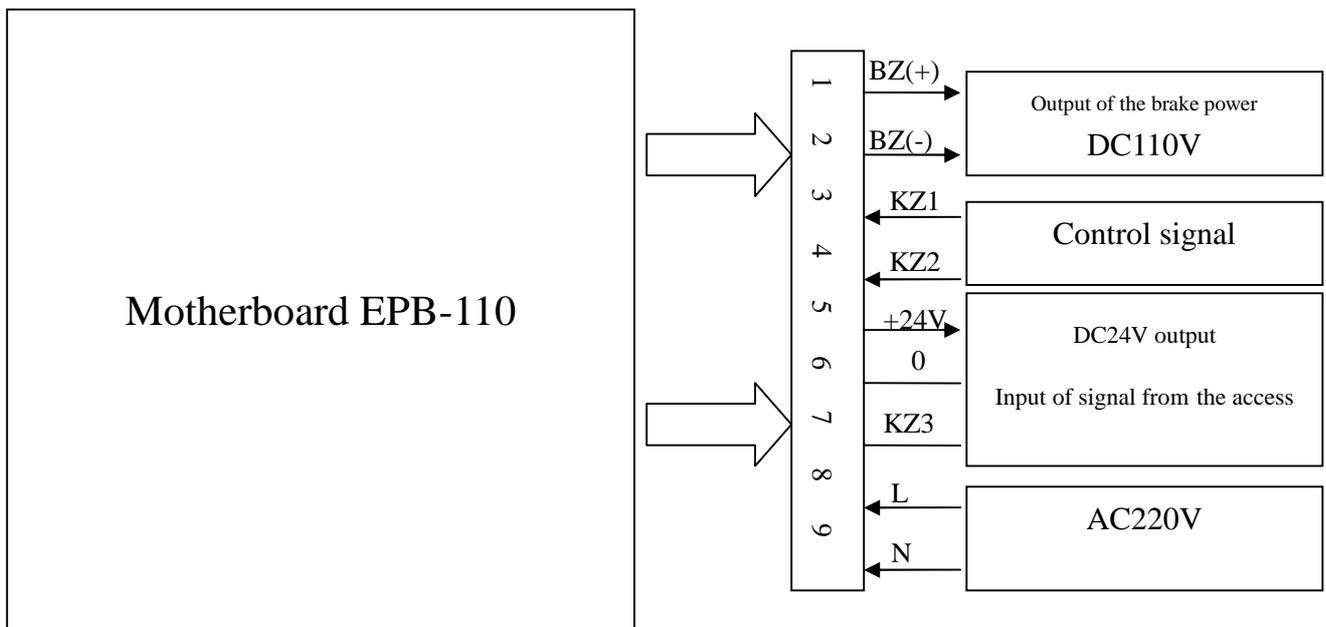
due to small power consumption when the electronic components on the PCB are idle so that the batteries will not be discarded for their over-discharge.

IV. Physical Dimensions

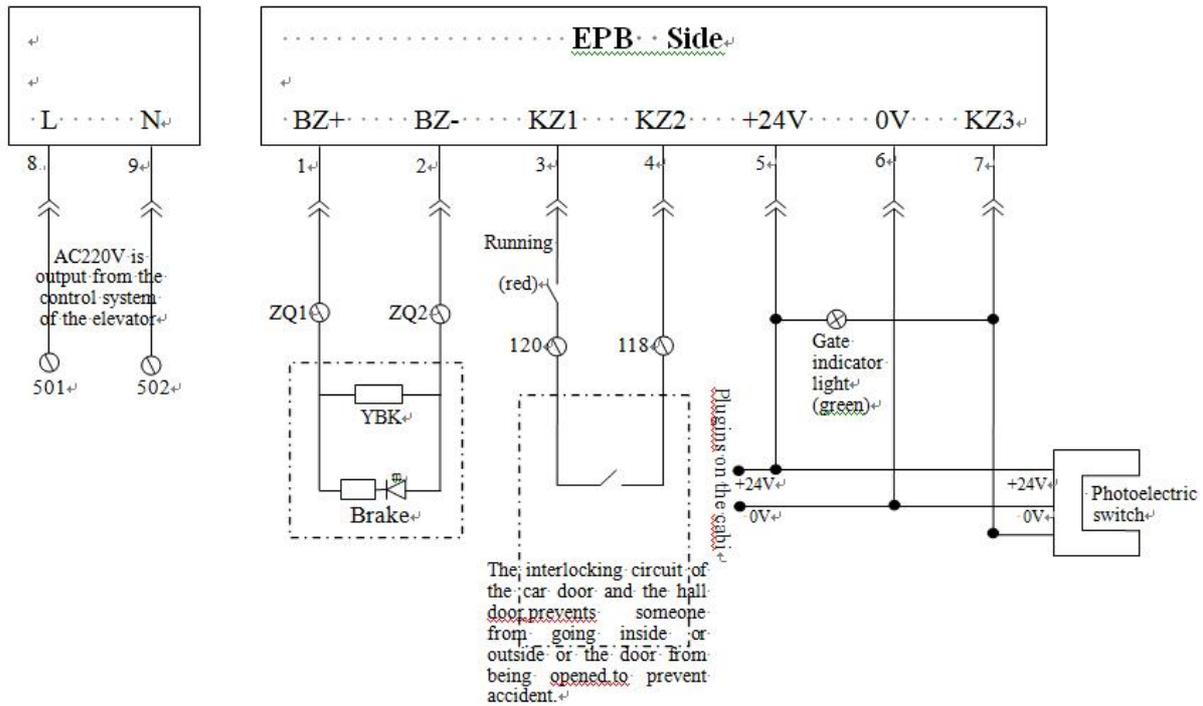
Physical dimensions (L*W*T) 280*270*140mm (Installed outside)

Physical dimensions (L*W*T) 170*150*170mm (Installed inside)

V. Schematic Diagram



VI. Connection



Side of the control cabinet

VII. Functions of the terminal

No.	Codes for functions	Descriptions of the functions	Wire numbers
1	BZ (+)	Output DC110V+	BZ (+)
2	BZ (-)	Output DC110V-	BZ (-)
3	KZ1	Input of the control signal	KZ1
4	KZ2	Input of the control signal	KZ2
5	+24V	DC24V+	+24V
6	0V	0V	0V
7	KZ3	Input of the leveling sensors	PX PX1
8	L	Input AC220V L	L
9	N	Input AC220V N	N

VIII: Instructions:

Please confirm that all of AC powers of the control cabinets are cut off when the device is started up. Hold down the “Running” (red) buttons on the operation box to start up the device; the brake is turned

on to run the device at the speed of maintenance. When the Gate indicator light button light (green) on the operation box is on, it means that the car has entered the leveling zone. When the release device KZ3 receives the photoelectric switch leveling signal, the device stops outputting, and you need to release the buttons. You need to open the car and let the persons inside out manually.

VIII: Instructions on connection and installations

Connection: The manufacturer provides one wire with 12-pin AMP plug to be butt-jointed with the 12-pin AMP plug on the EPB-110q machine. The wire terminals shall be connected on the side of the elevator based on their numbers.

Installation: The manufacturer provides two fixing baseplates. Please take down the screws corresponding to the holes on the side of the EPB-110 machine and hang it on the wall of the engine room or put it at other locations, and tighten the screws.

Notes:

- ① **Please power off the control cabinet before the device is started up, and 10 second must pass after the running ends before power on again. The elevators connected with the device must be equipped with star-delta contactors.**
- ② **When the product is out of use for a long time, it must be discharged every six months at the most, and it must be charged for more than eight hours continuously.**
- ③ **Please confirm that all of the control cabinets have been powered off before the device is started up, or else the mainboard may be damaged.**