

**XL-12 TH 动力配电箱  
使用说明书**

**OPERATING INSTRUCTIONS  
XL-12 TH POWER-DISTRIBUTION CABINET**

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**中 华 人 民 共 和 国**  
**上 海 电 器 成 套 厂**

**THE PEOPLE'S REPUBLIC OF CHINA**  
**SHANGHAI ELECTRICAL APPARATUS ASSEMBLY WORKS**

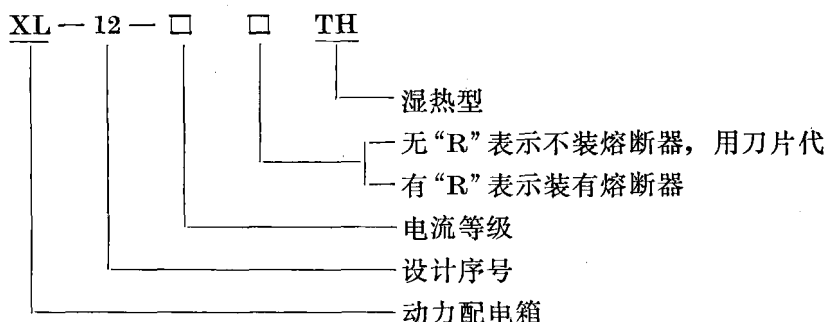
# XL-12 TH 型 动力配电箱

## XL-12 TH POWER-DISTRIBUTION CABINET

### 一、用途及型号说明

XL-12 TH 型动力配电箱适用于一般工业企业车间，作为 500 伏以下 50 或 60 赫芝的交流三相系统控制动力用。

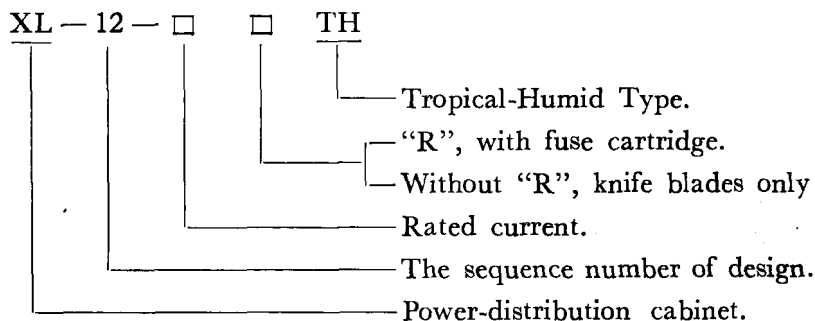
动力箱的型号及其所代表的意义如下：



### I. Application and Type Designation

The XL-12TH Power-Distribution Cabinet are suitable for use in industrial plants for three-phase power distribution up to 500 V. 50 or 60 Hz. A.C.

The type designation of the power-distribution cabinet is specified as follows:



### 二、使用环境

动力箱适合于下列工作环境：

1. 周围介质温度不高于 $+40^{\circ}\text{C}$ ，及不低于 $-15^{\circ}\text{C}$ ；
2. 空气相对湿度不大于 95%；
3. 振动频率不大于每分钟 600 次，其振幅不大于 0.5 毫米的地方；

4. 无爆炸危险的介质中, 且介质中无足以腐蚀金属和破坏绝缘的气体 and 导电尘埃存在的地方;
5. 有防雨雪设备和没有充满水蒸汽的地方。
6. 有凝露及霉菌存在的地方。

## II. Environment for Application

Power-Distribution Cabinets are suitable for use under the following environment conditions:

1. Ambient medium temperature neither higher than  $+40^{\circ}\text{C}$ , nor lower than  $-15^{\circ}\text{C}$ ;
2. Relative humidity not exceeding 95%;
3. Frequency of vibration not exceeding 600 per minute, and the amplitude not exceeding 0.5 mm.;
4. Free of explosive medium, harmful gases capable of corroding metal and damaging insulation. Places without conductive dust;
5. Places with rain and snow proof installation, but not filled with water vapor;
6. Even with the presence of condensed dew and fungus.

## 三、技术数据及方案

动力箱内装熔断器式刀开关 HR3, 按电流等级分为 100 安, 200 安, 400 安, 600 安四种。

## III. Description

Power-Distribution Cabinet is provided with HR3 fuse switch, the specifications for the rated current of the switch are 100A., 200A., 400A., and 600A.

## 四、主要设备技术数据

HR3 熔断器式刀开关系用 RTO 熔断器做成的二合一电器, 其额定电压: 交流至 500 伏, 直流至 440 伏; 其熔管及熔体额定电流列于表 1。

表 1

型 号	额定电流(安培)	熔 断 体 额 定 电 流 (安培)
HR3—100/33	100	30, 40, 50, 60, 80, 100
HR3—200/33	200	80, 100, 120, 150, 200
HR3—400/33	400	150, 200, 250, 300, 350, 400
HR3—600/33	600	350, 400, 450, 500, 550, 600

熔断器在 110% 额定电压, 交流回路功率因数不小于 0.3 时, 极限分断能力为 50000 安; 直流回路时间常数 0.015~0.02 秒的情况下, 极限分断能力为 25000 安。

HR3 熔断器式刀开关在交流 380 伏, 功率因数为 0.6 时能分断额定电流。



## IV. Technical Data of Main Equipment

HR3 fuse switch is the combinative apparatus of RTO fuse cartridge and knife switch, rated voltage up to 500V. A. C. and 440V. D. C. The rated current of fuse element in fuse cartridge are shown in Table 1.

Table 1

Type	Rated current (A)	Rated current of fuse element (A)
HR3—100/33	100	30, 40, 50, 60, 80, 100
HR3—200/33	200	80, 100, 120, 150, 200
HR3—400/33	400	150, 200, 250, 300, 350, 400
HR3—600/33	600	350, 400, 450, 500, 550, 600

The limiting current-interrupting capacity at 110% rated voltage should be 50KA. A. C. effective value, when the power factor of the circuit is 0.3; and 25KA. D. C. when the time constant of the circuit is 0.015-0.02 second.

HR3 fuse switch can break the rated current at A.C. power supply up to 380V., and  $\cos \phi > 0.6$ .

## 五、外形及安装尺寸

外形及安装尺寸见图 1。

## V. Over-all and Installation Dimensions

The over-all and installation dimension are shown in Fig. 1.

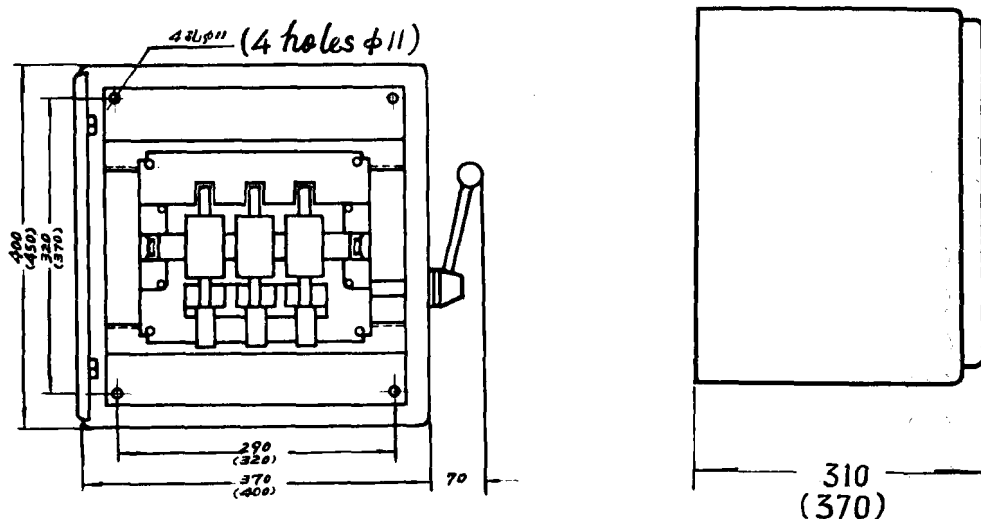


图 1 XL-12-  
100  
200  
400  
600 TH 外形尺寸与安装尺寸

注：括号内是 XL-12-600 TH 的尺寸

Fig. 1 XL-12-<sup>100</sup><sub>200</sub><sup>400</sup><sub>600</sub> TH Over all and installation dimensions.

Note: The dimensions in brackets are for XL-12-600TH

## 六、结 构

本系列动力箱系保护式，墙上悬挂安装，外壳用 2 毫米钢板弯制而成。内装 HR3 熔断器式刀开关，侧面操作，正面开门检修，电缆进出线在箱的上下侧。

## VI. Construction

XL-12TH Power Distribution Cabinet is made of 2 mm. sheet steel, in protective type for indoor wall installation. A door is provided in the front, when the door is opened, the whole interior view will be exposed so that facilitates repairing. The HR3 fuse switch is fixed on a frame of welded angle steel, the operating handle of the fuse switch is stretched out through the right side plate of the cabinet. Cables can be led into the cabinet through the knockout holes on the top or bottom of the cabinet.

## 七、安装及使用维护

1. 动力配电箱在全部装配齐全，并经检验合格后装箱运输。当产品运抵目的地后，首先需检查装箱是否完整，是否附有备件。若不是立即安装使用者，应把产品放在干燥清洁之处，以避免温度和湿度骤然变化而影响产品性能。

2. 动力配电箱墙上悬挂装置，安装螺钉螺母由用户自备。

3. 动力配电箱在安装或检修后，在投入运行前须进行下列各项检查与试验（检修后的检查与试验视其检修性质而定）：

- (1) 检查箱面漆层是否有剥落现象，箱内是否清洁；
- (2) 用手操作开关手柄是否灵活，应无卡绊现象；
- (3) 检查熔断器是否完好，有足量的备品；
- (4) 检查母线连接接触是否良好；
- (5) 检查并试验动力箱的接地装置是否可靠，检查其有无明显标志；
- (6) 用摇表测量绝缘电阻，并作耐压试验。

4. RTO 熔断器的熔片系密装在充满石英砂的熔管中（称为熔断体），当熔片因故障熔断后，需查明原因，再更换熔断体，更换时必须打开开关，带上橡皮手套，掀下熔断器横梁下部的搭钩，便可将损坏的熔断体取出。

5. 动力箱在运行时须经常注意周围环境的清洁工作，经过一定时间或遇停电机，应内外加以清洁，并应定期进行检修。

## VII. Installation and Maintenance

1. The Power-Distribution Cabinet is completely assembled and tested before packing for transportation.

Upon arriving at destination, first check whether the cabinet is in good order, and whether the spare parts are attached. If the cabinet is not installed for immediate service, it should be kept in a dry and clean place, to prevent adverse effect on its performance due to drastic changes of surrounding temperature and humidity.

2. In general the Power-Distribution Cabinet is securely suspended on the wall, mounting screws and nuts should be provided by the user.

3. After the Power-Distribution Cabinet is installed or repaired, and before it is put into operation, it should be subjected to following inspection and tests (the item of inspection and testing after repairing are determined by the nature of the repair):

(1) Inspect if the surface painting of the cabinet is peeling and the interior is clean.

(2) Operate the fuse switch with hand to check that whether it can be operated freely and see if there is any sign of jamming.

(3) Check if the fuses are in good condition, and see if the spare fuses supplied are sufficient.

(4) Check if the contact of the bus-bar is in good condition.

(5) Check and test if the grounding of the Power-Distribution Cabinet is reliable and if it is clearly marked.

(6) Measure the insulation resistance with a 500 V. megger and make a high voltage test.

4. The fuse elements of RTO fuse are sealed in the fuse cartridge with quartz filler. When the fuse element is blown, check the cause and then replace the fuse cartridge. While replacing, make sure that the load circuit is cut off. Rubber gloves are required to change the fuse cartridge from the insulation frame of fuse switch by pressing downward the clasps at the upper edge of the frame.

5. While the Cabinet is in service, it is necessary to pay attention to the clearing work in the surrounding. After a certain period of service or when power supply is temporarily suspended, make use of the opportunity to undergo a thorough cleaning inside and outside of the Power-Distribution Cabinet. Also make periodical repair.

## 八、产品成套性

动力箱附有产品合格证, 产品使用说明书, 动力箱附有根据协议提供的备用熔断体若干。

## VIII. Parts Supplied

The Power-Distribution Cabinet is supplied with a Test Certificate, Operating Instruction, and a number of spare fuse-cartridge per agreement.

## 九、订 货 须 知

订货时客户应提供下列资料:

1. 动力配电箱的型号及其台数。
2. 熔断体之额定电流, 以及备用熔断体数量。

## IX. Note for Ordering

When ordering, user should provide with the following particulars:

1. Type of the Power-Distribution Cabinet and number of Cabinets wanted.
2. Rated current of the fuse-element and the number of spare fuse-cartridges required.

