

电气防火短路灭弧保护器(HXDB02-XL)

产品使用说明

Electric fire-proof short-circuit arc-extinguishing protector

(HXDB02-XL)

Instructions for use of the product



广东省珩祥安全科技有限公司

Guangdong Province Hengxiang Security Technology Co., Ltd



感谢您使用我公司的电气防火短路灭弧保护器(HXDB02-XL),为了确保人身系统安全,并使产品得到最佳性能,在产品安装,使用和维修前,使用前请您务必详细阅读以便安全使用,希望您通过本用户手册,清楚方便的了解产品的使用,特别是警告和注意事项。

Thank you for using our company's electrical fire-proof short-circuit arc-extinguishing protector (HXDB02-XL). In order to ensure the safety of personal system and make the product get the best performance, please read it carefully before installation, use and maintenance of the product, so as to use it safely. I hope you can understand the use of the product clearly and conveniently through this user manual, especially the warnings and precautions.

产品名称 Product Name

电气防火短路灭弧保护器

Electric fire-proof short-circuit arc-extinguishing protector

产品型号 Product Model

HXDB02-XL

工作电压 Operating voltage

AC 220V±10% 50Hz

产品规格 Product Specifications

20A, 40A, 63A

产品功能 Product Features:

1. 微秒级短路限流保护功能,产品能实时检测用电线路电流,一旦发生短路故障,



能在 150 微秒内实现快速限流保护,避免短路点出现危险火花,具有电气灭弧功能,有效抑制因短路电流过大所引起的电气火灾危害。

Microsecond short-circuit current limiting protection, the product can detect the current of the power line in real time, once a short-circuit fault occurs, it can achieve rapid current limiting protection within 150 microseconds to avoid dangerous sparks at the short-circuit point, with electrical arc extinguishing function, effectively inhibit the electrical fire hazard caused by excessive short-circuit current.

2. 当被保护线路的电流超过额定电流处于过载状态、且过载持续时间超过设定时间 (3-60 秒)时,保护器即可执行过载报警与限流保护。

When the current of the protected line exceeds the rated current and is in an overload condition, and the duration of the overload exceeds the set time (3-60 seconds), the protector can execute an overload alarm and current limit protection.

3. 当保护器工作环境温度或机内元件温度超过所设定温度值时,保护器即可执行超温保护功能。

When the temperature of the working environment or the temperature of the components inside the protector exceeds the set temperature value, the protector can perform the over-temperature protection function.

4. 保护器执行限流保护时,能发出声光报警指示。

When the protector executes current limit protection, it can issue an acoustic and optical alarm indication.

5. 漏电保护功能当电路中出现漏电故障时能够快速实现限流保护功能。

Leakage protection function enables rapid current limiting protection in the event of a leakage fault in the circuit.

6. 保护器内置有线 RS-485 接口,可以将多台保护器与计算机联网,通过监控云平台实时监控、统计查询与追溯,可使用手机 APP 实现远程监控,能够提升智慧消防监控平台的安全管理。

The built-in wired RS-485 interface of the protector allows multiple protectors to be networked with a computer for real-time monitoring, statistical enquiry and tracing through the monitoring cloud platform, and remote monitoring can be achieved using a mobile phone APP, which can enhance the safety management of the intelligent fire monitoring platform.



产品应用场所 Product application sites:

本产品可适用于各种用电场所,如学校、医院、寺庙、会展、宾馆、娱乐场所、商场、住宅、仓库、电动车充电站及工厂等。此产品亦可向石油、化工、汽车、轮船、航空等领域作电气防火的延伸开发。

This product can be used in various electrical places such as schools, hospitals, temples, conventions, hotels, entertainment venues, shopping malls, houses, warehouses, electric vehicle charging stations and factories. This product can also be extended to petroleum, chemical, automobile, ship, aviation and other fields for the development of electrical fire protection.

产品外观及尺寸:

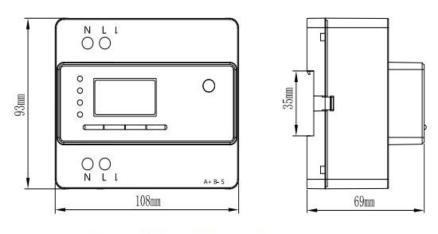
Product appearance and dimensions:

外形尺寸: 108(L)*93(W)*69(H)

Dimensions: 108(L)*93(W)*69(H)

HXDB02-XL 电气防火短路灭弧保护器(额定电流 10A-40A)

HXDB02-XL Electrical fire short circuit interrupter (rated current 10A-40A)



40A及以下规格产品尺寸



产品重量 Product weight

HXDB02-XL 毛重: 0.55KG 净重: 0.5KG

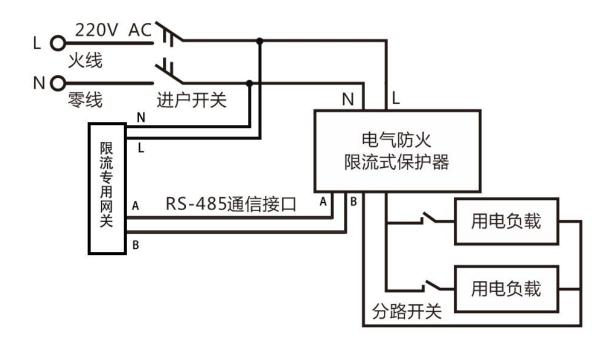
HXDB02-XL Gross Weight: 0.55KG Net Weight: 0.5KG

产品显示功能 Product display functions:

主菜单	报警功能	设定功能	高级参数
Main Menu	Alarm functions	Setting functions	Advanced
			parameters
实时时钟	短路报警	地址设定	设定电流
Real Time Clock	Short circuit alarm	Address setting	Set current
额定电流	过流报警	时间调整	风机启动
Rated current	Overcurrent alarm	Time adjustment	Fan start-up
实时电流	超温报警	高级参数	停机报警
Real-time current	Over temperature	Advanced	Stop Alarm
	alarm	parameters	
设备地址	高低压报警	报警记录查询	无线应用
Device address	High and low	Alarm record	Wireless
	pressure alarms	search	applications
设备温度	漏电报警		
Equipment	Earth leakage		
temperature	alarm		



产品接线图 Product wiring diagram:



数据通信与联网运行 Data communication and network operation:

本产品可以单机独立运行,也能通过与专用网关连接联网运行。内置通信接口RS-485 串行总线连接到监控电脑上,可以与智慧消防监控系统联机,用户可以在电脑上进行实时查询、故障追溯、远程监控等,也可以使用手机 APP,实现远程移动监控、报警。有关监控电脑联网专用软件的使用,可以参照本公司联网监控软件的使用说明。

This product can be run independently on a stand-alone basis or through a networked operation connected to a dedicated gateway. The built-in communication interface RS-485 serial bus is connected to the monitoring computer, which can be connected to the intelligent fire monitoring system. Users can make real-time enquiries, fault tracing and remote monitoring on the computer, or use the mobile phone APP to achieve remote mobile monitoring and alarming. For the use of the special software for monitoring computer networking, you can refer to the instructions for the use of our networking monitoring software.



用户可以通过显示屏上的菜单,对保护器工作参数进行设定,使之能满足用户的 不同要求。

The user can set the operating parameters of the protector via the menu on the display so that it can meet the different requirements of the user.

数据通信与联网运行 Product installation and use:

1. 本产品串联在用户进线和用电负载之间,连接线应使用截面积 4-6mm²的绝缘铜导线。保护器安装于室内集中控制开关箱内,小容量用户也可安装与小型家用配电箱内的 35mm 标准 DIN 导轨上。

This product is connected in series between the customer's incoming line and the load, the connection line should be insulated copper wire with a cross-sectional area of 4-6 mm². The protector is to be installed in a centralised indoor control switch box or on a 35mm DIN rail in a small domestic distribution box for small capacity users.

安装场所应无严重影响保护器绝缘的气体、化学性沉淀物及其他易爆、易腐蚀性介质。注意环境温度和产品散热通风。

The installation site should be free of gases, chemical deposits and other explosive and corrosive media that could seriously affect the insulation of the protector. Pay attention to the ambient temperature and product cooling and ventilation.

- 2. 保护器使用时上电后,系统进入自检状态,当听到蜂鸣器"嘀"一声后,显示屏弹 出主菜单,表示自检正常,产品处于正常工作状态。
 - When the protector is powered on, the system enters the self-test state. When a buzzer "beep" is heard, the main menu pops up on the display, indicating that the self-test is normal and the product is in normal working condition.
- 3. 本产品内部带有交流电,严禁非专业人员擅自打开机壳。使用本产品的被保护电路,在发生过负荷、短路、漏电等故障而限流保护期间,尽管线路中电流被限制在数毫安,但仍有可能带有较高的交流电压,故不允许随意触碰用电线路的金属部分。当发生短路限流报警时,应断开所有的负载分路开关后,按下保护器的复位按钮进行复位,待保护器完成自检,正常供电后依次合上各分路开关。

This product has an internal AC power supply, so it is strictly forbidden to open the housing without permission from non-specialists. In the event of an overload, short circuit, leakage or other fault in the protected circuit, although the current in the line is



limited to a few milliamps, there may still be a high AC voltage, so it is not permitted to touch the metal part of the line. When a short circuit current limit alarm occurs, all load tap switches should be disconnected and the reset button of the protector should be pressed to reset the protector and the tap switches should be closed in turn after the protector has completed its self-test and normal power supply.

当合上某一分路开关时保护器再次发出限流报警,根据声光显示状态即可判断该分路故障的性质。此时应断开该分路开关,检查该分路电气线路,将故障排除之后,即可合上该分路开关供电。当某一分路发生过载故障报警时,应减少大功率负载,在不超过该回路的额定功率后,按下保护器复位按钮,即可恢复正常供电。When a tap switch is closed, the protector will issue a current limit alarm again, and the nature of the tap fault can be judged according to the sound and light display status. At this time should be disconnected from the tap switch, check the electrical circuit of the tap, the fault will be removed, you can close the tap switch power supply. When an overload fault alarm occurs on a circuit, the high power load should be reduced and the rated power of the circuit should not be exceeded, then press the protector reset button to restore normal power supply.

4. 当发生机体超温限流保护时,表明此时负载电流过大或是环境温度过高、通风散 热不良等原因所致,应采取加强通风散热,待机体内部温度降低后,按下复位键 恢复供电。

When the body over-temperature current limit protection occurs, it indicates that the load current is too large or the ambient temperature is too high, poor ventilation and heat dissipation, etc., should be taken to strengthen the ventilation and heat dissipation, after the internal temperature of the body is reduced, press the reset button to restore power supply.

5. 本产品一般无需特殊保养和维护,仅需注意防水、防尘和通风散热即可。
This product generally requires no special care and maintenance, only attention to waterproof, dustproof and ventilation and heat dissipation.



产品规格参数 Product specification parameters:

类别	指标	参数	默认值
Category	Indicators	Parameters	Default value
	额定电压(Un)	AC 220V 50Hz	
	Rated voltage (Un)		
	额定电流(In)	20A, 40A, 63A	
	Rated current (In)		
额定值	短路保护动作时间	≤150μs	
Rating	Short circuit protection		
	action time		
	过电流限流保护	110%~150%In 可预设	120%In
	Overcurrent current limit	110% to 150% In	
	protection	presettable	
	过电流保护动作时间(s)	3~20 可设置	3
	Overcurrent protection	3 to 20 can be set	
	action time (s)		
	欠压保护	60%~95%可预设	80%
限流保护	Undervoltage protection	60% to 95% presettable	
Current	过压保护	110%~150%可预设	120%
limiting	Overvoltage protection	110% to 150%	
protection		presettable	
	漏电快速限流保护(mA)	10~30 可预设	30
	Leakage fast current limit	10 to 30 presettable	
	protection (mA)		
	机内超温保护(°C)	45~85 可预设	65



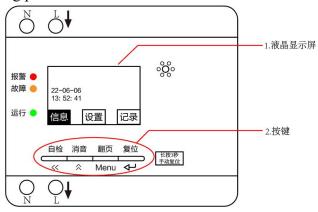


	In-machine	45 to 85 presettable	
	over-temperature		
	protection (°C)		
	报警方式	声光报警、远程报警	
	Alarm methods	Audible and visual	
		alarms, remote alarms	
セ数/36/≐	通信功能	RS485 接口,	RS485 接口
报警/通信 Alarms/Comm	Communication functions	Modbus-RTU 协议	RS485 interface,
		RS485 interface,	
unications		Modbus-RTU protocol	
	故障记录长度(条)	64	
	Fault record length		
	(entries)		



操作界面 Operator interface

1. 操作面板 Operating panels



序号 Serial number	名称 Name	功能 Function
1	液晶显示屏 Liquid Crystal Display	中文图形液晶显示屏 Chinese graphic LCD display
	自检 Self-check	进入下级 Access to lower levels
2	消音 Silencing	向上选择、翻页,修改位上数据, Selecting upwards, turning the page, modifying the data on the bit
2	翻页 Turn the page	向下选择、翻页,切换数据位 Select, page down and switch data bits
	复位键 Reset button	返回上级菜单,长按3秒进入复位界面 Return to the upper menu, press and hold for 3 seconds to enter the reset screen



2. 界面说明 Interface description

显示界面

Display interface

说明

Description

22-06-06 13: 52: 41 主界面

Main screen

信息 设置 记录

开机后默认显示此界面,显示时间日期、位于主界面时"左键"为"自检","右键"为"消音","Menu键"为"翻页",长按"确认键"为"复位"。"信息"、"设置"、"记录"选项按"Menu键"切换选项。

This interface is displayed by default after switching on, the time and date are displayed, "Left button" for "Self-test", "Right button" for "Silence", "Menu key" for "page turn", long press "Confirm key" for "reset for "Reset". For the "Info", "Settings" and "Record" options press the "Menu" key to switch between the options.

实时测量

电压: 000.0V

电流: 000.0V

温度: 023℃

信息界面一实时测量

Information interface - real time measurements

查看实时测量信息,在主界面按"确认键"查看实时测量,在实时测量界面显示电压、电流、温度。

To view real-time measurement information, press the "Confirm" button on the main screen to view the real-time measurement, the voltage, current and temperature are displayed on the real-time measurement screen.

设备信息

COMM RX:000000000

TX:000000000

Uer: 1000.225A

信息界面一设备信息

Information interface - Equipment information

查看设备信息,在信息界面中按"上键"或"下键" 切换页面查看设备信息,按"Menu键"返回主界面。

To view device information, press "Up" or "Down" in the information screen to switch pages to view device information, press "Menu" to return to the main screen.





世数にヨ	04/25
报警记录	01/35

22-06-06 短路报警

信息界面一报警记录

Information interface - Alarm logging

在主界面按 "Menu 键" 切换至记录, 再按 "确认键" 查看报警记录。

Press "Menu" in the main screen to switch to logging, then press "Confirm" to view the alarm log.

用户设置

厂家设置

设置界面

Setup screen

用户可在此界面输入用户密码"0001"进入用户设置界面,按"确认键"选择,按"左键"切换数据位,按"右键"修改位上数据,按"确认键"进入。厂家设置用于设备出场时的一些设置,禁止修改。

The user can enter the user setting interface by entering the user password "0001" in this interface, press the "Confirmation key" to select, press the "Left button" to switch data bits, press the Press "Right" to modify the data on the bit, press "Confirm" to enter. The factory settings are used for some settings when the device is out of the field and are not allowed to be modified.

系统设置

通信设置

风扇设置

报警设置

漏电报警

温度报警

短路报警

过压报警

欠压报警

过流报警

时间设置

用户设置界面

User settings screen

可修改设备各类参数设置,包括系统设置、通信设置、风扇设置、各类报警设置、时间设置,按"上键"或"下键"切换当前选择数据,按"确认键"进入下一级界面,按"Menu键"返回上一级界面。

You can modify various parameters of the device, including system settings, communication settings, fan settings, various alarm settings, time settings, press the "Up" or "Down" key to switch the currently selected data, press the "Confirm" key Press "Confirm" to enter the next level interface, press "Menu" to return to the previous level interface.





系统设置

背光延时	000s
编程密码	0001
蜂鸣器	K
事件清零	

系统设置界面

System setup screen

背光延时:设置屏幕熄灭时间,设置为000是常亮;

编程密码:用户登录时的密码,默认为"0001";

蜂鸣器:设备蜂鸣器开关;

事件清零:勾选后保存设置,设备报警事件记录清零;按"左键"或"右键"切换当前选择参数,按"确认键"选择当前参数,按"左键"切换数据位,按"右键"修改位上数据,修改完成后按"Menu键"返回。Backlight delay: sets the time when the screen goes off, set to 000 is always on;

Programming password: the user's password when logging in, the default is "0001";

Buzzer: equipment buzzer switch;

Event clear: check and save the setting, the device alarm event record is cleared;

Press the "Left" or "Right" button to switch the currently selected parameter, press the "Confirm" button to select the current parameter, press the "Left" button Press the "Left button" to switch the data bit, press the "Right button" to modify the data on the bit, press the "Menu key" to return after the modification is completed.

通信设置

从站地址	001
波特率	9600
数据格式	N81

通信设置界面

Communication settings screen

从站地址:修改设备地址;

波特率:修改通信波特率;

数据格式:修改数据格式。Slave address: modification of

the device address;

Baud rate: modification of the communication baud rate;

Data format: Modify the data format.





风扇设置

启动模式	自动
启动温度	50℃
停止温度	35℃

风扇设置界面

Fan settings screen

启动模式:设置风扇为"自动"或"常开"模式;

启动温度:风扇在"自动"状态下,设置风扇启动温

度;

停止温度:风扇在"自动"状态下,设置风扇停止运

行的温度。

Start-up mode: set the fan to "Auto" or "Always on"

mode;

Start-up temperature: set the fan start-up temperature

when the fan is in "Auto";

Stop temperature: sets the temperature at which the fan

stops running when the fan is in "Auto".

报警设置

模式	报警	延时	0.5s
漏电回滞		050)mA
温度回滞		05	\mathfrak{C}

报警设置界面

Alarm setting interface

模式:设置报警模式;

延时:设置报警延时;

漏电回滞:设置漏电报警回滞量;

温度回滞:设置温度报警回滞量。

Mode: setting the alarm mode

Delay: sets the alarm delay time

Leakage hysteresis: setting the amount of leakage alarm

hysteresis

Temperature hysteresis: Sets the amount of temperature

alarm hysteresis.

温度报警

报警跳闸	Ŋ
报警阈值	075℃

温度报警界面

Temperature alarm interface

报警跳闸:设置跳闸开关;

报警阀值:设置报警值。

Alarm tripping: setting the trip switch;

Alarm Threshold: Set the alarm value.





短路报警

重启次数 05次 自 复 位 060秒

短路报警界面

Short circuit alarm interface 重启次数:设置重启次数:自复位:设置自复位时间。

Number of reboots: Set the number of reboots:

Self-reset: Set the self reset time.

过压报警	报警
报警延时	05秒
报警阈值	100%
回滞量	005%

过压报警界面

Overpressure alarm interface

过压报警:设置过压报警工作状态;

报警延时:设置报警延时;

报警阀值:设置报警值;

回滞量:设置报警回滞量。

Hysteresis: set the alarm hysteresis.

Alarm delay: set the alarm delay time;

Alarm threshold: sets the alarm value;

Hysteresis amount: Set the alarm hysteresis amount.

欠压报警	报警
报警延时	05秒
报警阈值	085%
回滞量	005%

欠压报警界面

Undervoltage alarm interface

欠压报警:设置欠压报警工作状态;

报警延时:设置报警延时;

报警阀值:设置报警值;

回滞量:设置报警回滞量。

Hysteresis: set the alarm hysteresis.

Alarm delay: set the alarm delay time;

Alarm threshold: sets the alarm value;

Hysteresis amount: Set the alarm hysteresis amount.

	过流报警	报警	
	报警延时	05秒	
	报警阈值 200%		In
	回滞量	005%	111

过流报警界面

Overcurrent alarm interface

过流报警:设置过流报警工作状态;

报警延时:设置报警延时;

报警阀值:设置报警值;



	回滞量:设置报警回滞量。	
	Hysteresis: set the alarm hysteresis.	
	Alarm delay: set the alarm delay time;	
	Alarm threshold: sets the alarm value;	
	Hysteresis amount: Set the alarm hysteresis amount.	
时间设置	时间设置界面	
	Time setting screen	
20 <mark>22</mark> -01-03	可修改设备时间,按"左键"或"右键"切换当前选	
00: 00: 00	择参数。	
	The device time can be modified by pressing the "left" or	
	"right" button to toggle the currently selected parameter.	

售后服务 After Sales Service

1. 本产品自销售之日起,保修期限为一年包换,三年保修,在保修期内出现非人为 损坏的质量问题,本公司负责包修、包换。

From the date of sale, this product will be returned within one year and guaranteed for three years. If there is any quality problem caused by non-human damage during the warranty period, the company will be responsible for the warranty.

2. 产品使用超过保修期限的,本公司将酌情收取维修或调换所产生的材料和人工费用。

If the product is used beyond the warranty period, the Company will charge the material and labour costs incurred for repair or replacement as appropriate.



搬运和储存 Handling and storage

设备搬运,运输,储存均需在包装状态下进行,装卸过程要轻拿轻放,防止碰撞损坏。储存环境应保持通风,干燥,切忌露天存放。

The equipment should be handled, transported and stored in a packaged state. The loading and unloading process should be carried out gently to prevent collision damage. The storage environment should be ventilated and dry, and should not be stored in the open air.

保险服务

Insurance service

该产品已经向中国人民保险公司购买了产品责任险。(产品责任险每年签约的保险公司可能不同。): This product has purchased product liability insurance from China People's Insurance Company. (Product liability insurance may be signed by different insurance companies every year.):

- 1、每次事故赔偿限额 1300 万,累计赔偿限额 1500 万 The compensation limit for each accident is 13 million, and the cumulative compensation limit is 15 million.
- 2、每次事故财产损失赔偿限额 500 万 The compensation limit for property losses per accident is 5 million.
- 3、每次事故人身伤亡赔偿限额 500 万 The compensation limit for personal injury and death in each accident is 5 million.
- 4、每次事故每人人身伤亡赔偿限额 150 万元

The compensation limit for personal injury and death per person per accident is 1.5 million yuan.

- 5、赔偿情况可能随着每年续签情况会有所变化,以最新为准。 The compensation situation may change with the annual renewal, whichever is the latest.
- 6、保险承保范围为中国大陆地区(香港,澳门,台湾除外)
 The insurance coverage is in Chinese mainland (except Hongkong, Macau and Taiwan Province).

联系我们



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