

## HXDB01-ZN02-2P+4G 物联网智能多功能断路器 产品规格说明书

HXDB01-ZN02-2P+4G IOT intelligent multifunctional circuit breaker

### Product specification sheets



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 HXDB01-ZN02 物联网智能多功能防触电断路器，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，使用前请您务必仔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 HXDB01-ZN02 IOT intelligent multi-functional anti-touch circuit breaker, in order to ensure the safety of the personal system and to get the best performance of the product, before the installation, use and maintenance of the product, please make sure you read it in detail before use in order to use it safely, I hope you use this user manual to clearly and conveniently understand the use of the product, especially the warnings and precautions.

### 产品名称 Product name

HXDB01-ZN02L-2P+4G 物联网智能多功能防触电断路器

HXDB01-ZN02L-2P+4G IOT intelligent multifunctional anti-touch circuit breaker

### 产品介绍 Products Introduction

HXDB01-ZN02L-2P+4G 主要适用于交流额定频率 50Hz，额定单相不超过 230V，额定电流不超过 63A，短路能力不超过 6KA；可安装在智能电表测量系统、光伏并网、工业控制、设备、家居、办公楼宇、路灯控制系统、养老院、文物保护单位、学校、医院、农业、园林等配电电路中。具有远程控制、人工分合闸，超温保护、过欠压、过功率、电能测量、过载、短路保护、漏电保护等功能。

HXDB01-ZN02L-2P & 4G is mainly suitable for AC rated frequency 50Hz, rated single phase not more than 230V, rated current not more than 63A, short circuit capacity not more than 6KA; it can be installed in intelligent meter measuring system, photovoltaic grid connection, industrial control, equipment, home, office building, street light control system, nursing home, heritage protection unit, school, hospital, agriculture, garden and other power distribution circuits, gardening and other power distribution circuits. It has the functions of remote control, manual breaking and closing, over-temperature protection, over-undervoltage, over-power, power measurement, overload, short-circuit protection, leakage protection, etc.



## 产品规格选型

### Product specification selection

HX DB 01 - ZN 02 L - 63 / 1P / 32A / AC / RS485  
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

序号	含 义
①	企业代号
②	商标
③	型号
④	智能断路器
⑤	设计序号
⑥	带漏电；无：代表不带漏电
⑦	壳架等级C63A(注：DC或AC型产品1P/2P可做100A)
⑧	断路器极数：1P 1P+N 2P 3P 3P+N 4P
⑨	额定电流；优选：20、32、63、100A；(其他规格可定制)
⑩	AC:交流型
⑪	通讯方式；版本有：1, RS485 2, 4G

## 产品主要功能

### Product main features

主要功能:手动分合闸、远程分合闸、超温保护、过欠压保护、电参数(电压、电流、功率、功率因素、电量等)、过载保护、短路保护、及过载功率或电流限定、计量(精度1.0)、防止误合闸、漏电保护等保护等功能。

Main functions: Manual switch-off, remote switch-off, over-temperature protection, over-voltage protection, electrical parameters (voltage, current, power, power factor, electricity, etc.), overload protection, short-circuit protection, and overload power or current limit, metering (precision 1.0), protection against mis-closing, leakage protection, etc.

欠压保护可设置参数范围：100~200V；

Settable undervoltage protection range: 100 to 200V.

过压保护可设置参数范围：240~310V；

Settable overvoltage protection range: 240 to 310V.

过载保护可设置参数范围：0.6~1.0In；

Settable overload protection range: 0.6 to 1.0In.

超温保护可设置参数范围：60° C~120° C；

Settable over-temperature protection range: 0° C to 120° C.



## 主要规格参数

### Main specifications

1. 标准模数化设计, 手自一体操作方式;极数:单相 2P (54mm)  
Standard modular design, manual operation; number of poles: single phase 2P (54mm).
2. 工作电压:单相 AC230V 50/60Hz;  
Operating voltage:Single-phase AC230V 50/60Hz.
3. 额定电流: 63A; (其他规格可定制)  
Rated current: 63A; (other specifications can be customized)
4. 脱扣类型: C 型(B 可定制)  
Type of release: Type C (B can be customized) .
5. 短路分段能力:  $I_{cn}=I_{cs}=6KA$  (63A 以下 10KA)  
Short circuit segmentation capacity:  $I_{cn}=I_{cs}=6KA$  (10KA below 63A) .
6. 机械寿命大于 15000 次, 电气寿命大于 6000 次  
Mechanical life is more than 15000 times, electrical life is more than 6000 times.
7. 工作环境温度: $-40^{\circ}C\sim 70^{\circ}C$ , 海拔低于 2000m, 无显著冲击或震动环境  
Operating environment temperature: $-40^{\circ}C\sim 70^{\circ}C$ , altitude below 2000m, no significant shock or vibration environment.
8. 接线端子接线能力: 1-10 平方  
Wiring capacity of terminal block: 1-10 square.
9. 安装方式: DIN 标准导轨安装  
Mounting method: DIN standard rail mounting.
- 10、主要版本有:  
Main versions:  
根据通讯方式有:  
Depending on the communication method:
  - a) TUYA WIFI 版本  
TUYA WIFI version
  - b) ESP WIFI 版本  
ESP WIFI version
  - c) RS485 版本  
RS485 version

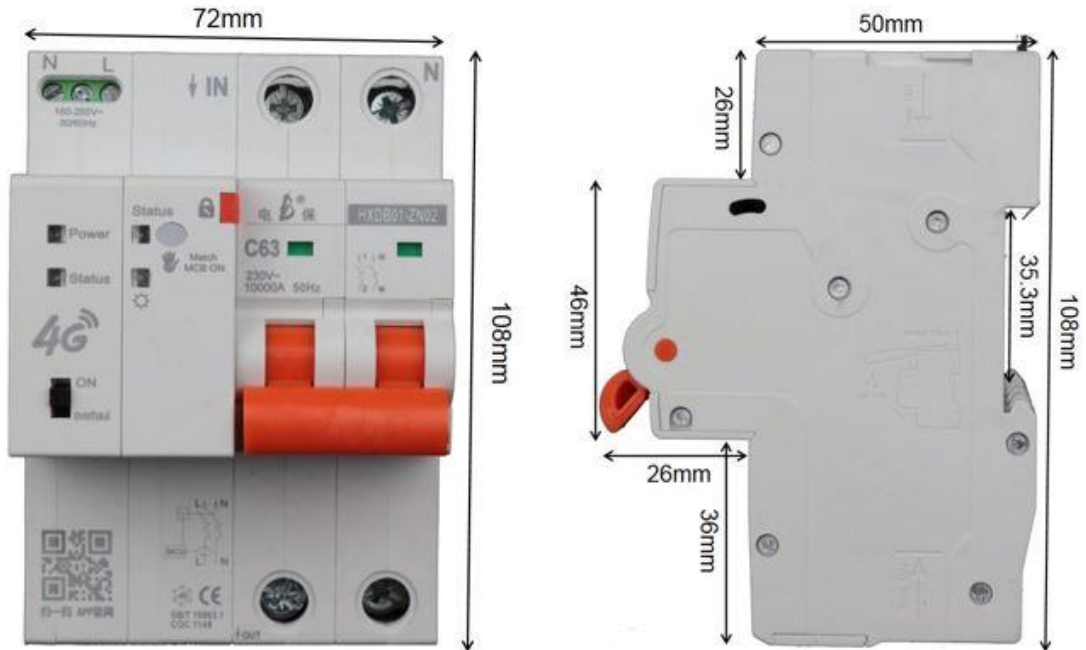
注:有其他特殊需求可定制;

Note: Other special requirements are available on request.



产品外形图

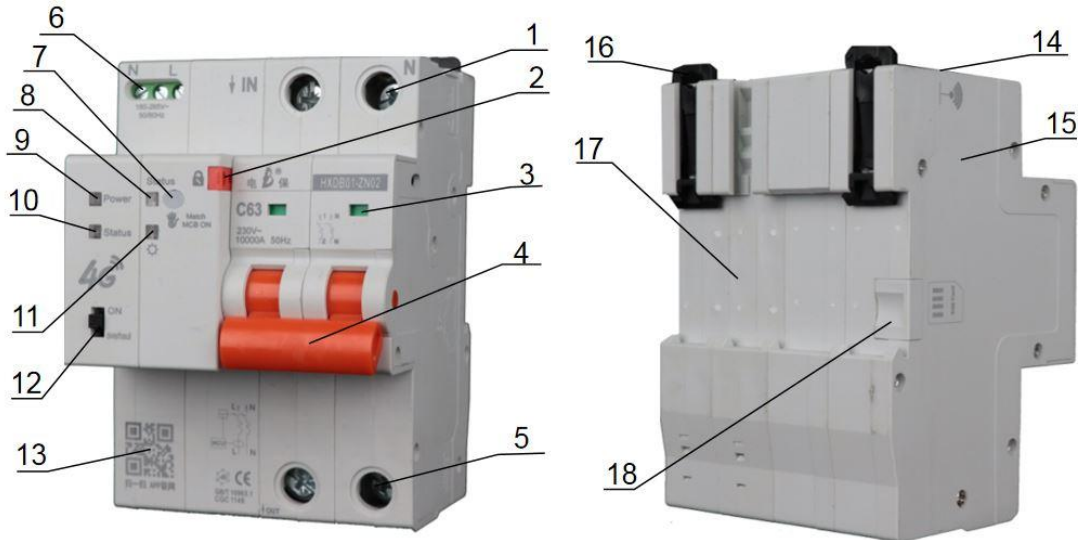
Product outline drawing





## 产品操作面板说明

### Description of the product operating panel



1. 进线接线端子 Inlet terminal
2. 保险锁（防止误合闸） Safety lock (to prevent misclosing)
3. 断路器合分指示 Breaker closing and dividing indication
4. 手动操作手柄 Manual operating handle
5. 出线接线端子 Outlet terminal
6. 通信模组工作电源输入 Communication module operating power input
7. 配网按键 Wiring keypad
8. 电源指示灯 Power indicator
9. 工作指示灯 Working indicator
10. 状态指示灯 status indicator
11. 网络指示灯 Network indicator
12. 信号开关按钮 signal switch button
13. 配网扫码 distribution network sweep
14. 4G 信号增益天线 4G signal gain antenna
15. 断路器本体 circuit breaker body
16. 安装卡 mounting card
17. DIN 导轨安装槽 DIN rail mounting slot
18. SIM 插入口 SIM insertion port

## 产品使用及注意事项

### Product use and precautions

1. 本产品 RS485 为标准配置通讯端口,可通过 RS485 转 USB 转换器与电脑及各类通讯设备连接,实现信息交换与控制;  
The RS485 communication port is standard and can be connected to computers and various communication devices via RS485 to USB converter to achieve information exchange and control.
2. 设备默认波特率为 9600bps,可在设置网关通讯菜单中查看波特率;  
The default baud rate of the device is 9600 bps, you can check the baud rate in the Setup Gateway communication menu.
3. 产品安装调试必须由专业电工实施  
Installation and commissioning of the product must be carried out by a professional electrician.
4. 本产品可根据用户需求定制,具体请联系相关技术人员;  
This product can be customized according to user requirements, please contact the relevant technical personnel.

## 产品重量

### Product weight

HXDB01-ZN02L-单相 2P-4G	0.5KG
HXDB01-ZN02L-Single phase-2P-4G	0.5kg

产品接线原理图

Product wiring schematic



物联网系统运行结构图

IoT system operating structure diagram





### 配合网关产品菜单说明：

#### Matching gateway product menu descriptions.

1. 接入正确的供电电源：AC型的须接正确的L、N；DC型的须正确的正负极，产品按接线原理图接好先后，上电，在网关上检修按钮处于“POWER ON”状态，液晶屏亮；

Access to the correct power supply: AC type shall be connected to the correct L, N; DC type shall be the correct positive and negative polarity, the product according to the wiring diagram connected to the successive, power on, in the gateway on the service button in the "POWER ON" state, the LCD screen light.

2. 如断路器未配网，此时断路器状态指示灯红色闪亮；如已配网，合闸状态：红灯常亮；分闸状态：蓝灯常亮。

If the circuit breaker is not equipped with the network, at this time the circuit breaker status indicator red flashing; such as has been equipped with the network, the closing state: red light is always on; the breaking state: blue light is always on.

3. 配网：点按菜单键，出现输入密码，此时再按菜单键确认（密码默认0000，如有修改，须输入正确密码）；进入菜单后，点按下翻键到“通讯”菜单，后按菜单键确认，进入配网和通讯设置界面

With the network: tap the menu key, enter the password, then press the menu key to confirm (password default 0000, if there is a change, you must enter the correct password); enter the menu, tap the flip down key to "communication" menu, then press the menu key to confirm, enter the network and communication settings interface.

4. 主界面模式应选择主机，根据子设备选取正确的波特率，再进入配网启动，此时，网关上显示“配网中”，下面需配网的断路器状态指示灯应处于红灯闪烁状态，然后点按断路器上白色按键；配网成功，断路器上状态指示灯转变为蓝灯闪烁，在网关上也会有数字递增；断路器逐一按完后（全变成蓝灯闪烁），在网关上再按菜单确认键，在显示屏上显示“停止”，并在右下角会显示配网成功产品的数量（最多16台），配网成功的断路器状态指示灯转成常亮状态（合闸：红灯常亮，分闸：蓝灯常亮）；点按绿色返回键，返回主界面

1. The main interface mode should be selected host, according to the sub-device



selection of the correct baud rate, and then enter the wiring start, at this time, the gateway shows "wiring in", the following circuit breaker status indicator to be wired should be in the red flashing state, and then tap the white button on the circuit breaker; wiring success, the status indicator on the circuit breaker changes to a blue flashing light, and then the gateway will also have a number increment; after the circuit breakers one by one (all become blue flashing), in the gateway and then press the menu confirmation key, in the display shows "stop" and in the lower right. After the circuit breakers have been pressed one by one (all turn blue and flashing), press the menu confirmation key on the gateway, the display will show "Stop" and the number of successful products (up to 16) will be shown in the lower right corner, and the status indicator of the successful circuit breakers will turn to a constant light (closed: red light constant, split: blue light constant). Press the green return button to return to the main interface.

## 5. 控制操作

Control operations:

- (1) 全合、全分:先点按菜单键,后输入密码,然后点按上翻或下翻键,找到菜单中“维护”菜单,点按确认,进入维护菜单;后再点按上翻或下翻键,找到“子设备”菜单,点按确认;后再按上翻或下翻键,找到“全合”或“全分”菜单,再点按菜单确认键,这样就可控制下面断路器全合或全分了。

All-close, all-divide: first tap the menu key, then enter the password, then tap the up or down key, find the menu "Maintenance" menu, tap to confirm, enter the maintenance menu; then tap the up or down key, find the "Sub-device" menu, tap to confirm; then press the up or down key, find the "All-close" or "All-divide" menu, tap to confirm. to confirm; then press the up or down key to find the "All closed" or "All divided" menu, then press the menu confirmation key, so that you can control the following circuit breaker all closed or all divided.

- (2) 单台控制:按前面 5.1 操作步骤,进入“子设备”菜单,找到“状态”菜单,再点按菜单确认键,进入后就可看到所有子设备的状态,如要控制某回路分合,点按上下翻按键,再按菜单确认键,就可控制。

Single unit control: follow the previous steps in 5.1, enter the "Sub-device" menu, find the "Status" menu, then press the menu confirmation key, you can see the status of all sub-devices after entering, if you want to control a circuit, tap the up and down button, then press the menu confirmation key. If you want to control a circuit, press the up/down button and then press the menu confirmation button.

- (3) 如要查看某设备参数,重复 5.2 操作,进入参数菜单,即可查看。

If you want to view a device parameter, repeat the operation in 5.2 and enter the parameter menu to view it.

## 6. 在网关主界面情况下,直接点按上下翻键,则可查看目前供电电源电压等参数。

In the main interface of the gateway, tap the up and down keys directly to view the current power supply voltage and other parameters.

## 基本故障排除

### Basic Troubleshooting

#### 1. 远程控制没响应:

The remote control is not responding.

- (1) 查看在主界面上双向箭头没有显示, 此时可能 SIM 卡欠费、松动或损坏, 此时进入菜单关于内, 查看 SIM 编码(20 位 数字编码); 如能查看到, 证明该卡欠费, 操作方法: 根据运营商充值流量既可开通。如不能查看到, 打开 SIM 卡插卡处盖板, 重新取出(往内轻推 SIM 卡后松开, 卡即弹出)再装入, 后能查看到卡号, 证明卡松动接触不良; 如还是查看不到, 证明卡坏, 调换 SIM 卡。

Check the two-way arrow on the main interface does not show, at this time may be SIM card arrears, loose or damaged, then enter the menu about the inside, check the SIM code (20 digit code); if you can view, prove that the card arrears, operation method: according to the operator recharge traffic can be opened. If you can't check, open the SIM card insert cover, take it out again (lightly push the SIM card inside and then release it, the card is popped out) and install it again, then you can check the card number, proving that the card is loose and has bad contact; if you still can't check, proving that the card is bad, replace the SIM card.

- (2) 查看主界面上 485 符号是否有显示, 如没有, 检查 RS485 接口是否有松动。

Check if the 485 symbol is displayed on the main interface, if not, check if there is any slack in the RS485 interface.

- (3) 随意操作按键, 显示屏没反应; 关断电源, 使网关重启。

Operate the keys at random, the display does not respond; turn off the power and make the gateway restart.

**2、控制下面子设备没响应, 检查该设备是否在线, 如不在线, 重新配网一次, 如配网不成功, 可能该设备有问题, 拆卸检查或需维修;**

2. If the control panel is not responding, check if the device is online, if not, re-match the network once, if the network is not successful, the device may be faulty and should be dismantled for inspection or repair.

## 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).

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