



珩祥科技  
HENGXIANG



广东省珩祥安全科技有限公司  
服务热线：400-765-5119

# HXDB01-WG 网关 产品规格说明书

HXDB01-WG GATEWAY

PRODUCT SPECIFICATION



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-WG网关，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 company's HXDB01-WG gateway. In order to ensure the safety of personal system and get the best performance of the product, please read it carefully before installation, use and maintenance of the product for safe use. Hope that you can understand the use of the product clearly and conveniently through this user manual, especially the warnings and precautions.

### 一、产品名称：HXDB01-WG 网关

**Product Name:** HXDB01-WG Gateway

### 二、产品介绍

#### **Product Introduction**

网关(Gateway)又叫协议转换器，是一种复杂的网络连接设备，可以支持不同协议之间的转换,实现不同协议网络之间的互联。

Gateway, which is also called protocol converter, is a complex network connection device that can support the conversion between different protocols and realize the interconnection between different protocol networks.

主要应用于水、电、气、汽管网监测；EMS（能源管理系统）信号采集、传输；市政供、排水管网、管沟监测；地下管廊环境监测。生产制造、加工企业生产过程信号采集、数据传输；MES（制造执行系统）信号采集、数据传输；危化场所环境监测。及大气环境监测、农业大棚环境监测、养殖环境监测、食品仓储环境监测信号采集、数据传输。

It is mainly used in water, electricity, gas and steam pipe network monitoring, EMS (Energy Management System) signal acquisition and transmission, Municipal water supply and drainage pipe network and pipe trench monitoring, Environmental monitoring of underground pipe gallery. Signal acquisition and data transmission in the production process of manufacturing and processing enterprises, MES (Manufacturing Execution System) signal acquisition and data transmission, environmental monitoring of hazardous chemical sites, atmospheric environment monitoring, agricultural greenhouse environment monitoring, breeding environment monitoring, food storage environment monitoring signal acquisition, data transmission.

### 三、产品主要特点

#### **Main Features of the Product:**

1. 0. 96 寸 OLED 显示屏设计，对操作人员提供直观的人机操作界面。
1. 0.96-inch OLED display design, providing operators with an intuitive human-machine interface.

2. 有检修安全锁设计,极大地保障检修人员人身安全。
2. Equipped with a safety lock, ensuring the safety of maintenance personnel to a great extent.
3. 独立开关电源设计,最大输出可达 DC12V3A。
3. Independent switch power supply design, with a maximum output of DC12V3A.
4. 模块化设计,整体保留了断路器外形特点,可 35mm 导轨上安装。
4. Modular design, which retains the appearance characteristics of circuit breakers and can be installed on a 35mm guide rail.
5. 可灵活选择通讯方式;通讯波特率 9600-38400 可选
5. Flexible communication modes can be selected; communication baud rates of 9600-38400 are available
6. RS485 支持 DL/ T645/Modbus 协议并自动转换
6. RS485 supports DL/T645/Modbus protocols and automatically converts between them;
7. 断电保护设计:保障主电路断电后数据保存和上传不丢失
7. Power failure protection design: ensuring that data is saved and uploaded without loss after the main power supply is cut off
8. 本地上百条事件记录存储,可随时查看,以便事故原因分析
8. Local storage for hundreds of event records, which can be viewed at any time for accident cause analysis
9. 支持多种远程 OTA 升级模式,让设备升级维护不再困扰
9. Supports multiple remote OTA upgrade modes, making equipment upgrades and maintenance no longer troublesome.
10. 宽工作电压, 4G 支持全网通
10. Wide working voltage, 4G support full netcom

#### 四、主要规格参数

##### Main Specifications:

1. 标准模数化产品宽度 36mm  
Standard modular product width of 36mm
2. 工作电压: AC165~285V、DC15~95V  
Operating voltage: AC165-285V, DC15-95V

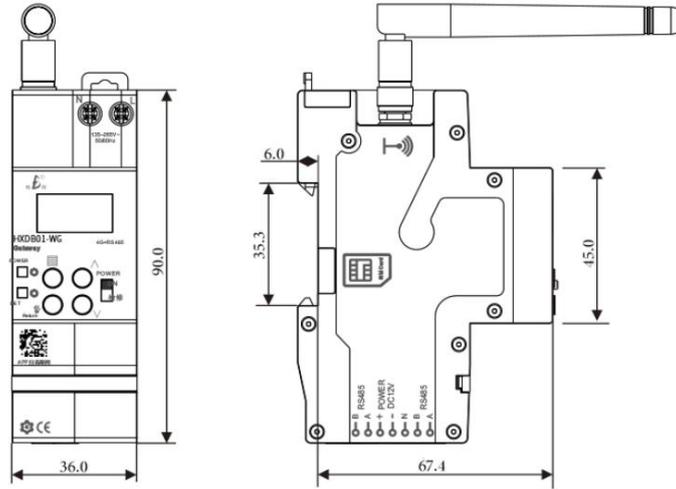
3. 工作环境温度：-40° C~70° C  
Operating ambient temperature: -40° C to 70° C
4. 工作模式:透明传输模式、HTTPD 模式、UDC 模式  
Operating modes: transparent transmission mode, HTTPD mode, UDC mode
5. 网络协议: TCP/DNS/HTTP/FTP  
Network protocols: TCP/DNS/HTTP/FTP;
6. 支持频段: FDD-LTE (联通 4G)TD-LTE (移动 4G)、FDD-LTE (电信 4G)  
Supported frequency bands: FDD-LTE (China Unicom 4G), TD-LTE (China Mobile 4G), FDD-LTE (China Telecom 4G)
7. RS485 支持 9600bps-38400bps  
RS485 supports 9600bps-38400bps;
8. 输出 DC12V 3A 接线端口  
DC12V 3A output wiring port
9. 可支持 16 路数据采集  
Supports up to 16 channels of data acquisition;
10. 主要版本有:  
Main versions:  
根据电源供电方式有: AC230V 和 DC48V  
According to power supply mode: AC230V and DC48V  
根据通讯方式有:  
According to communication mode:
  - a) 4G+RS485;
  - b) RJ45+RS485;
  - c) 4G+RJ45+RS485;
  - d) RS485+RS485;

注:有其他特殊需求可定制;

Note: Customization is available for other special requirements.

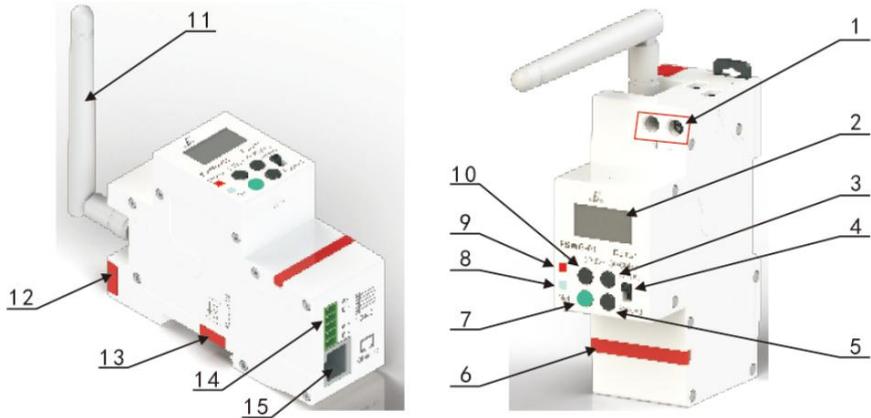
## 五、产品外形图

### Product outline drawing



## 六、产品操作面板说明

### Product operation panel description



- |             |              |               |
|-------------|--------------|---------------|
| 1, 电源接线端子   | 2, 液晶显示屏     | 3, 菜单上翻键      |
| 4, 检修开关     | 5, 菜单下翻键     | 6, RS485盖板    |
| 7, 菜单返回键    | 8, 网络指示灯     | 9, 电源指示灯      |
| 10, 菜单及确认键  | 11, 4G信号增益天线 | 12, TYPE-C编程口 |
| 13, SIM卡插入口 | 14, RS485接口  | 15, RJ45网络口   |

## 七、产品使用及注意事项

### Product Usage and Precautions

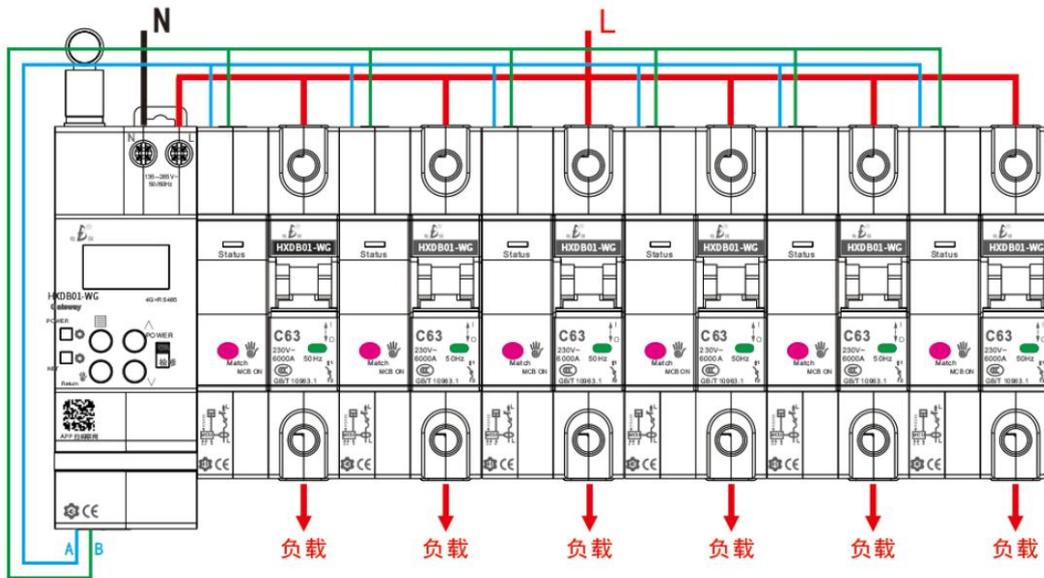
1. 本产品 RS485 为标准配置通讯端口, 可通过 RS485 转 USB 转换器与电脑及各类通讯设备连接, 实现信息交换与控制。

The RS485 is the standard communication port of this product and can be connected to computers and various communication devices through an RS485 to USB converter for information exchange and control.

- 设备默认波特率为 38400bps，可在设置通讯菜单中查看和设置需要的波特率。  
 The default baud rate of the device is 38400bps, which can be viewed and set in the communication settings menu.
- 4G 版产品，使用前必须插入 SIM 卡，方可实现远程信息交互控制。  
 For the 4G version of the product, a SIM card must be inserted before it can realize remote information exchange and control.
- 产品安装调试必须由专业电工实施。  
 Installation and debugging of the product must be carried out by professional electricians.
- 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 needs. Please contact the relevant technical personnel for details.

## 八、产品接线原理图

Product Wiring Schematic



## 九、产品菜单说明：

### Product Menu Instructions:

- 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  
 Connect the correct power supply: For AC type, connect the correct L and N; for DC type, connect the correct positive and negative poles. Follow the wiring diagram and turn on the power. The LCD screen should be on when the maintenance button on the gateway is in the "POWER ON" state.

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 connected to the network, the circuit breaker status indicator light will flash red. If it is connected to the network, the closed state is indicated by a solid red light, and the open state is indicated by a solid blue light.

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

Network Configuration: Press the menu button and enter the password (default 0000, if modified, enter the correct password). Then press the menu button again to confirm. After entering the menu, press the down arrow key to access the "Communication" menu and press the menu button to confirm. This will take you to 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

Select the "Host" mode in the main interface and select the correct baud rate based on the sub-device. Then enter the network configuration startup. At this time, the circuit breaker status indicator light that needs to be networked should be flashing red. Press the white button on the circuit breaker. When the network is successful, the circuit breaker status indicator light will change to flashing blue, and the number will increase on the gateway. After all the circuit breakers have been pressed, (all turn blue flashing), press the menu confirm button on the gateway. The display will show "Stop", and the number of successfully networked products (up to 16) will be displayed in the lower right corner. The circuit breaker status indicator light that is successfully networked will remain on (closed: solid red, open: solid blue). Press the green return button to return to the main interface.

5. 控制操作：

Control Operation:

(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。

(1) Full close and full open: Press the menu button, enter the password, and then press the up or down arrow key to find the "Maintenance" menu in the menu. Press confirm to enter the maintenance menu. Then press the up or down arrow key again to find the "Sub-device" menu, and press confirm. Then press the up or down arrow key again to find the "Full Close" or "Full Open" menu and press the menu confirm button to control all circuit breakers to close or open.

(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。

(2) Single circuit control: Follow the steps in 5.1 to enter the "Sub-device" menu, find the "Status" menu, and press the menu confirm button to see the status of all sub-devices. To control a particular circuit, press the up or down arrow key and then press the menu confirm 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。

(3) To view the parameters of a device, repeat the steps in 5.2 to enter the parameter menu and view them.

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 gateway main interface, you can directly press the up or down arrow key to view the current power supply voltage and other parameters.

## 十、基本故障排除

### Basic Troubleshooting

#### 1. 远程控制没响应

Remote control is unresponsive:

(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。

(1) Check if the bidirectional arrow is not displayed on the main interface. At this time, it may be due to SIM card arrears, loose or damaged. Enter the "About" menu to view the SIM code (a 20-digit digital code); if it can be viewed, it proves that the card is in arrears. The operation method is to recharge the traffic according to the operator's recharge flow. If you cannot view it, open the SIM card slot cover and take it out again (push the SIM card inward and release it, and the card will pop out) and install it again. If you can view the card number afterwards, it proves that the card is loose and poorly connected. If you still cannot view it, it proves that the card is damaged and needs to be replaced.



(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。  
(2) Check if the RS485 interface is loose if the 485 symbol is not displayed on the main interface.

(3) 随意操作按键，显示屏没反应；关断电源，使网关重启。  
(3) If the display screen does not respond after operating the buttons at will, turn off the power and restart the gateway.

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. The sub-devices under control are unresponsive. Check if the device is online. If it is not online, try to reconfigure the network. If the network configuration is unsuccessful, the device may have a problem, and it needs to be disassembled for inspection or repaired.

## 十一、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 has a one-year warranty and a three-year warranty period. If there is a quality problem that is not caused by human factors during the warranty period, the company is responsible for repairing or replacing it.

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 for the materials and labor costs incurred for repair or replacement at its discretion.

## 十二、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。

Equipment transportation and storage should be carried out in the packaging state, and the loading and unloading process should be handled gently to prevent

collision damage. The storage environment should be kept ventilated, dry, and avoid outdoor storage.

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