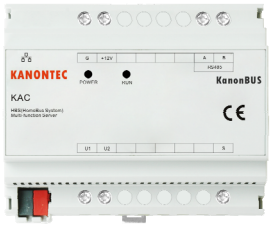
KAC 空调直连网关/主机

HBS (Home BUS) Server

操作说明书



订货号. (KAC00X-YY)

X: 为子型号（1/2/5/8）

YY: 为空调品牌缩写 DK/TB/MSE/HT

注意

RISK

All work carried out on the unit may only be performed by skilled electricians. Observe the regulations valid in the country of use, as well as the valid KNX guidelines

CAUTION

Do not connect the main voltage (230 V) or any other external voltage to any point of the BUS, except for the specific connections.

概述

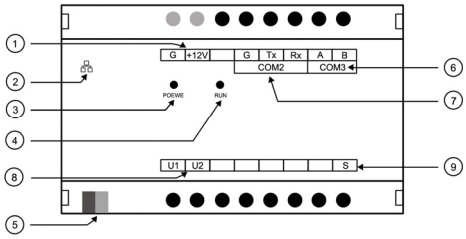
KAC 多功能系统集成网关，可将 HBS 协议与各种流行的通信协议(基于 RS485 及 RS232 的各种通信协议，TCP/IP、UDP 协议，BACnet/IP 协议, Modbus RTU/TCP 等)进行集成和相互转换，可以为您实现真正的智能化解决方案。尤其适用于日系的 VRV 中央空调多联机系统。

型号	接口	功能
KAC001-(DK/TB/MSE/HT)	1xHBS 1xRS485	- RS485/Modbus RTU - 逻辑控制
KAC002-(DK/TB/MSE/HT)	1xHBS 1xAPP	- IOS/Android/PC 软件 - 云服务器功能 - 空调直连接口(U1/U2) - 逻辑控制
KAC005-(DK/TB/MSE/HT)	1xHBS 1xAPP 1xKNX	- IOS/Android/PC 软件 - 云服务器功能 - 空调直连接口(U1/U2) - KNX/EIB 接口 - 逻辑控制
KAC008-(DK/TB/MSE/HT)	1xHBS 1xAPP 1xKNX 1xRS485 1xRS232	- IOS/Android/PC 软件 - 云服务器功能 - 空调直连接口(U1/U2) - KNX/EIB 接口 - 逻辑控制 - 基于 RS485 的各种协议 - 基于 RS232 的各种协议 - 逻辑控制

特点及典型应用

- 适用于直接连接 HBS (Home BUS) 系统的中央空调多联机或系统；
- 适用于智能家居控制系统或中控系统直接控制 HBS 多联机
- 适用于标准 RS485 温控面板直接控制 HBS 多联机
- 适用于楼控 BA/BMS 对 HBS 多联机进行数据监控
- 可以控制空调室内机的开关、风速、模式、温度等
- 可以反馈空调室内机的开关状态、风速状态、模式状态、温度设定状态、室内温度状态等；
- 对接协议支持标准 Modbus RTU/TCP、BACnet/IP、自定义 RS232/RS485、TCP/IP 或 UDP 等
- 支持可视化 APP。
- 适用于 iPad/iPhone/Android/Windows PC 等
- 支持定时、逻辑运算等等
- 支持远程调试/远程配置

模块说明

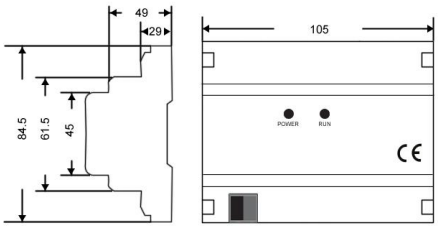


① 电源供电 12V DC
② Ethernet 网络接口
③ LED Power 电源指示灯
④ LED RUN 运行指示灯
⑤ KNX/EIB 接口 (**KAC005/KAC008**)
⑥ Modbus/RS485 (**KAC001/KAC008**)
⑦ RS232 接口 (**KAC008**)
⑧ HBS 接口
⑨ 系统复位按钮

操作指示灯

LED Power 亮	模块已上电
LED RUN 亮	网关启动完毕
LED RUN 闪烁	网关收到数据正在处理

安装接线



① **安装：**
网关符合 DIN 35mm 标准化导轨安装，安装尺寸见上图。拉动模块下方的弹簧片即可将模块很方便地卡在标准化导轨上。

② **接线：**
- 按照标签接上 12V 辅助电源，请注意正极和负极
- 通过 HBS U1 U2 接入空调系统（无极性）
- 插上网线至路由器/交换机或与 PC 直连（注意需相同局域网环境内）
- 将 RS485 接入第三方系统

③ **启动：**
上电时 Power 电源指示灯亮。启动完毕(约 15 秒), RUN 指示灯亮

④ **配置管理：**
打开浏览器（不要使用 IE，建议使用 Firefox/Google Chrome）
默认配置如下：

username	**admin**
password	**123**
IP address	**192.168.1.232**
Port	**80**

⑤ **出厂设置复位：**
长按设备右下角轻触开关 6 秒以上， 直至 RUN 指示灯快速周期性闪烁(0.1s)后设备将自动重启，RUN 指示灯灭。等 RUN 指示灯恢复亮起，网关的 IP 网络参数、串口设置及启动模式将自动复位。

⑥ **系统集成**
具体对接点表及注意事项参见相关点表

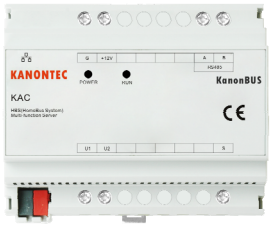
技术参数

电源供电	12V DC
电流消耗	< 300 mA
处理器	工业级 32 位 ARM9 系列 CPU。实时时钟 RTC，具有掉电保护功能。内置硬件看门狗(WDT)，防止系统死机。
工作温度	0°C ... +70°C
储存温度	-25°C ... +85°C
防护等级	IP20
模块尺寸	6 X 17.5mm DIN-Rail

KAC, Host For HVAC

HBS (Home BUS) Server

User Manual



Order No. (KAC00X-YY)

X: means sub-Type 1/2/5/8

YY: means DK/TB/MSE/HT

Attention

⚠ RISK

All work carried out on the unit may only be performed by skilled electricians. Observe the regulations valid in the country of use, as well as the valid KNX guidelines

⚠ CAUTION

Do not connect the main voltage (230 V) or any other external voltage to any point of the BUS, except for the specific connections.

Abstract

The KAC Host can make the integration between VRV/VRF air-conditions (especially for HBS based systems such as Daikin, Toshiba, Hitachi, Mitsubishi, etc.) and other terminals or protocols (RS485/RS232 based, Modbus, Bacnet, TCP/IP, etc)

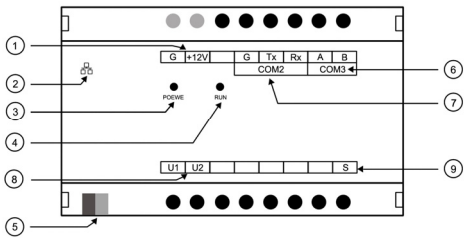
The KAC series has different types:

Type	Port	Functions
KAC001-(DK/TB/MSE/HT)	1xHBS 1xRS485	- RS485/Modbus Slave - Logic control
KAC002-(DK/TB/MSE/HT)	1xHBS 1xAPP	- APP for IOS/Android/PC - Cloud monitor & control - HBS Port(U1/U2) - Logic control
KAC005-(DK/TB/MSE/HT)	1xHBS 1xAPP 1xKNX	- APP for IOS/Android/PC - Cloud monitor & control - HBS Port(U1/U2) - KNX/EIB Port - Logic control
KAC008-(DK/TB/MSE/HT)	1xHBS 1xAPP 1xKNX 1xRS485 1xRS232	- APP for IOS/Android/PC - Cloud monitor & control - HBS Port(U1/U2) - KNX/EIB Port - RS485 based protocols - RS232 base protocols - Logic control

Features & Applications

- Suitable for controlling VRV/VRF HVAC systems. (Daikin, Toshiba, Hitachi, Mitsubishi Electric.)
- Suitable for Home-automation systems or BA/BMS which needs to monitor/control the VRV/VRF systems
- Controlling ON/OFF, Mode choice, Set-point, Fan-Speed.
- Monitor ON/OFF, Mode choice, Set-point, Fan-speed, room-temperature.
- Suitable for many standard protocols such as Modbus, BACnet/IP, TCP/IP, KNX TP1, KNXnet/IP, etc
- Type which has APP-function can be suitable for iPad/iPhone/Android/Windows PC etc.
- Type which has APP-function can be connected remotely (using Kanontec-Cloud)
- Logic functions/timing, etc supported
- Make configuration remotely

Operating Elements

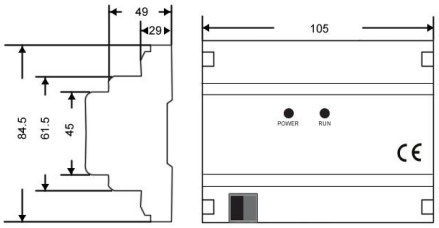


① Power supply 9~30V DC
② Ethernet
③ LED Power Indicator
④ LED RUN Indicator
⑤ KNX/EIB (**KAC005/KAC008**)
⑥ Modbus RTU/RS485 (**KAC001/KAC008**)
⑦ RS232 (**KAC008**)
⑧ HBS Port(Non-Polarity)
⑨ System-Reset Button

LED Indicator

LED Power ON	Device is power on
LED RUN ON	Device started OK
LED RUN Flash	Device is processing

Wiring & Connect



① **Mounting**
the device is suitable for installation in the connection unit or small enclosures for fast installation on 35mm mounting rails to DIN EN 60715.

② **Connection**
connecting it with 9~30V DC power supply. Connecting the U1 and U2 to VRV/VRF Outdoor or Indoor unit. Connect the RS485 to Home-automation system. Connect the Ethernet to Router.

③ **Startup**
LED RUN will be ON-status when the Gateway starts successfully. (ca. 15s)

④ **Configuration**
Open the Web browser (Firefox/Chrome, do not use IE or IE based Browser)

username	**admin**
password	**123**
IP address	**192.168.1.232**
Port	**80**

⑤ **Reset back to factory**
Long press the Reset button (at right-down) above 6 seconds, then RUN Led indicator will be flashed every 0.1 second. The Device will be reboot automatically, then IP settings, Serialport settings will be reset.

⑥ **Integrations**
please read the Integration Point list.

Technical Data

Power supply	9~30V DC
Current consumption	< 300 mA
CPU	Freescale iMX283, ARM9; RTC integrated; Hardware-Watchdog (WDT) integrated.
Temperature	0ºC ... +70ºC
storage	-25ºC ... +85ºC
IP Class	IP20
Size	6 X 17.5mm DIN-Rail