Eave Series Knob Temperature Control Panel

Instruction Manual

MPHX-4B-BP.18

Before using this product, please read this manual carefully and keep it properly!

Document Version：C

◇◆ Overview

Eave Series Knob Temperature Control Panel (hereinafter referred to as the “product” or “device”) features mechanical buttons and a knob for controlling AC, fresh air and floor heating. The color and brightness of the button indicator light can be customized through HDL Studio to meet different user needs.

Main functions:

- Built-in temperature and humidity sensor: supports sending local temperature and humidity values, used for inputting scene and automation control conditions
- Proximity detection: Once the sensor detects nearby human motion, the touch screen automatically wakes up.
- Custom color and brightness of the button indicator light, set through HDL Studio
- Custom brightness of knob light ring, set through HDL Studio
- Separate pages for air conditioning, floor heating and fresh air, each controlling only one device;
- Panel control function: device selection; air conditioning switch/mode/temperature/wind speed setting; Floor heating switch/temperature/mode setting; Fresh air switch/speed/mode setting.
- Button lock/unlock function
- Support HDL Buspro online upgrade

◇◆ Appearance

Eave Series Knob Temperature Control Panel has 4 buttons and 1 knob, and button serial number are as follows:

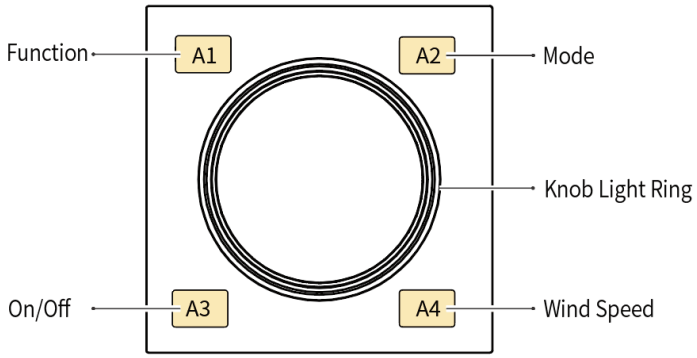


Figure 1

◇◆ Technical Data

Item	Parameter

Rated voltage	24V DC
Rated current	78mA/24V DC
Communication protocol	Buspro
Cable diameter of Buspro terminal	0.6-0.8mm
Working temperature	-5℃~45℃
Working relative humidity	≤90%
Storage temperature	-20℃~60℃
Storage relative humidity	≤93%

◇◆ Specifications

Item	**Parameter**
Dimensions (W X H X D)	86×86×8.1/20.22(mm)
Net weight	146g
Housing material	Aluminum alloy
Installation	Wall box (See Figure 6)
IP degree (compliant with EN 60529)	IP20

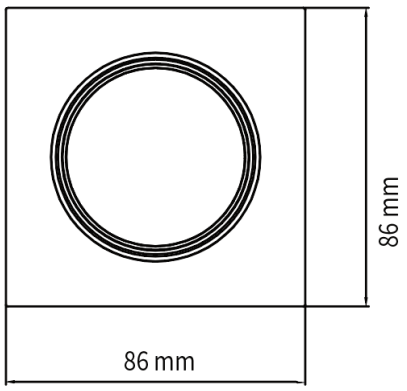


Figure 2

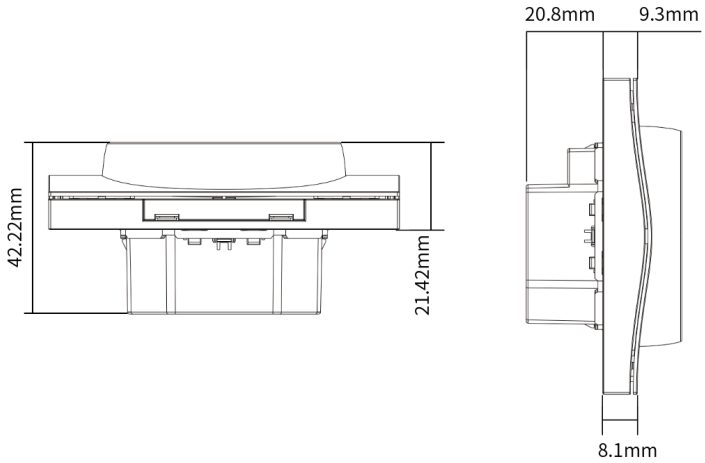
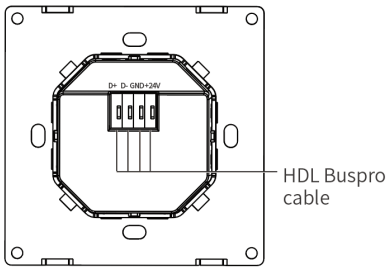


Figure 3



Buspro Panel Power Interface EU

Figure 4

◇◆ Safety Precaution

Please do not privately disassemble or replace any parts of the product. Otherwise, it may cause mechanical fault, electric shock, fire or personal injuries.

Warning:

- The installation and testing for the product must be carried out by HDL Automation Co., Ltd. (hereinafter referred to as HDL) or its appointed service agencies. The electric construction shall comply with local laws and safety regulations.
- HDL will not be responsible for any consequence caused by the inexpert or faulty installation and wiring methods, which are not in accordance with the instructions contained in this datasheet.
- Please contact HDL after-sales departments or our designated service agencies for your maintenance service. Product failures caused by private disassembly are not subject to the warranty.
- It is not allowed to change the usage scenario or conditions, expand the transmission frequency range, increase the transmission power (including installing additional RF power amplifiers), or change the transmission antenna without authorization.
- No harmful interference shall be caused to other legitimate radio stations, nor shall protection against harmful interference be proposed.
- It should withstand interference from industrial, scientific, and medical (ISM) application equipment that radiates radio

frequency energy or other legitimate radio stations.

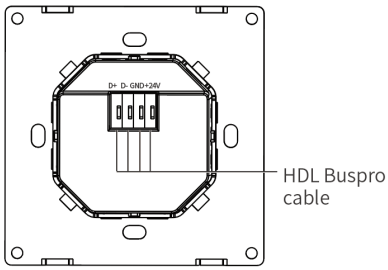
- If harmful interference occurs to other legitimate radio stations, the use should be immediately stopped and measures should be taken to eliminate the interference before continuing to use.
- Radio observatories, meteorological radar stations, and satellite earth stations (including measurement and control, ranging, and reception) established inside aircraft and in accordance with laws, regulations, relevant national provisions, and standards.
- The use of low-power equipment in electromagnetic environment protection areas such as navigation stations, military and civilian radio stations, airports, etc. shall comply with the regulations of electromagnetic environment protection and relevant industry regulatory authorities.
- It is prohibited to use various model remote controllers within a radius of 5000 meters from the center point of the airport runway.
- When using low-power devices, the environmental conditions are -5 ℃~45 ℃ and the input voltage is AC 100-240V (50/60Hz).

Caution:

- Before performing any installation or disassembly procedures on the device, it is crucial to disconnect the device from all voltage sources. This step is necessary to ensure the safety of the technician and prevent any potential damage to the device.
- It is a MUST to install the device with wall box.
- Maximum wireless transmission distance of 30 meters. Due to obstacles that can shorten the wireless transmission distance, to ensure good communication, it is recommended to install this device in an open area and avoid installing it near large metal objects.
- To protect this device and loads, it is recommended that a 5A circuit breaker be connected to each circuit.
- Do not use corrosive liquid to wipe the device body, especially the interface, so to avoid damage to the device.
- Prior to performing maintenance or cleaning on the device, disconnect the device from all voltage sources, to avoid electric leakage and electric shock.

◇◆ Wiring

- For Buspro connection, a hand-in-hand connection is recommended. Please wire according to HDL standards: D+, D-, GND and +24V.



Buspro Panel Power Interface EU

Figure 5

◇◆ Installation

- **Warning**: Before installation, please cut off the power supply, it is strictly prohibited to operate with electricity.
- **Note**: Before installation, please get the necessary cables ready in the wall box.

Step 1: . Install the wall box (the depth of wall box should not be less than 45mm) on the wall and lead out Buspro cable . Connect the cables, and pay attention to safe and reliable wiring.

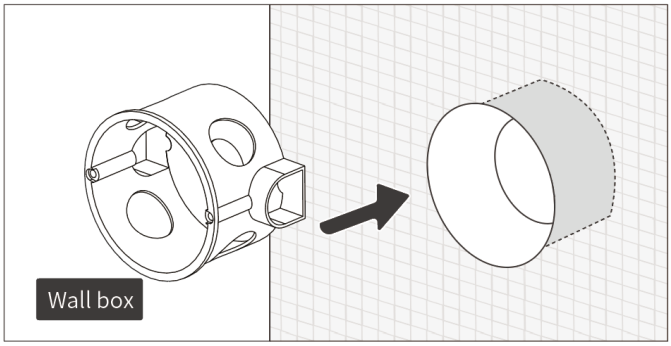


Figure 6

Step 2: Stick the frame onto the wall and align the opening to the wall box.

Step 3: Insert the power base into the frame, aim the screws on both sides of the base at the holes in the wall box, install them together and lock the screws.

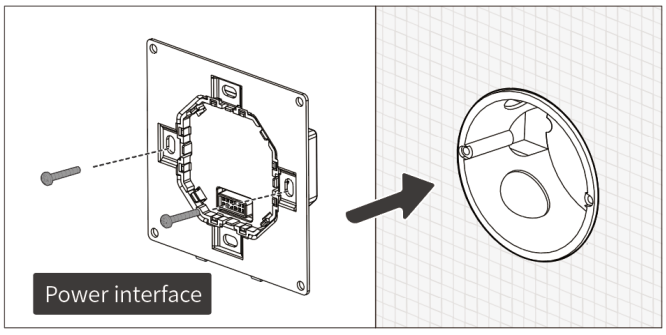


Figure 7

Step 4: Align the panel pins with the base holes, press gently and install on the base.

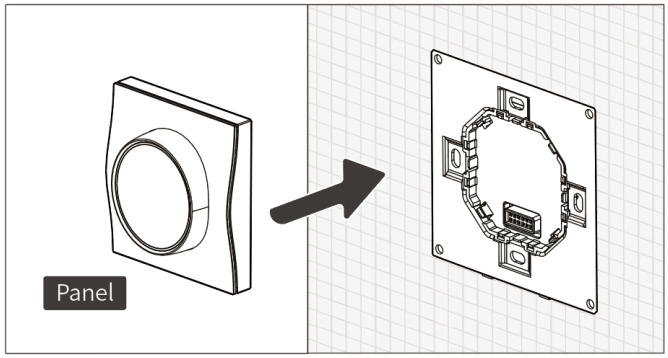


Figure 8

Multi-gang installation:

- Supports horizontal and vertical installation;
- Horizontal installation supports up to 4 rows;
- Vertical installation supports up to 4 columns.

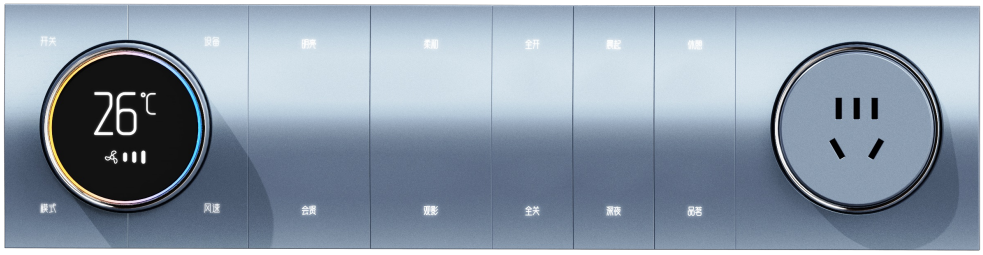


Figure 9

Figure 10

◇◆ Disassembly

Warning: Before performing any disassembly procedures on the device, it is crucial to disconnect the device from all voltage sources. This step is necessary to ensure the safety of the technician and prevent any potential damage to the device.

Step 1. It is recommended to use a screwdriver to pry the panel open from the bottom.

Step 2. To remove the panel and power base, please refer to the section Installation and do it reversely.

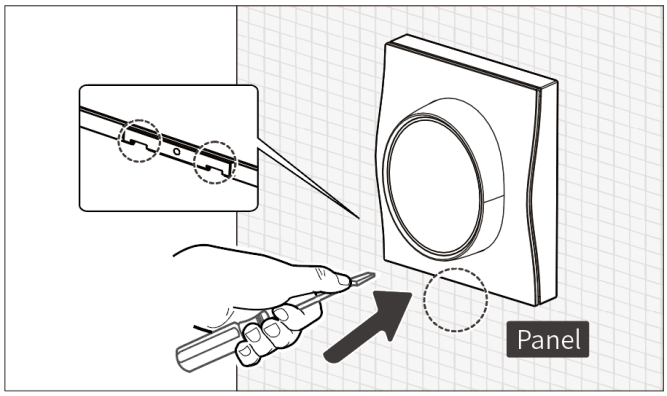


Figure 11

◇◆ Operation

Eave Series Knob Temperature Control Panel has 4 buttons and 1 knob, and button serial number are as follows:

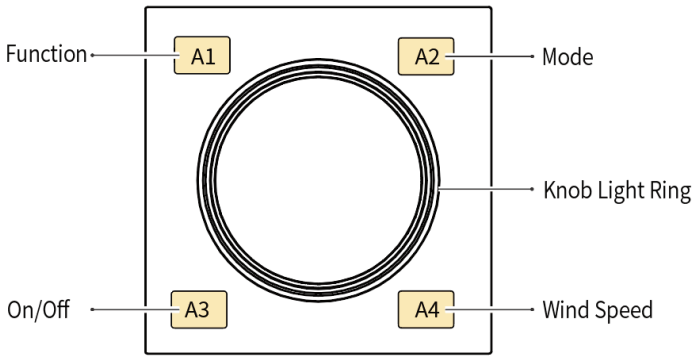


Figure 12

- Button

Procedure	Result
Click on A1 button	Switch between AC, floor heating, and fresh air pages
Click on A2 button	Switch between AC, floor heating, and fresh air
Click on A3 button	AC switch, floor heating switch, fresh air switch
Click on A4 button	AC speed switching, fresh air speed switching

Rotate the knob	Rotate clockwise to increase temperature, and counterclockwise to decrease temperature

- Knob

Device Mode	Knob Light Ring Status
AC	Cooling is blue, heating is orange, ventilation is green, dehumidification is white, and automatic is green
Floor heating	All modes are orange
Fresh air	All modes and speeds are orange

- LED Indicator

LED Indicator Status	Device Status
All button LED indicators flash alternately for 10 seconds	Device locating

- Programming Mode

Procedure	Result
Press and hold any button for about 15 seconds, all backlight lights will turn blue, and then flash slowly	This device will enter programming mode and automatically exit after 120 seconds

◇◆ Packing List

Panel*1

◇◆ Copyright Statement

Update History:

The form below contains the information of every update. The latest version contains all the updates of all former versions.

Version	Update Information	Date
V1.0	Initial release	February 19, 2025
V1.1	Update installation instructions	July 14, 2025

◇◆ Technical Support

E-mail: hdltickets@hdlautomation.com

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