Eave Series Button Smart Panel

Instruction Manual

MPBX-2/4/6B-BP.18

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

Document Version：C

◇◆ Overview

Eave Series 2/4/6 Button Smart Panel features mechanical buttons and supports multiple press modes and button control types. It can achieve basic control functions such as switching, dimming, color temperature, RGB control, curtains, scenes, etc., and has a built-in temperature sensor that can detect the local ambient temperature and upload it to the bus; Each group of buttons can be customized with laser engraving and support RGB indicator function for buttons. The color and brightness of the button indicator light can be customized through HDL Studio to meet different user needs. Eave series panels are only available in metal version, and their excellent performance and wide range of application scenarios make them an ideal choice for modern home intelligent design solutions.

Product Name	Product Model
Eave Series 2 Button Smart Panel	MPBX-2B-BP.18
Eave Series 4 Button Smart Panel	MPBX-4B-BP.18
Eave Series 6 Button Smart Panel	MPBX-6B-BP.18

Main functions:

- Light control: switch, dimming, color temperature and RGB
- Curtain control: supports curtain opening, closing, stopping, and percentage control
- Scene control: supports one click scene control
- Built in temperature sensor: supports sending local temperature values to the bus, used for inputting scene and automation control conditions
- RGB LED indicator function: supports custom button indicator light brightness and color configuration
- Button locking function: Supports panel button locking function to prevent external personnel from manually controlling the panel or children from accidentally touching it
- Proximity detection: Once the sensor detects near human motion, the touch screen automatically wakes up.
- Button text laser engraving customization: supports custom button laser engraving, which can engrave text size and content according to user needs, making it easy to identify the target controlled by the corresponding button

◇◆ Appearance

Eave series button panel includes: 2/4/6 button panels, the panel front view and button numbers are as follows:

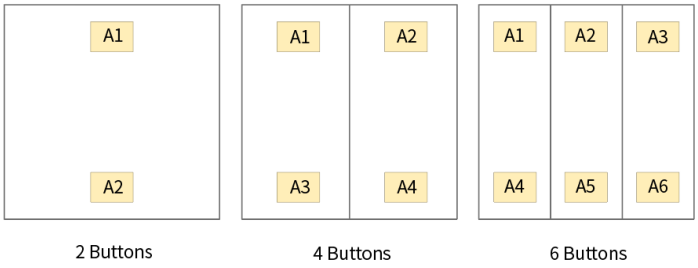


Figure 1

◇◆ Technical Data

Item	Parameter
Rated voltage	24V DC
Rated current	2 Buttons：26mA/24V DC 4 Buttons：36mA/24V DC 6 Buttons：45mA/24V DC
Communication protocol	HDL 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)	86×86×8.1/12.1(mm)
Net weight	77.6g
Housing material	Aluminum alloy
Installation	Wall box (See Figure 6)
IP degree (compliant with EN 60529)	IP20

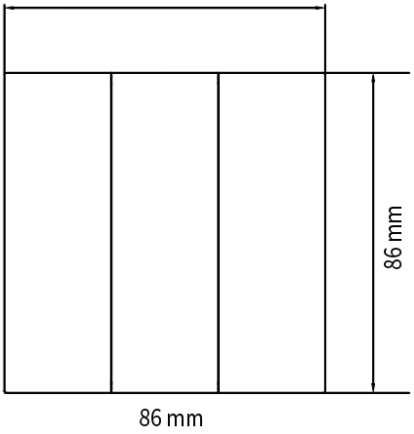


Figure 2

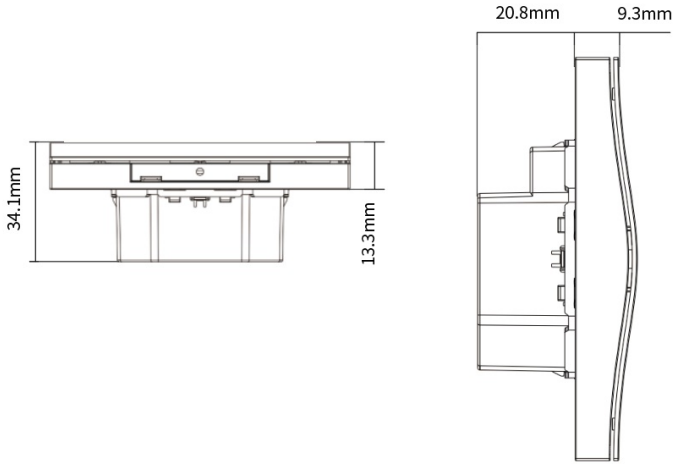
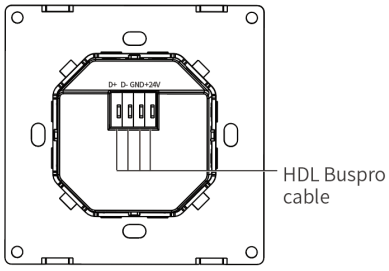


Figure 3



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.

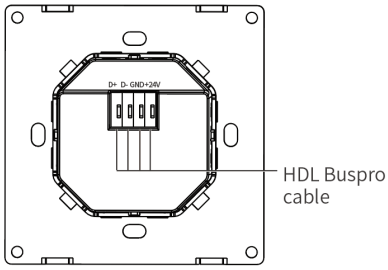
- HDL will not be responsible for any consequence caused by the inexpert or faulty installation and wiring methods, which are not in accordance with the instructions contained in this datasheet.
- Please contact HDL after-sales departments or our designated service agencies for your maintenance service. 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.
- To protect this device and loads, it is recommended that a 10A 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

- The device can be used with Buspro Panel Power Interface.
- 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.
- Caution: Disconnect the power supply before installation and do not operate with electricity.

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.

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

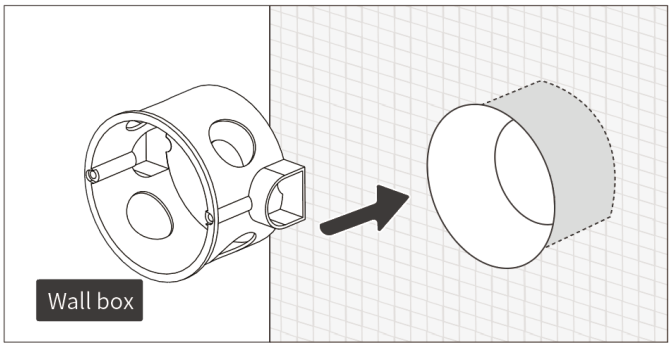


Figure 6

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.

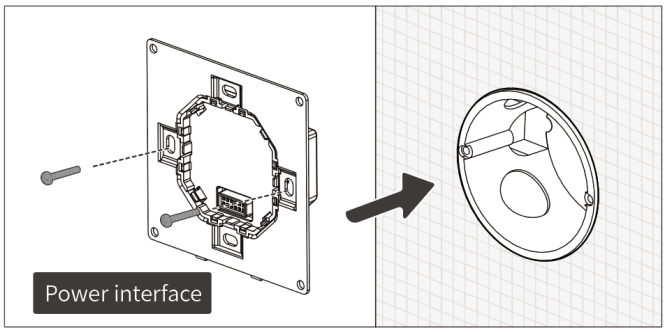


Figure 7

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

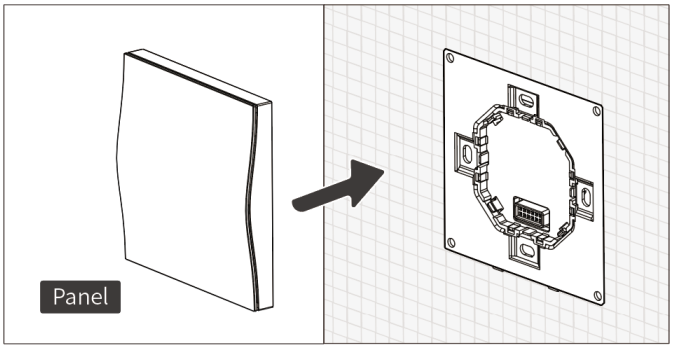


Figure 8

Multi-gang installation:

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

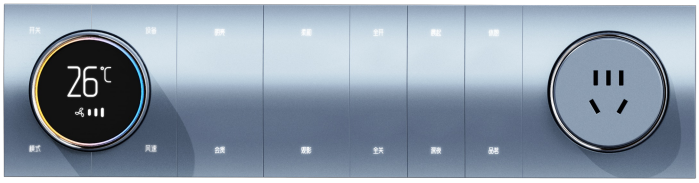


Figure 9

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.

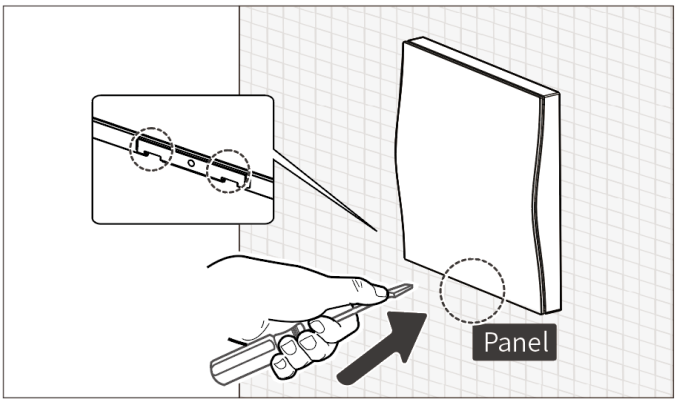


Figure 11

◇◆ Operation

1. Programming mode: Long press any button for 15 seconds, the backlight will turn blue and flash slowly, and the programming mode is on (in programming mode, the subnet ID and device ID can be modified in the commissioning software)

2. Panel lock/unlock:

Manual lock: short press A1 and the last button at the same time for 5 seconds, the indicator light flashes blue (power off and re-power on, the panel is still locked)

Auto-lock: users can configure the auto-lock function in the HDL Studio commissioning software, set the auto-lock time, and the panel will be locked automatically after a certain period of time.

Panel unlock: press A1 and the last button at the same time for 5 seconds, the panel will be unlocked.

Note: Unlocking must be done manually.

3. Customize the colour of the button indicator: support colour customization through the commissioning software (please refer to the commissioning instructions for details).

4. Proximity detection setting: support setting of sensing distance and time of the sensor waking up panel indicator through the commissioning software (please refer to the commissioning instructions for details).

◇◆ Packing List

- Panel*1

◇◆ Copyright Statement

The contents of this document will be updated as the updates of product versions or other reasons. Unless otherwise agreed upon, this document is to be used as a guidance only. All the statements, information and recommendations in this document makes no warranty expressed or implied.

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

◇◆ Troubleshooting

E-mail: hdltickets@hdlautomation.com

Website: https://www.hdlautomation.com