PE-X1-10V



RoHS SELV (Class 2















Features:

- 1.0-10V standard signal interface, active and passive signal output
- 2.Timing on/off lighting function.
- 3. Built in active power supply, which can be connected to active
- signal and passive signal power supply
- 4.The panel backlight turns dark after 8 p.m
- 5.Built in WiFi chip, can update time
- 6. Support mobile app control and access to third-party language platform
- 7. Touch the button, the backlight will turns red and sound at the same time
- 8.Tempered glass panel
- 9. Turn off with 30 seconds delay function
- 10. The minimum off voltage can be set to match all 0 / 1-10V power supplies on the market
- 11. The color temperature value can be set according to the color temperature range of the LED

Application:

- 1.Control 0 / 1-10V dimming driver and CCT driver
- 2. Villa intelligent lighting
- 3. Museum lighting
- 4. High end commercial lighting

General description:

1.Standard 0-10V / 1-10V signals are used to control brightness and color temperature, and third-party voice control and can be realized through mobile app. The raw materials used are first-line brands, imported chip, matching a variety of 0-10V dimming and CCT drivers on the market. Custom 0-10V / 1-10V on and off voltage value to control the color temperature and brightness. The color temperature can be set according to the range of LED. The built-in active power supply to control more drivers

Specification:

Model		PE-X1-10V
OUTPUT	Voltage	0-10Vdc
	Min voltage	0.05-1.5Vdc (Custom setting)
	Current	50mA
	Dimming Range	0~100%
	Dimming interface	0-10V/1-10V CCT/DIM
	Power off mode	Power off memory function
	Load	50 pcs drivers (200M signal wire, 1.5mm2 shielding wire)
INPUT	Input voltage	110-250Vac
	Frequency	50/60Hz
FUNCTION	Touch Key	8 keys
	Timing on/off	Yes
	Delay off	Turn off delay 30S
	Mobile APP	Tuya app
	Color temperature	Custom setting
	Scene	Two scenarios can be customized
PROTECTION	Working Temperature	ta: 45°C , tc: 80°C
	Working Humidity	20 ~ 95%RH, non-condensing
	Storage Temp., Humidity	-40 ~ 80°C , 10~95%RH
SAFERY	Withstand Voltage	I/P-O/P: 3750Vac
& EMC	Isolation Resistance	I/P-O/P: 100MO/500VDC/25°C/70%RH
OTHERS	Dimension	86×86×33mm(L×W×H)
	Packing	Color box
	Weight (G. W.)	200g±10g

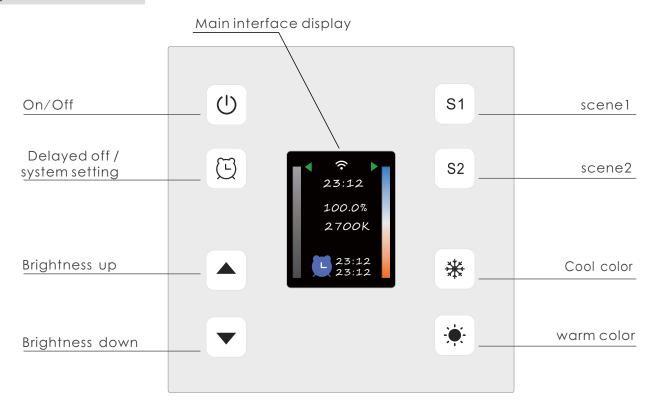
Dimensions:



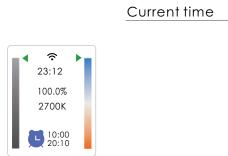


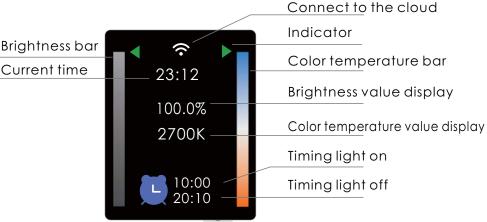
Fixed frame

Product function:



Main interface:





Key function:

- () On/off
- Short press: enter the 30 second countdown automatic light off interface.

 /Long press for 3 seconds to enter the system setting interface.
- Short press: the brightness increases by 1, long press, and the brightness increases rapidly.
- Short press: the brightness decreases by 1, long press, and the brightness decreases rapidly.

- Short press: call scenario 1 / long press for 3s : enter the scenario 1 setting interface.
- Short press: call scenario 2 / long press for 3 s : enter the scenario 2 setting interface.
- Short press: the color temperature turns cold, long press the color temperature turn cold quickly.
- Short press: the color temperature warms, long press the color temperature turn warm quickly.

Shutdown interface:





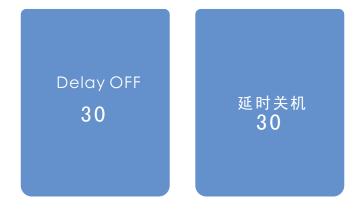
Display clock when power off.

Display backlight and key backlight, down to 2 / 3 of normal brightness,

From 8 p.m. to 6 a.m. tomorrow, it will drop to 1 / 6 of the normal brightness.

Countdown shutdown interface:





After a delay of 30 seconds, it will shut down automatically.

Press any key to exit directly and return to the main interface.

System setting interface:

setting: Timer Clock Wifi Rst 中文 Dark On PHY Set

设置:

● 定时器
时钟
Wifi 复位
English
深色 开
物理设置

(1) Back to the main interface.

Short press: execute and enter the corresponding function interface.

▲ Short press: the selection cursor moves up.

▼ Short press: the selection cursor moves down.

Timer: enter the timing switch lamp setting interface

Clock: enter the system time setting interface

WiFi reset: reset the WiFi connection, clear the number of clouds, and re pair

中文:To Chinese interface

Dark on: switch the background color of the main interface, Off: white, On: black

Physical setting: enter the physical setting interface (set the physical color temperature of the lamp and the minimum trun off voltage of 0 / 1-10V)

■ Timer interface:





On 23:55 :The lamp On.

Off --:-- : The lamp Off.

Note: four horizontal bars indicate that the

timer on / off function is not enabled

(U) Back to the main interface.

Short press: enter the time adjustment state.
Press save again to exit.

Short press: move the cursor up; In the time adjustment state, hour plus 1.

Short press: move the cursor down; In the time adjustment state, the hour is reduced by 1.

Short press: in the time adjustment state, open and close the timer.

S2 The function is the same as above.

Short press: in the time adjustment state, minutes plus 1.

Short press: in the time adjustment state, the minute is reduced by 1.

Clock interface:



时钟: ● 时间 23:55 Wifi时间 Time 23:55: Adjust the system clock.

Wifi time: Obtain the cloud time, provided that it is connected to the cloud.

Note: each time the system is connected to the cloud, it will automatically take the cloud time.

- (1) Back to the main interface.
- Short press: enter the time adjustment state.
 Press save again to exit.
- Short press: move the cursor up; In the time adjustment state, hour plus 1.
- Short press: move the cursor down; In the time adjustment state, the hour is reduced by 1.
- $\frac{*}{S3}$ Short press: in the time adjustment state, minutes plus 1.
- Short press: in the time adjustment state, the minute is reduced by 1.

PHY setting interface:

PHY Set:

CctC 7000KCctW 2000KDimOff 1.2V

Cct C 7000K: Select the color temperature value of the cool light bead5000-7000K.

Cct W 2000K : Select the color temperature value of the warm color light bead 2000–4000K $_{\circ}$

Dim Off1. 2V: Set0/1-10Vsignal port min off voltage.

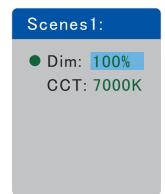
(0.05V-1.5V, 0.05V min interval)

Note: the driver min brightness value of 0-10V on the market is different, 1.2v/0.4v/0.7 and so on. We can adjust the third dimming off voltage to adapt to different dimming drivers.

Adjustment method: adjust the brightness to the lowest on the main interface, and then enter the current interface menu, adjust the voltage, and the brightness of the light will change, so you can you can know how many volts the light is turned off and how many volts the minimum brightness is.

- 时钟:
- 冷色 7000K 暖色 2000K 调光关 1.2V
- (1) Back to the main interface.
- Short press: execute and enter the regulation state.
 Press save again to exit.
- Short press: move the cursor up; In the regulation state, add 1 level.
- Short press: move the cursor down; In the regulation state, reduce level 1.

Scene setting interface:









Dim 100%: Set the brightness value of the corresponding scene.

CCT 7000K: Set the color temperature value of the corresponding scene.

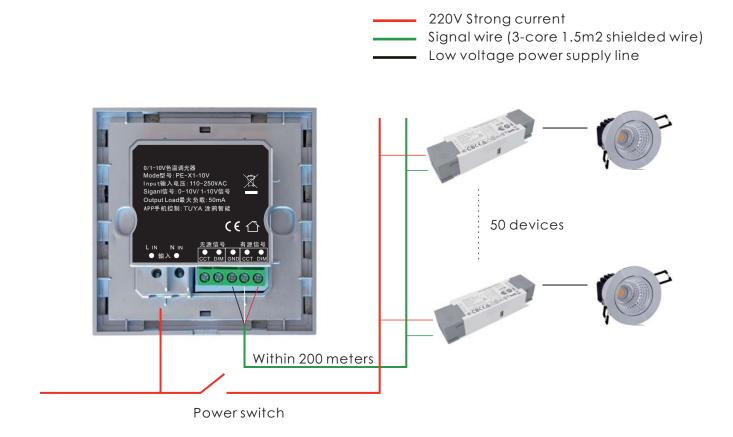
Note: pressing Scene 1 and Scene 2 in Tuya app is equivalent to executing S1 and S2 keys of this dimmer.

- (U) Back to the main interface.
- Short press: execute and enter the regulation state.
 Press save again to exit.
- Short press: move the cursor up; In the regulation state, add 1 level.
- Short press: move the cursor down; In the regulation state, reduce level 1.

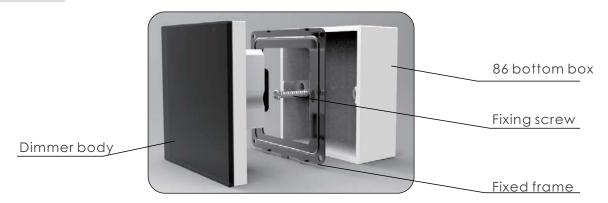
Wiring:



Note:1-10V driver or 0/1-10V driver (The light will come on without a signal) use passive interface, 0-10V driver (need a signal to turn on the light) Use active interfaces.



Installation:



Step 1: fix the fixing frame on the bottom box with two screws



Step 2: connect the input line and signal line



Step 3: hang the dimmer body on the fixing frame

Instrctions for use:

The input terminal of the product is connected with AC live line L and zero line n, and the output terminal is wired according to the product identification. Pay attention to the positive and negative poles.

- 1. When using this dimmer, please pay attention to distinguish the input end and output end. Please wire correctly and power on only after checking.
- 2. Please connect the load at the DC output first, confirm that it is correct, and then power on.
- 3. The input voltage range of the product is ac110-265 $^\circ$, which is used within the specified load range and the ambient temperature is 20 to + 45 $^\circ$,

In the environment that meets the service conditions of the product, the product enjoys a 3-year free warranty.

Solutions to common problems during use:

- 1. The product is powered on and does not work: 1 Check whether the cable is connected properly, 2 Whether the signal line is correct, 3 Whether the input and output are connected incorrectly4. Check whether the signal line is short circuited (whether the disconnection signal light can be on).
- 2. Power on can only adjust color or brightness: check whether the dimming power supply adjusts brightness in one way and temperature in one way
- 3. Can not adjust color temperature or brightness: 1 Please check whether the signal line is connected or short circuited Or reverse.
- 4. Since the power supply is controlled by low-voltage line, shielded signal lines shall be used as much as possible in the actual use to ensure the control quantity and distance.

Difference between 0-10V and 1-10V:

A long time ago, LED lamps had not come out, and the lamps commonly used in the market were fluorescent lamps. At that time, when the fluorescent lamps were dimmed to less than 10%, the lamp cap was very easy blackening and unstable operation, which seriously affects the service life of fluorescent lamps; So the minimum voltage is set at 1V. The starting process of fluorescent lamp is complex, and it must be 100% after lighting, it will automatically reduce to the corresponding brightness and can only be started when powered on. Therefore, the control interfaces are designed to supply power by themselves and can not turn off the lights through signals.

This is the 1-10V interface, which has three characteristics: the lowest 1V, self powered, and the signal cannot turn off lighting.

With the development of technology, LED lamps completely replace fluorescent lamps. The dimming of LED lamps is easy to be very low, one ten thousandth or lower, and there is no need to start the process, As long as there is a signal, it will light up. There is no need to limit it to a minimum of 1V. If it can be 0V, there will be a 0-10V power supply. The dimming minimum voltage of some power supplies is 1.2-10vFor compatibility with older systems. Some power supplies achieve a minimum voltage of 0.7V, some power supplies achieve a minimum voltage of 0.3V, etc. each manufacturer is different. At this time, there is no way to distinguish whether the power supply is 1-10V or 0-10V. All our driver are called 0 / 1-10V driver, which are compatible with 0-10V and 1-10V signals at the same time.

Definition:

Dimmer and dimming system: I: 1-10V, no output voltage, only pull signal, strong pull-down ability, can connect many lamps, and it is necessary to use multimeter without lampsNo voltage can be measured (called passive signal).

- 2: 0-10V outputs 0-10V signal and also has the ability to pull signal, but it may not be pulled low. 10V DC voltage(called active signal) can be measured with a multimeter.
- Power supply or lamp: I: 1-10V, minimum 1V, can not be adjusted off, self powered (the lamp will be on when not connected signal)
- 2: 0-10V does not supply power (the signal lamp of 0-10V needs to be connected to be on), and the minimum voltage is less than 1V, which can be adjusted off.
- 3: 0 / 1-10V self powered (no signal light will be on), the minimum is less than 1V, and can be adjusted off.

Dimming power supply distinction: dimming power supply signal interface is divided into active and passive. When the driver is powered on, the signal is not connected, and the lamp can be the brightest, it is an active signal, which can be controlled by both active and passive signals; When the driver is powered on, the signal is not connected, the lamp cannot light up, and the 10V signal needs to be connected, then the power supply is a passive signal interface, which needs to be controlled by an active signal.

Dimming compatibility is related to the control distance of signal line and the quantity of control power supply. If the quantity is too large or the signal line is too long, there will be problems such as unable to adjust low and turn off .The digital dimming power supply produced by Aidimming company is tested with 200m 0.75 square copper core shielded signal wire, which can control 50 power supplies to work normally.