



2.4GHz CCT Knob Dimmer Panel

Installation & Pairing Guide

Step-by-Step Mounting and Group Pairing Instructions



SOLUXLED

Factory-direct 2.4GHz Wireless LED Lighting Control

www.soluxled.com

1. Product Overview

The 2.4GHz CCT Knob Dimmer Panel is a wireless wall-mount controller for LED lighting systems. This guide covers mounting and pairing the panel with light fixtures.

Specifications at a glance:

Parameter	Value
Model	HG-6501-2.4G
Panel dimensions (W × H × D)	86 × 86 × 38 mm (excl. knob)
Knob protrusion	Ø 50 mm × 15 mm
Input voltage	AC 100–260V
Max load (with Lout)	<500W
Load (no Lout, RF remote)	Unlimited paired lights
Wire gauge	0.5–6 mm ²
Back body depth	27 mm

2. Mechanical Drawings

2.1 Front View

Unit: mm

Figure 1 — Front View

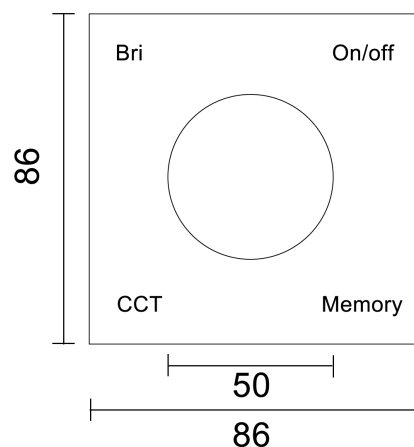
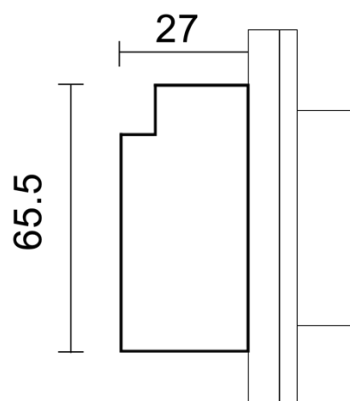


Figure 1 — Front view: 86 × 86 mm faceplate with Ø 50 mm knob protruding 15 mm. Four backlit buttons: Bri, On/Off, CCT, Memory.

2.2 Side Cross-Section

Figure 2 — Side Cross-Section



Side profile: 53 mm total = 15 mm knob + 11 mm faceplate + 27 mm back body.

2.3 Back View

Figure 3 — Back View (Terminals & Screws)

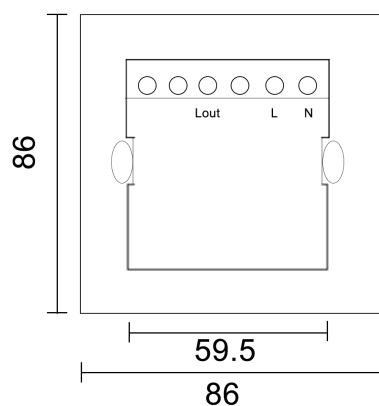


Figure 3 —Back view: 6-hole terminal block (3 active: Lout / L / N), 2 oval mounting screws (8 × 4 mm, 60 mm centre-to-centre).

3. Wiring Diagram

Figure 4 — Wiring Diagram(AC Power → Panel → Light)

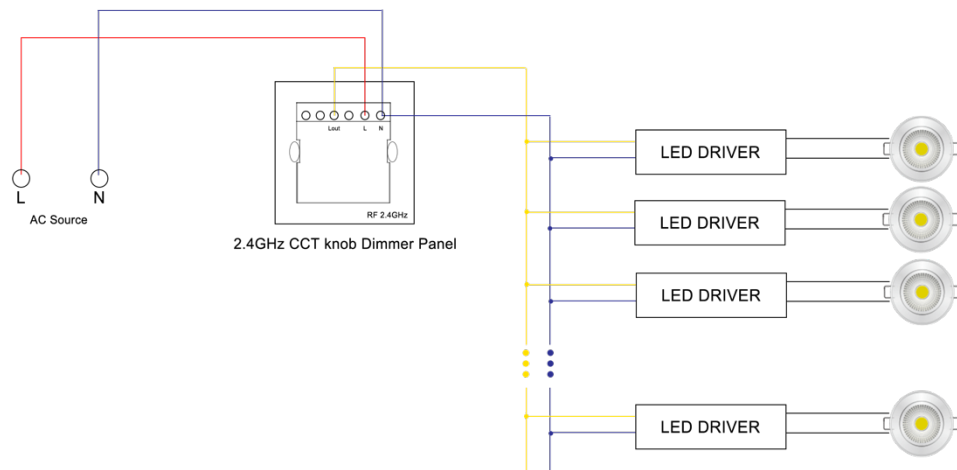


Figure 4 — AC Power → Panel → Light wiring diagram.

The panel has a 6-position terminal block. Only 3 positions are active: Lout, L, N. Connect the wires according to the diagram above.

3.1 Terminal Block Detail

Hole #	Function	Spacing	Connection
1	— (empty)	—	Not used
2	— (empty)	—	Not used
3	Lout (Light output)	17 mm from L	Connect to light fixture ($\leq 500W$)
4	— (empty)	—	Not used
5	L (AC Live)	8.5 mm from N	Connect to AC Live (Brown)
6	N (AC Neutral)	—	Connect to AC Neutral (Blue)

3.2 Wiring Mode (Two Options)

Option A — With Lout (Direct Load):

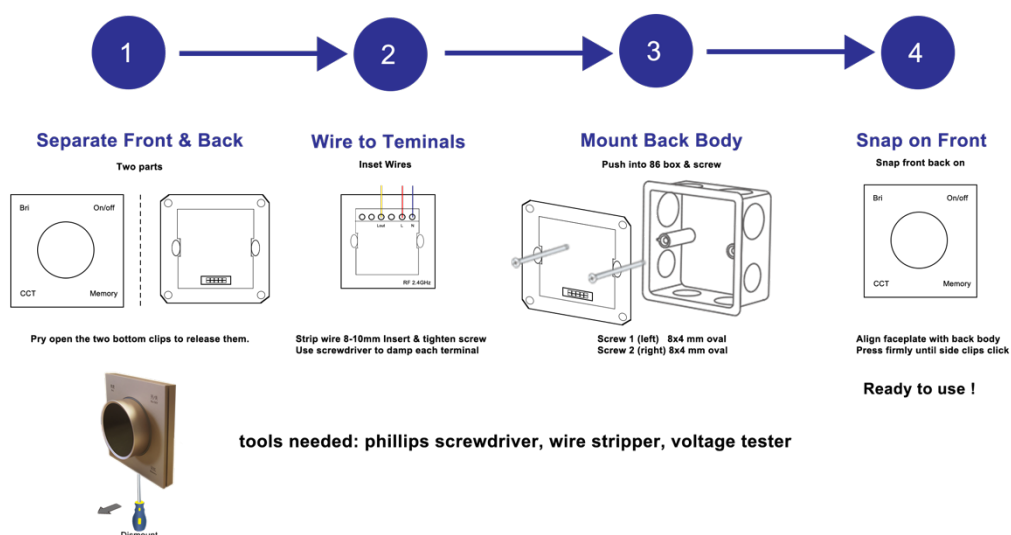
Connect L to AC Live, N to AC Neutral, Lout to the light fixture. Panel directly powers the light. Max load 500W.

Option B — Without Lout (RF Remote Only):

Connect only L and N for AC power. Do NOT connect anything to Lout. The panel works purely as a 2.4GHz RF remote control and can pair with unlimited lights within RF range.

4. Installation Steps

Figure 5 — Installation Sequence (4 Steps)



⚠ SAFETY WARNINGS

1. Always turn off the AC main breaker before wiring. Verify with a voltage tester that power is off.
2. Wiring must be performed by a qualified electrician following local electrical codes.
3. When Lout is connected, the load must not exceed 500W. Without Lout, the panel acts as an RF remote with unlimited device count.
4. After installation, ensure all wires are properly clamped and no bare copper is exposed.

Figure 5 — 4-step installation sequence

4.1 Step 1 — Separate Front Panel from Back Body

Press the side clips on the back body and gently pull the front panel away. The faceplate (with knob and buttons) separates from the back body (with terminal block).

4.2 Step 2 — Wire to Terminals

Strip 8–10 mm of insulation from each wire. Use a small Phillips screwdriver to loosen each terminal screw. Insert the wire and tighten firmly.

Wire order (left to right):

- Lout — to light fixture (if used)
- L — to AC Live wire (brown)
- N — to AC Neutral wire (blue)

4.3 Step 3 — Mount Back Body into 86 Wall Box

Push the wired back body into the standard 86 mm wall box. Tighten the 2 oval mounting screws (8 × 4 mm) at top and bottom of the back body. Screw centres are 60 mm apart vertically, located 41.5 mm from top and 42.8 mm from bottom.

4.4 Step 4 — Snap Faceplate Back On

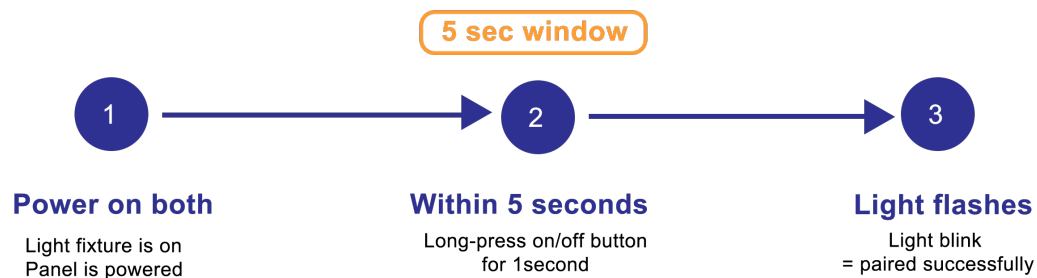
Align the faceplate (with knob) over the mounted back body. Press firmly until the side clips engage with an audible click. The panel is now ready for pairing.

SAFETY WARNINGS

1. Always turn off the AC main breaker before wiring. Verify with a voltage tester that power is off.
2. Wiring must be performed by a qualified electrician following local electrical codes.
3. When Lout is connected, the load must not exceed 500W. Without Lout, the panel acts as an RF remote with unlimited device count.
4. After installation, ensure all wires are properly clamped and no bare copper is exposed.

5. Pairing the Panel with Lights

Figure 6 — Pairing Flow (Within 5 Seconds of power-on)



1-to-Many Pairing Mode (Optional):

If Lout is connected: one panel can control <500W load. If Lout is NOT connected: panel, can pair unlimited lights within RF range (~30m).

Figure 6 — Pairing flow within 5 seconds of power-on.

5.1 Pairing Steps

- Power on both the light fixture and the panel.
- Within 5 seconds of power-on, long-press the On/Off button for 1 second.
- The light fixture will flash 1 time to confirm successful pairing.
- If pairing fails or the 5-second window expires, the light will not flash. Repeat from step 1.

5.2 Pairing Notes

- The 5-second pairing window starts when the panel is powered on. If you wait too long, power cycle the panel and try again.
- One panel can pair with multiple lights simultaneously. To pair a second light, power it on (and power cycle the panel), then repeat the long-press.
- If the panel is connected to a load via Lout (Option A), pairing controls that load directly. Without Lout (Option B), pairing is via RF only.
- Pairing information is stored in non-volatile memory. Lights remain paired after power cycle.

5.3 Troubleshooting

Issue	Solution
Light does not flash after long-press	Check 5-second window — power cycle the panel and try again within 5 seconds.
Panel does not respond	Verify L and N wires are properly connected. Check the AC breaker.
Light paired but does not respond	Light may be out of RF range (~30m open area, less through walls). Move closer and try again.
Multiple light fixtures require simultaneous power-on for pairing.	Power on the power supplies for multiple light fixtures and pair them within 5 seconds of restarting the panel.



2.4GHz CCT 旋钮调光面板

安装与配对指南

一步步安装及群组配对说明



SOLUXLED

工厂直销 2.4GHz 无线 LED 照明控制系统

www.soluxled.com

1. 产品概述

2.4GHz CCT 旋钮调光面板是用于 LED 照明系统的无线墙面控制器。本指南涵盖面板的安装以及与灯具的配对方法。

关键规格：

参数	值
型号	HG-6501-24G
面板尺寸 (宽 × 高 × 深)	86 × 86 × 38 mm (不含旋钮)
旋钮突出	Ø 50 mm × 15 mm
输入电压	AC 100–260V
最大负载 (接 Lout)	<500W
负载 (无 Lout, RF 遥控)	无限配对灯具
线径	0.5–6 mm ²
背体深度	27 mm

2. 机械尺寸图

2.1 正面

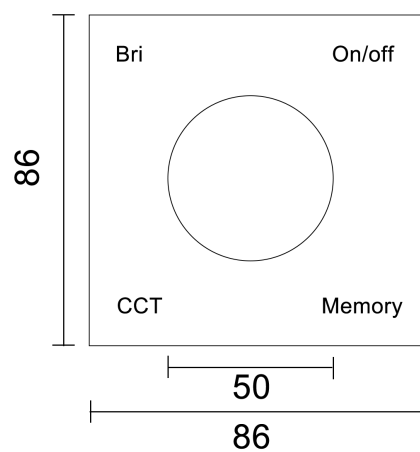


图 1 — 正面: 86 × 86 mm 面板, 中央 $\varnothing 50$ mm 旋钮突出 15 mm。四个带背光按键: Bri / On/Off / CCT / Memory。

2.2 侧面剖面

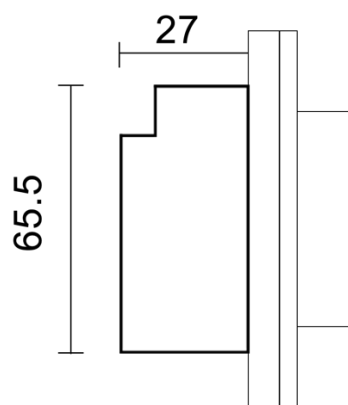


图 2 — 侧面: 总深 53 mm = 旋钮 15 mm + 面板 11 mm + 背体 27 mm。

2.3 背面

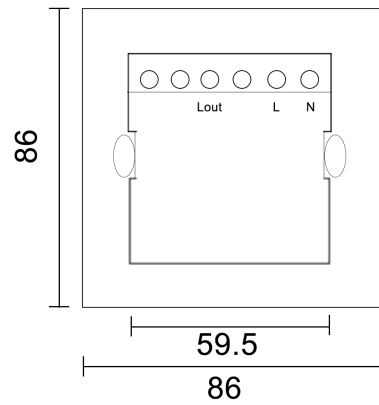


图 3 — 背面: 6 孔端子排 (3 个有效: Lout / L / N), 2 个扭圈安装蟹夹 (8×4 mm, 中心间距 60 mm)。

3. 接线图

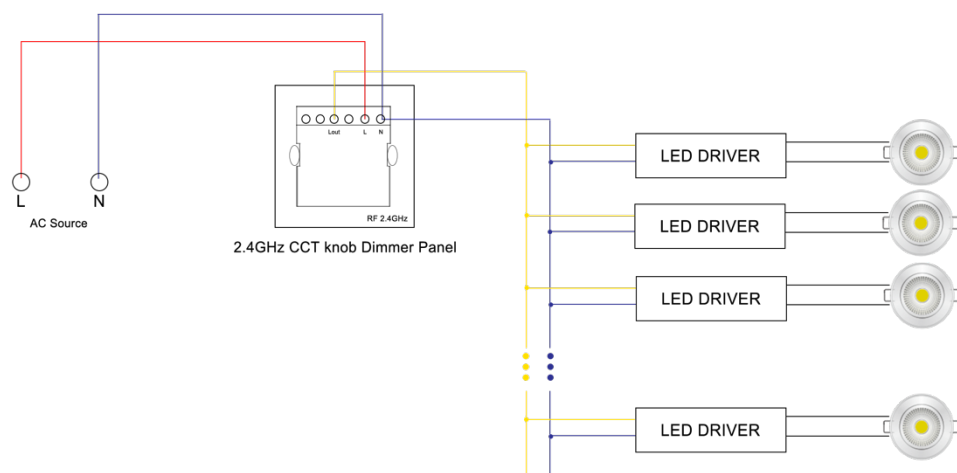


图 4 — AC 电源 → 面板 → 灯具的接线示意图。

面板有 6 个端子位, 仅 3 个有效 (Lout / L / N)。按上图连接电线。

3.1 端子排说明

孔位	功能	间距	接线
1	— (空)	—	未使用
2	— (空)	—	未使用
3	Lout (灯具输出)	距 L 17 mm	接灯具 (≤500W)
4	— (空)	—	未使用
5	L (AC 火线)	距 N 8.5 mm	接 AC 火线 (棕色)
6	N (AC 零线)	—	接 AC 零线 (蓝色)

3.2 两种接线方式

方式 A — 接 Lout (直接驱动负载):

L 接 AC 火线, N 接 AC 零线, Lout 接灯具。面板直接给灯具供电。最大负载 500W。

方式 B — 不接 Lout (仅 RF 遥控):

只接 L 和 N 取电。Lout 不接任何东西。面板只作为 2.4GHz RF 遥控使用, 可配对无限数量的灯具 (受 RF 距离限制)。

4. 安装步骤

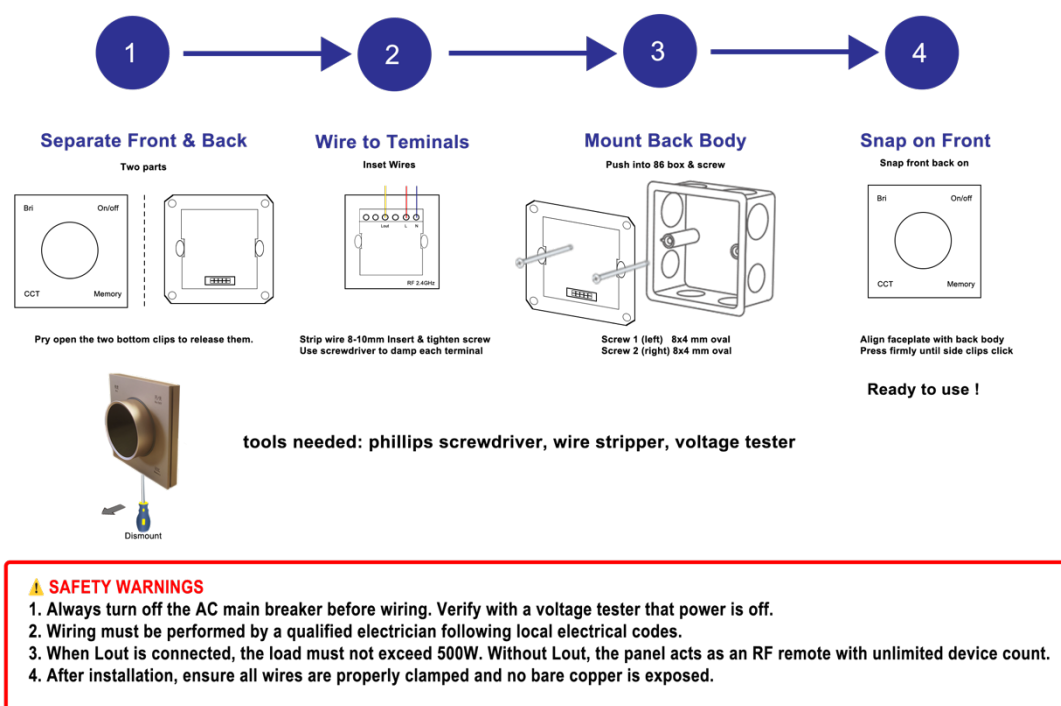


图 5—4 步安装流程。

4.1 第 1 步 — 分离前面板和后座

翘开后底座两侧的卡扣，轻轻向前拖出前面板。前面板（带旋钮）与后座（带端子排）分离。

4.2 第 2 步 — 接入端子

每根电线剥 8–10 mm 绝缘皮。用小型十字蟹丝刀松开端子蟹丝，插入电线后拧紧。

接线顺序（从左到右）：

- Lout — 接灯具（如使用）
- L — 接 AC 火线（棕色）

- N — 接 AC 零线 (蓝色)

4.3 第 3 步 — 后座推入 86 底盒

把接好线的前后座推入标准的 86 底盒。拧紧后座上的 2 个螺丝安装蟹未 (8 × 4 mm), 分别在顶部和底部。蟹未中心纵向间距 60 mm, 距顶部 41.5 mm, 距底部 42.8 mm。

4.4 第 4 步 — 扣回前面板

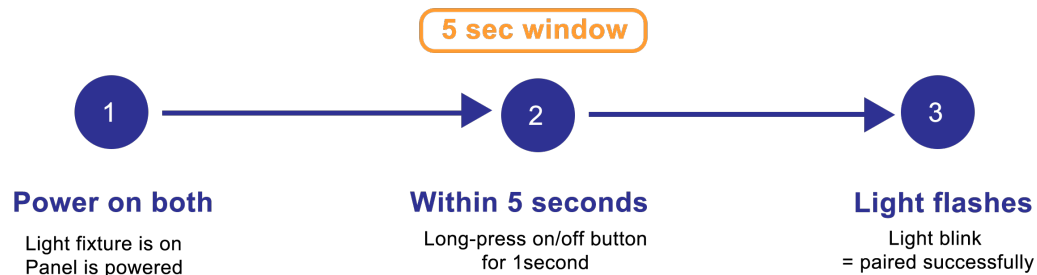
把前面板 (带旋钮) 对准已装好的后座, 用力按压直到两侧卡扣发出「咧咩」声咬合。

面板安装完成, 可以开始配对。

SAFETY WARNINGS

1. 接线前必须先关闭 AC 总闸, 用验电笔确认断电后再操作。
2. 接线作业必须由持证电工按当地电气规范执行。
3. 接 Lout 时负载不得超过 500W。不接 Lout 时面板是 RF 遥控, 可配对无限数量灯具。
4. 安装完成后确保每根电线都被端子蟹丝夹紧, 无裸露铜线。

5. 面板与灯具的配对



1-to-Many Pairing Mode (Optional):

If Lout is connected: one panel can control <500W load. If Lout is NOT connected: panel, can pair unlimited lights within RF range (~30m).

图 6 — 开机 5 秒内的配对流程。

装好面板并给面板和灯具都通电后，按以下步骤通过 2.4GHz RF 配对。

5.1 配对步骤

- 同时给灯具和面板通电。
- 开机 5 秒内，长按 On/Off 按键 1 秒。
- 配对成功时，灯具闪烁 1 次作为确认。
- 配对失败或超过 5 秒窗口期时灯具不闪烁，请重新从第 1 步开始。

5.2 配对注意事项

- 5 秒配对窗口从面板通电开始计时，超时请断电重启再试。
- 一个面板可同时配对多个灯具。配第二个灯具时，先给该灯具上电（并重启面板），在 5 秒窗口内再次长按 On/Off。
- 如果用方式 A 接了 Lout，配对操作同时控制直连负载。方式 B（不接 Lout）则仅通过 RF 控制。
- 配对信息保存在非易失存储器中，灯具断电后再次通电仍保持配对。

5.3 故障排查

问题	解决方法
长按后灯具不闪烁	检查 5 秒窗口期——断电重启面板后 5 秒内再试。
面板无反应	检查 L 和 N 接线是否稳固，检查 AC 总闸是否打开。
已配对灯具无响应	灯具可能超出 RF 距离 (开阔 ~30m, 穿墙会缩短)。请靠近再试。
多灯具需统一通电配对	多个个灯具电源通电，重启面板后 5 秒内配对。