

TECHNICAL DOCUMENTATION

ARTCILUX

Smart Lighting System

Troubleshooting Guide

Comprehensive diagnostic & repair reference for LED linear lighting systems, drivers, and control accessories

VERSION

V1.0

RELEASE DATE

August 2026

APPLICABLE PRODUCTS

LED Linear Lighting Systems

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IMPORTANT SAFETY INSTRUCTIONS

- **Always disconnect the power supply** before performing any inspection, disassembly, or repair work.
- Electrical work should only be performed by **qualified personnel**.
- Do not open the power supply or controller housing in damp or wet environments.
- Do not attempt to disassemble internal components of the power supply (there are no user-serviceable parts inside).
- This guide is for reference only. ARTCILUX assumes no liability for equipment damage or personal injury resulting from improper handling.
- If you have any questions, please contact ARTCILUX Technical Support.

Table of Contents

01 Pre-Troubleshooting Checklist

02 LED Strip Light Faults

03 Driver Power Supply Faults

04 Controller Faults

05 Maintenance & Care Recommendations

06 Technical Support & Contact Information

1 Pre-Troubleshooting Checklist

Before diving into the detailed sections below, perform these quick checks first:

Verify Power Supply

Is your home's circuit breaker tripped? Is the wall outlet providing power? Use a multimeter to confirm 220V AC is present at the input terminals.

Check the Switch

Is the switch in the "ON" position? For wireless switches, does the battery need replacing? Check if the indicator LED is dim or off.

Swap-and-Test

Replace the suspected faulty component (LED strip, power supply, or controller) with a known working unit to quickly isolate the issue.

If the issue persists, refer to the corresponding section below for detailed troubleshooting.

2 LED Strip Light Faults

2.1 Complete Failure to Light Up

PRODUCT	POSSIBLE CAUSE	CHECK STEPS	SOLUTION
LED Strip Light	Power supply failure	Check whether the 220V power supply is normal.	Restore power or contact a licensed electrician to inspect the wiring.
	Sensor control board failure	Swap with a known-good fixture to test functionality.	Replace the sensor control board or the entire fixture.
	LED strip polarity reversed (+/-)	Use a multimeter to measure the transformer output voltage and verify correct polarity.	Reconnect the wiring according to the correct polarity markings.
	Short circuit or damaged wiring	Inspect the LED strip wiring for damage or open circuits.	Repair or replace damaged cables.
	LED strip is damaged	Visually inspect the LED chips for burn marks or physical damage.	Replace the LED strip, or contact ARTCILUX after-sales service.

2.2 One Half Does Not Light Up

PRODUCT	POSSIBLE CAUSE	CHECK STEPS	SOLUTION
LED Strip Light	Poor soldering at strip splicing joints	Remove the end caps and the light cover. Inspect the solder joints at the strip connection points.	Remove the end caps and light cover, then re-solder the joints with a soldering iron or replace the LED strip.

2.3 Intermittent Lighting (Gaps)

PRODUCT	POSSIBLE CAUSE	CHECK STEPS	SOLUTION
LED Strip Light	Damaged LED chips or resistors	Visually inspect the non-lit sections for darkened or burnt components.	Remove the end caps and light cover, then re-solder the joints with a soldering iron or replace the LED strip.
	Poor SMD soldering quality	Check for loose or tilted SMD components on the strip surface.	
	Improper assembly process	Check for kinks or bends in the strip during installation. Ensure all connectors are fully mated.	

2.4 Flickering

PRODUCT	POSSIBLE CAUSE	CHECK STEPS	SOLUTION
LED Strip Light	Unstable output voltage from the driver	Monitor the driver output voltage with a multimeter for fluctuations.	Replace the driver power supply.
	Strip power load exceeds driver rating	Calculate the total wattage of all connected LED strips and compare to the driver rating.	Replace with a higher-wattage driver, or add an additional driver to share the load.
	Voltage mismatch between driver and strip	Verify the strip's operating voltage (DC 12V or 24V) matches the driver's output voltage.	Use a driver with an output voltage that exactly matches the strip requirement (e.g., DC 12V or DC 24V). A driver voltage higher than the strip rating will cause continuous flickering.

2.5 Abnormal Phenomena (Ghosting / Always On)

PRODUCT	POSSIBLE CAUSE	CHECK STEPS	SOLUTION
LED Strip Light	Input switch wired to Neutral (N) instead of Live (L)	Check the switch wiring terminals to confirm if the switch only breaks the neutral line.	Re-wire the switch to interrupt the Live (Line) conductor.
	Environmental interference or sensor control board failure	Swap with a known-good fixture to test functionality.	Replace the controller if faulty; remove or relocate interfering devices.

3 Driver Power Supply Faults

3.1 No Power Output

PRODUCT	POSSIBLE CAUSE	CHECK STEPS	SOLUTION
LED Driver Power Supply 12V/24V	Input 220V AC line fault	Check whether the 220V high-voltage line is open-circuited.	Restore power, or contact a licensed electrician.
	Mains voltage fluctuation damaged the driver	Use a multimeter to test the driver output voltage (DC 12V or 24V). Test with a known-good LED strip to rule out strip failure.	Replace the driver (ARTCILUX genuine drivers feature built-in over-voltage protection for enhanced durability).
	Internal driver failure	When 220V AC fluctuates outside the normal operating range (100-240V), the driver may be damaged.	Replace the driver power supply.

3.2 Unstable Power Output

PRODUCT	POSSIBLE CAUSE	CHECK STEPS	SOLUTION
LED Driver Power Supply 12V/24V	Loose 220V AC input connection	Check the 220V high-voltage line for looseness and restore the connection.	Reconnect and securely tighten all terminals.
	Load short circuit or power overloading	If the total lamp power exceeds the driver rating, it will shorten the driver lifespan and trigger over-current protection, causing flickering.	Eliminate the short circuit; if overloaded, add another driver to share the load.
	Internal component aging	All electronic products have a service life. Long-term use causes internal electrolytic capacitors to age, resulting in unstable output voltage.	Replace the driver power supply.

4 Controller Faults

4.1 Door Contact (Magnetic) Switches

PRODUCT	FAULT PHENOMENON	POSSIBLE CAUSE	SOLUTION
Door Contact Sensor	No function or poor sensitivity	Poor wiring connection	Check whether the wiring connection is loose or poorly contacted, and repair it.
		Incorrect door contact positioning or dark-colored door panel	Check the switch sensing surface and adjust the door contact position. For dark-colored door panels, apply the supplied silver reflective sticker according to the instruction manual.
		Interference from other infrared devices	Avoid close proximity to infrared devices during use.
		Control distance too far (wireless switch)	When the wireless switch control distance is too far, adjust the installation distance according to the actual scenario.
		Low battery (wireless switch)	When the wireless switch indicator is dim or off, replace the battery promptly.
		Switch damaged or sensor element aged	All electronic products have a service life. After three years, some electronic components may age, resulting in degraded performance and sensor failure. Replace or repair the switch.

4.2 Motion (PIR) Sensors

PRODUCT	FAULT PHENOMENON	POSSIBLE CAUSE	SOLUTION
Motion (PIR) Sensor	No function or abnormal sensing distance	Poor wiring connection or contact	Check whether the switch wiring connection is loose or poorly contacted.
		Improper mounting position or angle	Adjust the installation position and probe angle. The ARTCILUX PIR sensor has a detection angle of 120 degrees. Clear any obstructions.
		Ambient temperature interference	PIR sensors detect changes in surrounding body heat. Do not face the sensor toward windows, air conditioners, or fans that affect air flow.
		Low battery (wireless switch)	When the indicator light is dim or off, replace the battery.
		Sensor switch failure	All electronic products have a service life. After three years, some electronic components may age, resulting in degraded performance and sensor failure. Replace or repair the sensor.
Motion (PIR) Sensor	Light flickers after connecting switch	Matching fault	Disconnect the switch and test the LED strip independently to rule out strip failure.

4.3 Touch Switches

PRODUCT	FAULT PHENOMENON	POSSIBLE CAUSE	SOLUTION
Touch Sensor	No function	Touch switch damaged or poor wiring connection	For wired switches, check whether the wiring connection is loose or poorly contacted, and repair it.
		Dimming turned completely off	Remove and reattach the switch knob, or rotate the dimming control to maximum brightness.
		Control distance too far (wireless switch)	Adjust the installation position and reduce obstructions between the remote and receiver.
		Low battery (wireless switch)	When the indicator light is dim or off, replace the battery.
		Sensor element aged	All electronic products have a service life. After three years, some electronic components may age, resulting in degraded performance and sensor failure. Replace or repair the switch.

4.4 Hand-Sweep Switches

PRODUCT	FAULT PHENOMENON	POSSIBLE CAUSE	SOLUTION
Hand-Sweep Sensor	No function or poor sensitivity	Poor wiring connection	Check whether the switch wiring connection is loose or poorly contacted.
		Control distance too far (wireless switch)	Adjust the installation position and reduce obstructions between the remote and receiver.
		Low battery (wireless switch)	When the indicator light is dim or off, replace the battery.
		Switch damaged or sensor element aged	All electronic products have a service life. After three years, some electronic components may age, resulting in degraded performance and sensor failure. Replace or repair the switch.
		Dimming turned completely off	Remove and reattach the switch knob, or rotate the dimming control to maximum brightness.

4.5 Wireless Switches

PRODUCT	FAULT PHENOMENON	POSSIBLE CAUSE	SOLUTION
Wireless Switch	Reduced wireless range after long-term use	Low battery	After long-term use, the battery power is insufficient and the wireless range is affected by battery level. Replace the battery.

4.6 Specific Model Issues

MODEL	FAULT PHENOMENON	POSSIBLE CAUSE	SOLUTION
2S1102 Dual Door Contact Switch	Light flickers after door opening	On-site spotlight interference. Some older switches were not equipped with anti-interference functionality.	Contact ARTCILUX support for information on the upgraded version.
S1602 Door Contact / Hand-Sweep Integrated Switch	Light flickers or turns off automatically	Poor light shielding of the sensor head; susceptible to external interference. Some older sensor head materials are translucent with poor shielding.	Contact ARTCILUX support for information on the upgraded version.
	Light turns off automatically when door is opened	Improper installation angle; placed too close to the wall. Light reflecting off the wall triggers the sensor when the door opens.	Adjust the mounting position, ensuring it is installed away from the wall (recommended minimum gap: 30cm).
S1316SE Motion (PIR) Sensor	No sensing function	Improper installation angle; the switch remains in dimming mode and cannot receive other command actions.	Remove and reinstall the switch securely; ensure the wireless sensor surface is not covered or obstructed.
	Poor sensitivity	The switch is surrounded by metal objects, causing wireless signal interference.	Relocate the switch to an open area to ensure unobstructed wireless signal transmission.
Hand-Sweep Dark-Free Control Board	Micro-lighting on control board	Input wires and output wires are bundled together, coupling an induced voltage exceeding 70V on the output line. This voltage causes the LED to glow dimly after the hand-sweep turns off the light.	Route the input and output cables separately, maintaining a minimum spacing of 3cm (approx. 1.2 inches). Do not bundle them together for convenience. This measure not only eliminates micro-glow but also effectively reduces the risk of lightning-induced surges on rainy days.

5 Maintenance & Care Recommendations

To extend the service life of your ARTCILUX lighting system, we recommend the following routine maintenance:

Cleaning

Regularly wipe the LED strip surface and the sensor lens with a soft, dry cloth. Prevent dust build-up, which can affect sensing sensitivity and heat dissipation.

Moisture Protection

Ensure the installation environment is dry and well-ventilated. Prevent moisture from entering the driver or controller housing.

Battery Replacement

For wireless switches, replace the battery if the indicator light dims or if the unit has been in use for over one year.

Cable Inspection

Check connecting cables every six months for loose, frayed, or damaged sections. Retighten or replace as necessary.

Technical Support & Contact Information

If the troubleshooting steps above do not resolve your issue, please contact the ARTCILUX Technical Support team via one of the following channels:

OFFICIAL WEBSITE

artcilux.com

SUPPORT & DOWNLOAD CENTER

artcilux.com/download-center/

EMAIL

sales@artcilux.com

SERVICE HOTLINE

+86-755-8973-4323

ADDRESS

Unit 1001, Block A, South Area, Xiangnian Square, Qiaocheng North Road, Nanshan District, Shenzhen, China

To help us serve you faster, please have the following information ready when you contact us:

- ✓ Product model number (found on the product label)
- ✓ Date of purchase
- ✓ Detailed description of the fault and the troubleshooting steps you have already tried

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