

INSTALLATION GUIDE



Schluter®-LIPROTEC-ECX

LED driver and dimmer



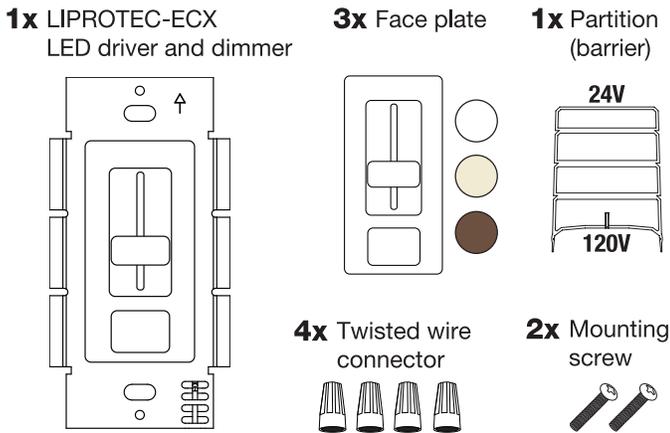
SAFETY & WARNINGS

- UNLIKE TRADITIONAL DIMMING CONTROLS, LIPROTEC-ECX LED DRIVER AND DIMMER REQUIRES UNIQUE WIRING STEPS. READ ALL WARNINGS AND INSTALLATION INSTRUCTIONS THOROUGHLY.
- Install in accordance with national and local electrical code regulations.
- This product is intended to be installed and serviced by a qualified, licensed electrician.
- NEC Code 725.136: Class 1 and Class 2 circuits in same enclosure must be separated by a barrier unless Class 2 circuit conductors are installed in accordance with 725.41 Class 1 Circuits.
- CEC Code: Rule 16-212 requires the separation of Class 2 conductors from various other circuits like electric power, Class 1, and electric lighting through appropriate minimum separations or barriers of raceway, cable or other metal or non-metal material.
- Only install compatible 24V Constant Voltage DC fixtures or warranty will be void.
- Do not modify product beyond instructions or warranty will be void.

QUICK SPECS / MODELS

LIPROTEC-ECX	Input	Output	Max Load
	120V AC	24V DC	60W

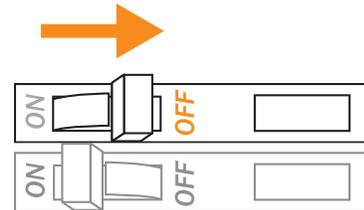
SUPPLIED ACCESSORIES



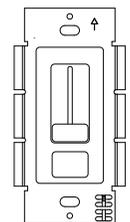
INSTALLATION

1 TURN POWER OFF AT CIRCUIT BREAKER

SHOCK HAZARD!
May result in serious injury or death.
Turn power OFF at circuit breaker prior to installation.



2 DETERMINE LOCATION TO INSTALL LIPROTEC-ECX DIMMER AND DRIVER



TOOLS FOR INSTALLATION

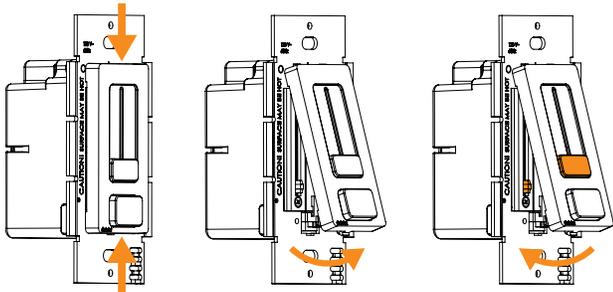


3 REMOVE EXISTING SWITCH (IF NECESSARY)

- 1) Remove trim plate and switch mounting screws.
- 2) Pull switch from wall.
- 3) Identify wires connected to switch and mark wires if desired.
- 4) Disconnect wires from switch.

INSTALLATION CONT.

4 CHOOSE FACE PLATE FINISH (IF NECESSARY)



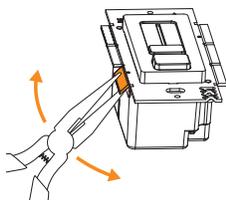
Gently squeeze top and bottom of face plate.

Lift face plate from housing.

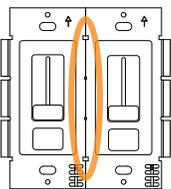
Insert replacement face plate into top housing groove. Position housing slider and face plate slider at min brightness (bottom level) and pop on face plate.

5 REMOVING FINS (IF NECESSARY)

It's required to break off dimmer fins when ganging multiple dimmers in same wall box.



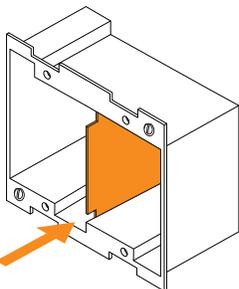
Grip with pliers. Bend back and forth until fin breaks off.



Fins have been removed.

ZERO LOAD DERATING

Unlike standard high voltage AC controls, removing LIPROTEC-ECX LED driver and dimmer fins does not reduce the dimmer's maximum wattage rating.



Removeable partition

Install gang boxes that include vertical partitions (available at local electrical distributor) unless Class 2 circuit conductors are installed (NEC: in accordance with 725.41 Class 1 Circuits).

6 ATTACH VOLTAGE PARTITION (BARRIER)

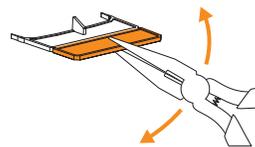
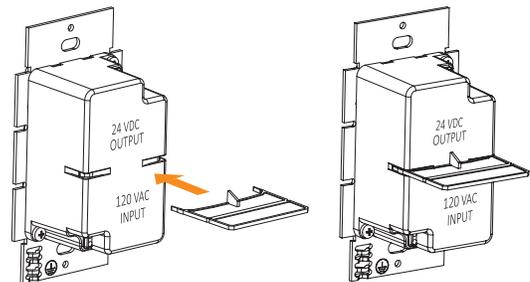
A voltage barrier is provided, which separates high voltage and low voltage wires in the wall box. Attach before mounting.

NEC CODE 725.136

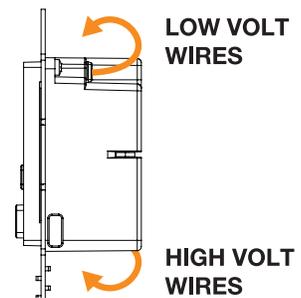
Class 1 and Class 2 circuits in same enclosure must be separated by a barrier unless Class 2 circuit conductors are installed in accordance with 725.41 Class 1 Circuits. For example, Non-Metallic (NM) cable is considered a Class 1 circuit conductor. Therefore, if both high voltage and low voltage circuits are installed with NM cable then the voltage barrier is not required for installation.

CEC CODE

Rule 16-212 requires the separation of Class 2 conductors from various other circuits like electric power, Class 1, and electric lighting through appropriate minimum separations or barriers of raceway, cable or other metal or non-metal material. This also applies to a compartment, outlet box, junction box, or similar fitting with the conductors of electric lighting, power, or Class 1 circuits unless where the power circuit conductors are supplying power for the Class 2 power supply and all conductors are insulated for the maximum voltage of any conductor in the enclosure.



For shallow boxes, barrier can be shortened. Grip with pliers. Bend back and forth until fin breaks off.



For extra shallow wall boxes it's acceptable to use the dimmer housing as a barrier. Tuck wires on top and bottom sides of dimmer housing.

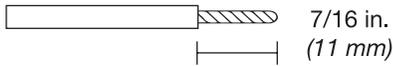
INSTALLATION CONT.

7 WIRE DIMMER

SPECIAL WIRING INSTRUCTIONS!

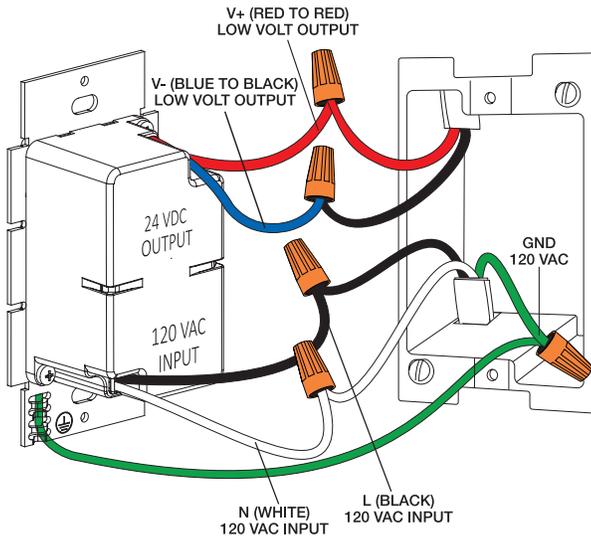
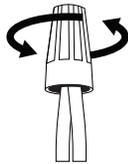
LIPROTEC-ECX requires unique wiring steps. Read thoroughly.

1) Strip wires on dimmer.

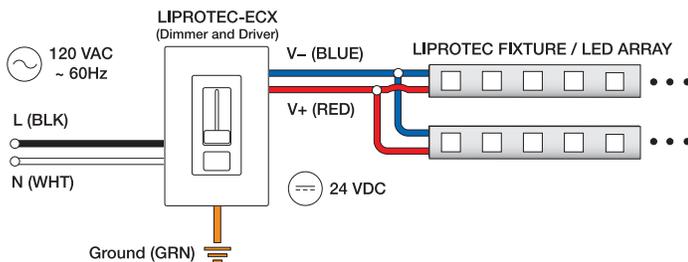


2) Wire dimmer. **Ensure main power is OFF.**

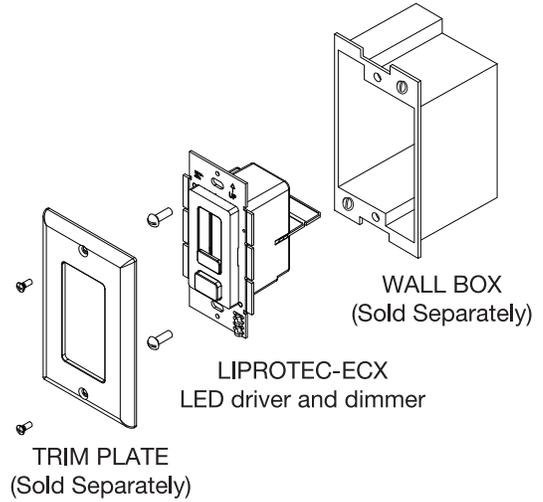
- GND (GREEN): To ground wire in box.
- V+ (RED): To low voltage V+ (Red).
- V- (BLUE): To low voltage V- (Black).
- N (WHITE): To 120 V Neutral.
- H (BLACK): To 120 V Line Hot.



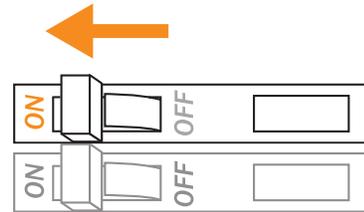
SYSTEM DIAGRAM



8 MOUNT DIMMER TO WALLBOX AND ATTACH TRIM PLATE



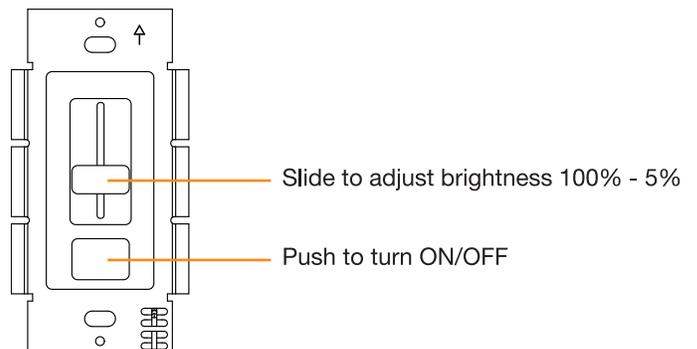
9 TURN POWER ON AT THE CIRCUIT BREAKER



SYSTEM WORKING IMPROPERLY?

Turn power **OFF** at circuit breaker and verify all connections. Review **WIRING** and **TROUBLESHOOTING**, or contact Schluter Systems Customer Service at 800-472-4588 (US) or 800-667-8746 (Canada) for more information.

OPERATION



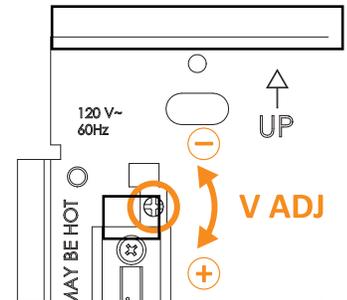
TROUBLESHOOTING

Symptom	Common Cause
Fixture does not illuminate.	<ul style="list-style-type: none"> • Incorrect wiring. Polarity of Low Voltage V+ and V- are reversed. • Circuit breaker is OFF or tripped.
<ul style="list-style-type: none"> • Different fixtures do not dim in sync. • Fixture turns off at low dim level. • Fixture strobos/flickers at low dim level. 	<ul style="list-style-type: none"> • Only install compatible 24V DC fixtures.
• Dimmer buzzes excessively.	
Fixture heats up excessively.	<ul style="list-style-type: none"> • Incorrect voltage pairing of dimmer and fixture. • Do not attach a 12V fixture to a 24V dimmer. • Fixture is not compatible.

VOLTAGE ADJUSTMENT

LIPROTEC-ECX LED driver and dimmer can provide a 1V boost if the fixture is receiving noticeable light degradation.

- Pop off face plate as shown in Step 4 of INSTALLATION.
- Use a small screwdriver to adjust output voltage by turning adjustment dial clockwise.



Schluter®-LIPROTEC-CW CABLES AND Schluter®-KERDI-BOARD-SNLT NICHES

For best performance and lumen output, ensure that proper wire gauge is installed to compensate for voltage drop of low voltage circuits. Use only LIPROTEC-CW cables (sold separately), available in 13' 1-1/2" (4 m), 26' 3" (8 m) and 49' 2-1/2" (15 m) lengths. These cables are specifically designed for use with the LIPROTEC system and conform to NEC and CEC standards. LIPROTEC-CW cables include a pre-installed IP65 wire gland for a watertight connection to the KERDI-BOARD-SNLT shower niche with LED strip or other LIPROTEC LEDs.



Schluter®-LIPROTEC-CW	
Cable for white LEDs	
Item No.	Length
LTCW/4M	13' 1-1/2" – 4 m
LTCW/8M	26' 3" – 8 m
LTCW/15M	49' 2-1/2" – 15 m



Schluter®-KERDI-BOARD-SNLT			
Niche with warm white LED strip			
Item No.	Dimensions	Depth	LED Color
KB12SNLT1WW	12" x 12" – 305 mm x 305 mm	3-1/2" – 89 mm	Warm white
KB12SNLT2WW	12" x 20" – 305 mm x 508 mm	3-1/2" – 89 mm	Warm white
KB12SNLT3WW	12" x 28" – 305 mm x 711 mm	3-1/2" – 89 mm	Warm white

This installation guide is subject to change without notice. Please visit www.schluter.com for the latest version.



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