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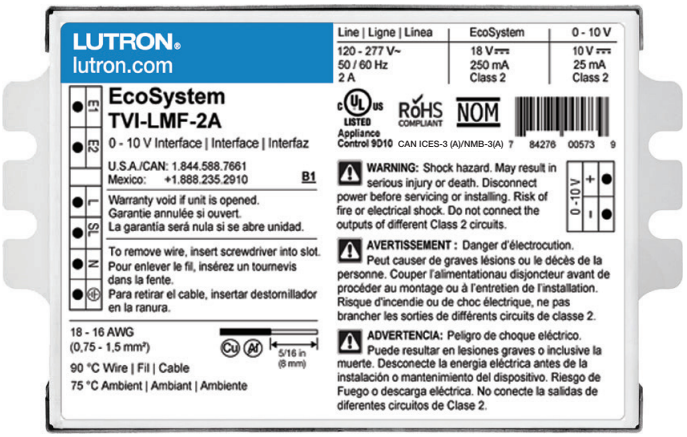
EcoSystem to 0–10 V⎓ Interface

The EcoSystem to 0–10 V⎓ Interface provides a control gateway from an EcoSystem link to a 0–10 V⎓ compatible lighting device, typically an LED driver.

It allows for individual addressing of the 0–10 V⎓ device, but provides only one-way communication from the controls to the 0–10 V⎓ device. This interface is suggested for single fixture control only. For multiple fixture controls please contact Lutron.



Features

- Guaranteed compatibility with Energi Savr Node units with EcoSystem, GRAFIK Eye QS with EcoSystem, PowPak dimming module with EcoSystem, and Quantum systems, allowing for integration into a planned or existing EcoSystem lighting control solution.
- Occupies one EcoSystem unit address.
- Operates at 120 V~, 220/240 V~, or 277 V~ input and provides one 120 V~, 220/240 V~, or 277 V~ switched output.
- Provides one 0–10 V⎓ low-voltage Class 2 control output for devices compliant with IEC 60929 Annex E2 (“Control by DC voltage”).
- Switches up to 2 A of NEMA 410 compliant load.
- Incorporates Lutron Softswitch technology, allowing a minimum of 1,000,000 relay cycles.

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Job Name:	Model Numbers:	
Job Number:		

Specifications

Regulatory Approvals

- cUL® Listed (evaluated to the requirements of UL® 244A and UL® 916)
- Complies with requirements for use in other spaces used for environmental air (plenums) per NEC® 2014 300.22(C)(3)
- Meets the Canadian National Building Code plenum requirements for a concealed space used as a plenum within a floor or roof assembly
- NOM certified and available for Mexico
- For commercial use: Class A only

Power

- Operating voltage:
  120 V~ 50/60 Hz
  220/240 V~ 50/60 Hz
  277 V~ 50/60 Hz
- Maximum interface power consumption (at any voltage):
  ≤ 1.0 W when output load is turned on
  ≤ 0.5 W when output load turned off (“standby”)
- Relay Output: 2 A of electronic load (NEMA 410 rated)
- 5 drivers maximum per fixture
- Input power to interface must not be switched

Environment

- Ambient and contacting surface operating temperature: –4 °F to 167 °F (–20 °C to 75 °C)
- 0% to 90% humidity, non-condensing
- For indoor use only

Power Wiring

- Interface is grounded by a mounting screw to the grounded fixture or a terminal connection
- Each terminal accepts one 18 AWG to 16 AWG (0.75 mm^2 to 1.5 mm^2) solid wire only

EcoSystem Link

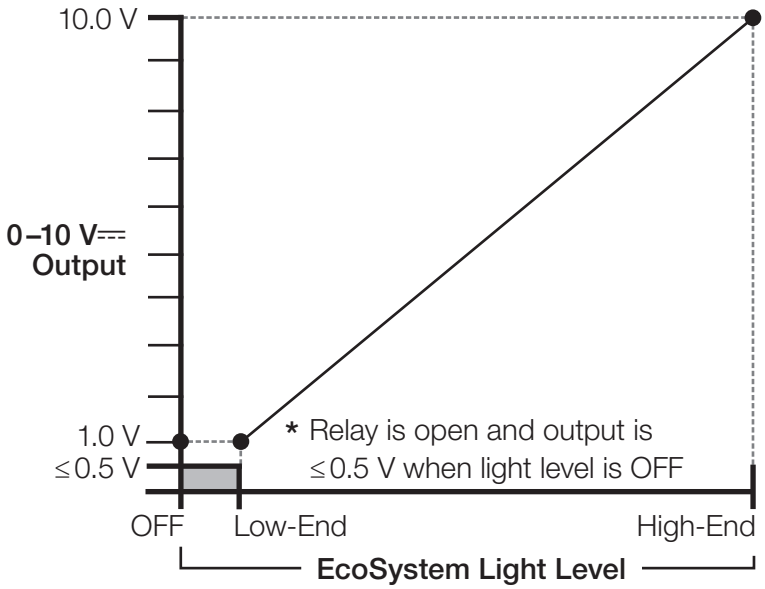
- EcoSystem Digital Link protected from line-voltage miswire
- EcoSystem Digital Link can be wired Class 1 or Class 2 for maximum wiring flexibility
- Each terminal accepts one 18 AWG to 16 AWG (0.75 mm^2 to 1.5 mm^2) solid wire only

Limitations

- Interface cannot detect or report LED driver failure.
- Low-end light level and dimming performance is determined by specifications of driver being used.

0–10 V⎓ Control Output

- Current rating: 25 mA max (sink only)
- Compliant to IEC 60929 Annex E2 (“Control by DC Voltage”).
- Maximum 0–10 V⎓ wire length: 10 ft (3 m) from interface to driver
- Class 1 or Class 2 wiring allowed, isolated from line and EcoSystem link.
- Each terminal accepts one 18 AWG to 16 AWG (0.75 mm^2 to 1.5 mm^2) solid wire only.
- Voltage Range:
  Off: ≤ 0.5 V
  Low end: 1 V
  High end: 10 V
- Linear dimming curve:



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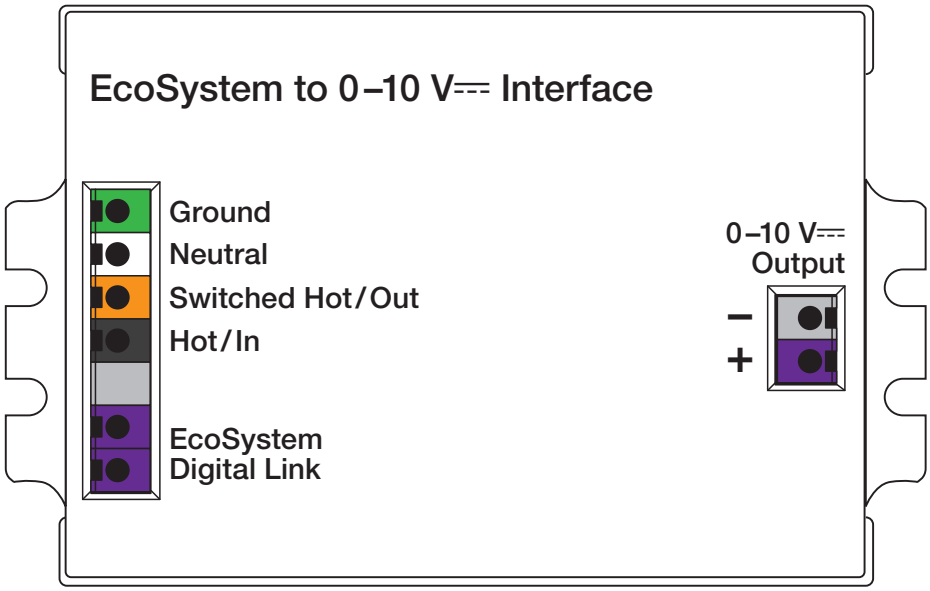
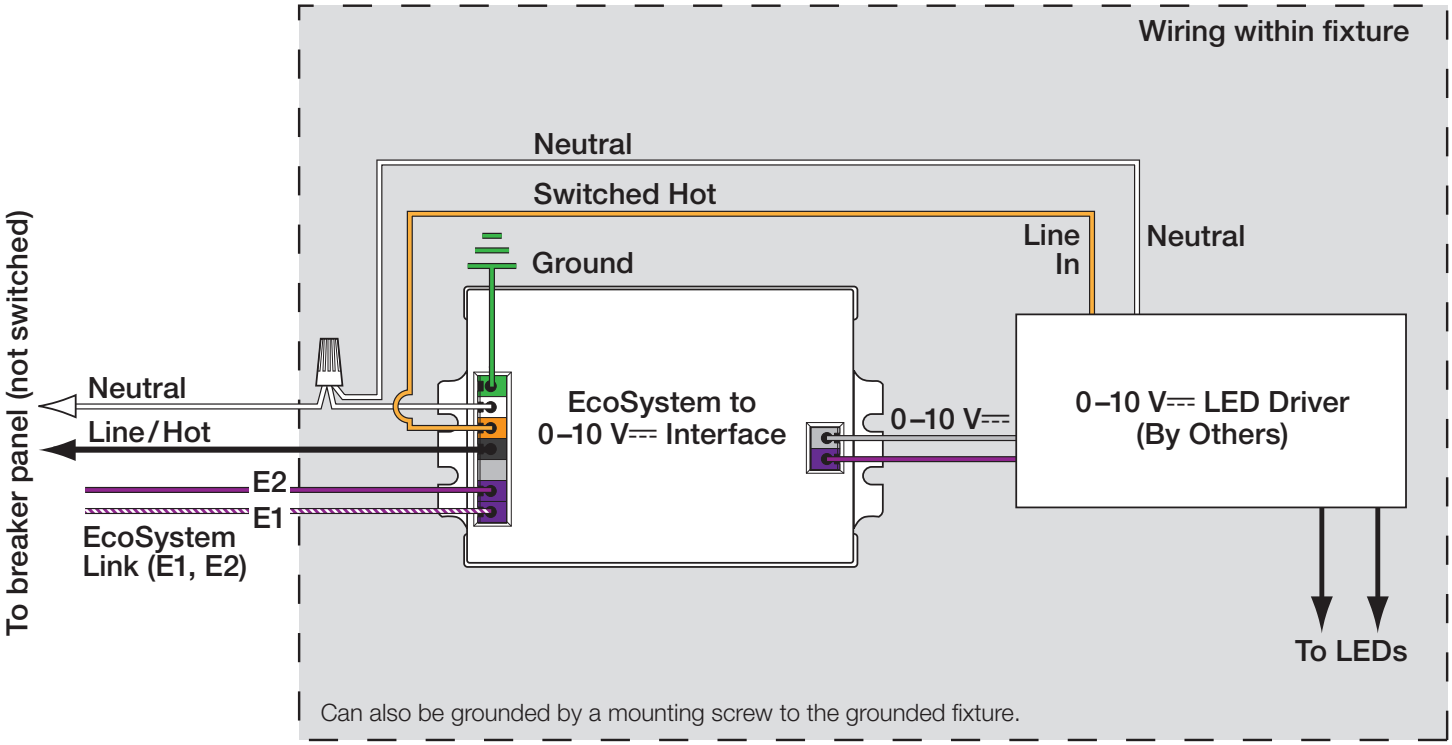
Wire Locations

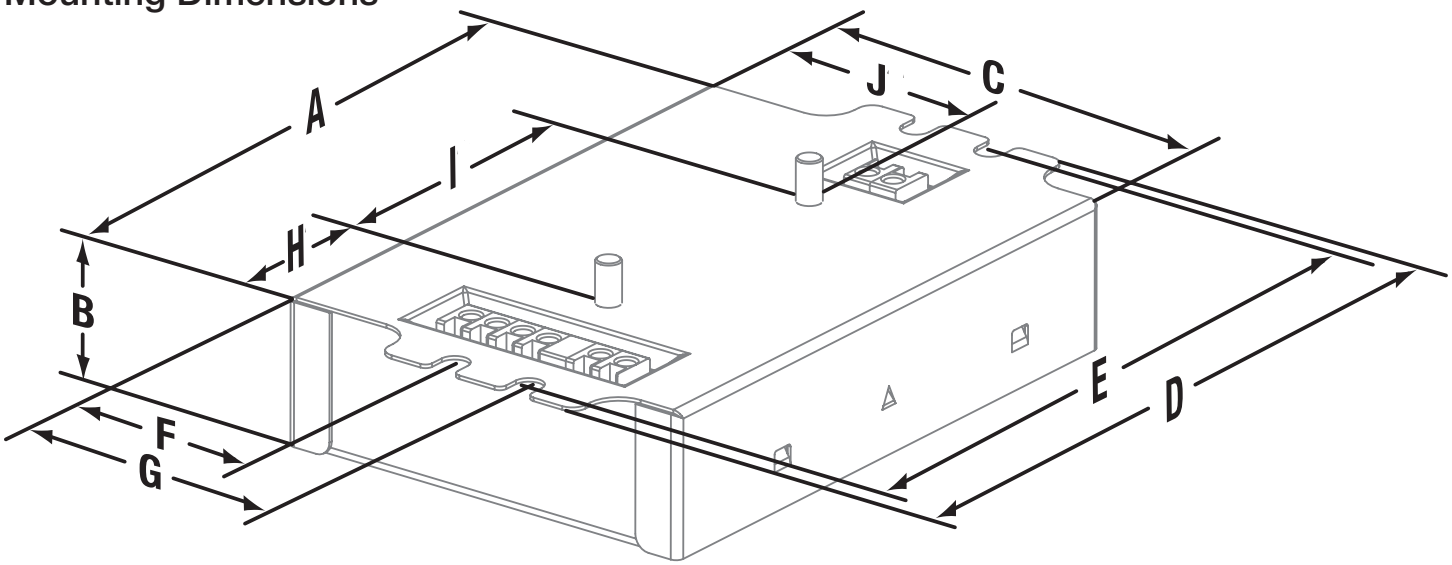


Wiring Diagram

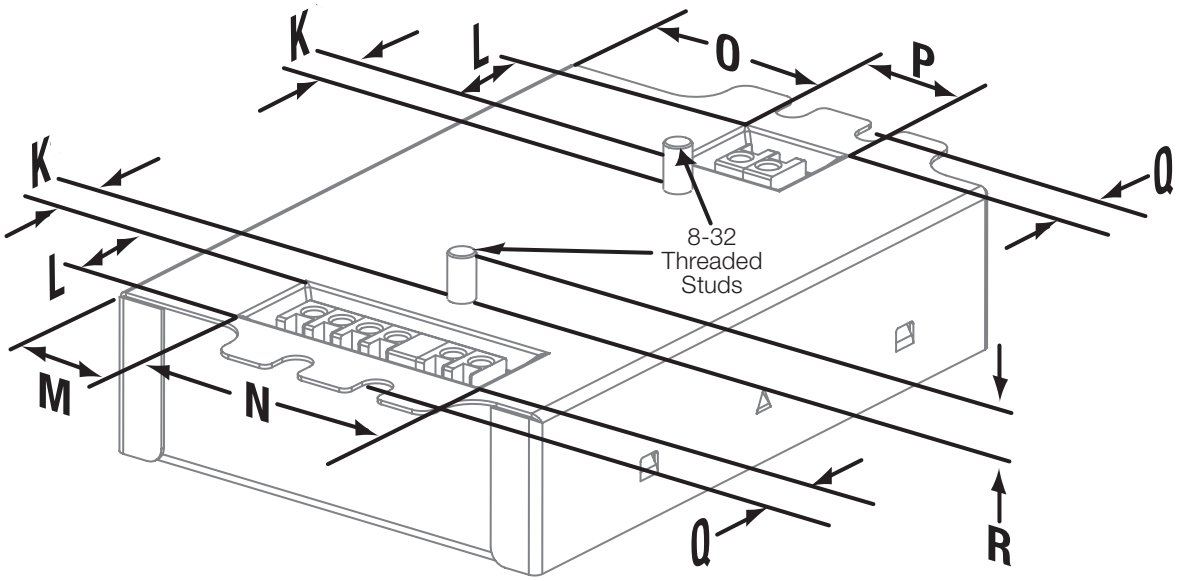


Job Name:	Model Numbers:	
Job Number:		

Mounting Dimensions



Connector Location Dimensions



A	4.20 in (107 mm)	F	1.42 in (36 mm)	L	0.65 in (16.5 mm)	R	0.29 in (7 mm)
B	1.00 in (25 mm)	G	1.99 in (51 mm)	M	0.75 in (19 mm)		
C	3.00 in (76 mm)	H	1.11 in (28 mm)	N	1.73 in (44 mm)		
D	4.90 in (124 mm)	I	2.00 in (51 mm)	O	1.33 in (34 mm)		
E	4.60 in (117 mm) (mounting center)	J	1.60 in (41 mm)	P	0.74 in (19 mm)		
		K	0.33 in (8.3 mm)	Q	0.32 in (8 mm)		

NOTE: To mount to a junction box, use Lutron part 2441317.

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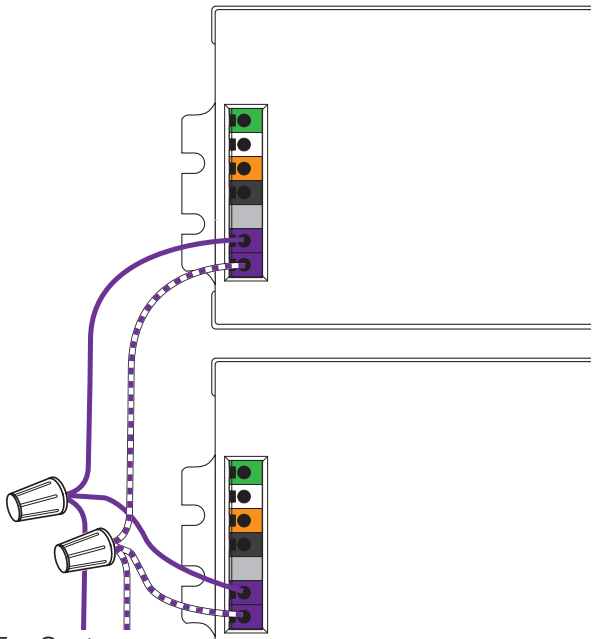
EcoSystem to 0–10 V⎓ Interface Wiring Diagram:

EcoSystem Digital Link Overview

- The EcoSystem digital link wiring (E1 and E2) connects the interfaces together with other EcoSystem devices to form a lighting control system.
- Each EcoSystem digital link supports up to 64 EcoSystem devices, 64 occupant sensors, 16 daylight sensors, and 64 wallstations or IR receivers.
- Sensors do not directly connect to EcoSystem 0–10 V⎓ Interfaces.
- E1 and E2 (EcoSystem digital link wires) are polarity insensitive and can be wired in any topology (e.g., T-tap and daisy-chain).
- Power is supplied to the EcoSystem Digital Link from the control system.
- For complete information, see EcoSystem Design and Application Guide (Lutron P/N 367-1533).

EcoSystem Digital Link Wiring

- Each EcoSystem digital link terminal accepts only one 18 AWG to 16 AWG (0.75 mm^2 to 1.5 mm^2) solid copper wire per terminal.
- Make sure that the supply breaker to the interface and EcoSystem digital link power supply is OFF when wiring.
- Connect the two conductors to the two terminals E1 and E2.
- Using two different colors for E1 and E2 will reduce confusion when wiring several devices together.
- The EcoSystem digital link may be wired Class 1 or Class 2. Consult applicable electrical codes for proper wiring practices.



To the EcoSystem digital link supply and up to 64 total EcoSystem devices

Notes

- The EcoSystem digital link supply does not have to be located at the end of the digital link.
- EcoSystem digital link length is limited by the wire gauge used for E1 and E2 as follows:

Wire Gauge	Digital Link Length (max)
12 AWG	2200 ft
14 AWG	1400 ft
16 AWG	900 ft
18 AWG	550 ft

Wire Size	Digital Link Length (max)
4.0 mm^2	828 m
2.5 mm^2	517 m
1.5 mm^2	310 m
1.0 mm^2	207 m
0.75 mm^2	155 m

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