

EcoSystem Multiple Control Input Ballasts

Digital electronic dimming ballasts maximize the benefits of a lighting management system. EcoSystem Ballasts offer 100% to 10% dimming; ideal for use where saving energy, increasing flexibility, and maximizing productivity are the goals of the lighting design.

Features

- Continuous, flicker-free dimming from 100% to 10%
- Integral sensor connection provides power for and responds to one occupancy sensor, one photo sensor, and one personal control input (infrared receiver or wallstation)
- Communicates status and sensor inputs over the EcoSystem digital link
- Programmed rapid start design ensures full rated lamp life while dimming and cycling
- Lamps turn on to any dimmed level without flashing to full brightness
- Low harmonic distortion throughout the entire dimming range
- Frequency of operation ensures that ballast does not interfere with infrared devices
- End-of-lamp-life protection circuitry ensures safe operation throughout entire lamp life
- Ultra-quiet operation
- Non-volatile memory restores all ballast settings after power failure
- Ballasts maintain consistent light output for linear lamp lengths (e.g., 4 ft [1.5 m], 3 ft [1 m], 2 ft [0.5 m] have same relative output)
- Protected from miswires of any input power to control lead, or from lamp leads to each other and/or ground
- 100% performance tested at factory
- Custom ballast factors available. Design tool and specifications can be found at www.lutron.com/ballasttool
- BAA-compliant (Buy American Act) model numbers available. Add a "U" prefix to the model number









EcoSystem case type G





EcoSystem case type J

Job Name: <input style="width: 90%; height: 20px;" type="text"/>	Model Numbers: <input style="width: 95%; height: 20px;" type="text"/>	
Job Number: <input style="width: 80%; height: 20px;" type="text"/>	<input style="width: 95%; height: 20px;" type="text"/>	<input style="width: 95%; height: 20px;" type="text"/>

EcoSystem Ballasts with Integral Sensor Connection for Linear T5 HO Lamps

Lamp	No. of Lamps	Model	Case Size	Input Voltage (V~)	Input Current (A)	Input Power (W)	Ballast Factor (BF)	System Lumens (lm)	System Efficacy (lm/W)	Ballast Efficacy Factor	Relative Efficacy (RSE)
F54T5 (45.2 in [1148 mm]) 	1	EC5 T554 J UNV 1 ¹	J	277	0.21	56.5	1.0	5000	88	1.77	0.96
				240	0.24	58.0	1.0	5000	86	1.73	0.93
				120	0.48	57.9	1.0	5000	86	1.73	0.93
	2	EC5 T554 J UNV 2 ¹	J	277	0.40	110.1	1.0	10,000	91	0.91	0.98
				240	0.52	119.0	1.0	10,000	84	0.84	0.91
				120	0.99	119.3	1.0	10,000	84	0.84	0.91
F39T5 (33.4 in [848 mm]) 	1	EC5 T539 J UNV 1	J	277	0.16	43.3	1.0	3500	81	2.31	0.90
				240	0.18	44.0	1.0	3500	80	2.27	0.89
				120	0.37	44.0	1.0	3500	80	2.27	0.89
	2	EC5 T539 J UNV 2	J	277	0.30	83.0	1.0	7000	84	1.20	0.94
				240	0.35	84.0	1.0	7000	83	1.19	0.93
				120	0.70	84.3	1.0	7000	83	1.19	0.93
F24T5 (21.6 in [549 mm]) 	1	EC5 T524 J UNV 1	J	277	0.11	30.0	1.0	2000	67	3.33	0.80
				240	0.13	28.8	1.0	2000	69	3.47	0.83
				120	0.24	28.8	1.0	2000	69	3.47	0.83
	2	EC5 T524 J UNV 2	J	277	0.20	54.8	1.0	4000	73	1.82	0.89
				240	0.23	54.0	1.0	4000	74	1.85	0.89
				120	0.45	53.9	1.0	4000	74	1.86	0.89

EcoSystem Ballasts for Linear T5 HO Lamps (CA Customers only)

Lamp	No. of Lamps	Model	Case Size	Input Voltage (V~)	Input Current (A)	Input Power (W)	Ballast Factor (BF)	System Lumens (lm)	System Efficacy (lm/W)	Ballast Efficacy Factor	Relative Efficacy (RSE)
F54T5 (45.2 in [1148 mm]) 	1	EC5NST554CU110R ²	C	277	0.23	63.7	1.0	5000	78	1.57	0.85
				240	0.26	62.4	1.0	5000	80	1.60	0.87
				120	0.54	64.8	1.0	5000	77	1.54	0.83
	2	EC5NST554CU210R ²	C	277	0.43	119.1	1.0	10,000	84	0.84	0.91
				240	0.50	120.0	1.0	10,000	83	0.83	0.90
				120	1.02	122.4	1.0	10,000	82	0.82	0.88

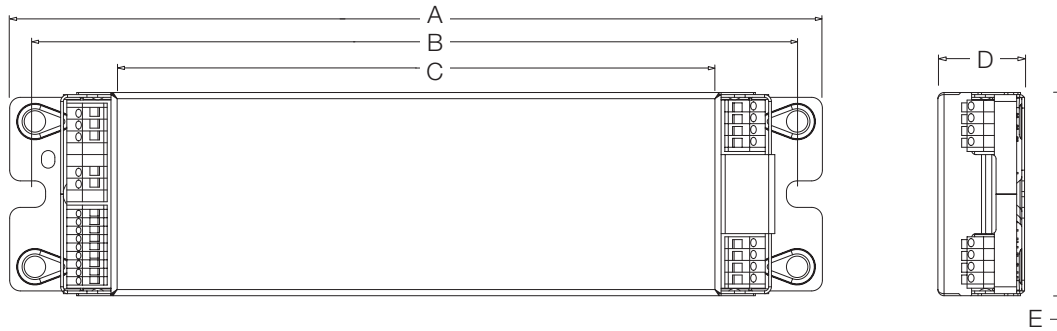
¹ Not for sale in California - see CEC Title 20 Regulation App Note #601 (P/N 048601), for information on alternative models

² For sensor inputs, use with a C5-BMF-2A

Job Name:	Model Numbers:	
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EcoSystem Ballast Case Dimensions

G Case

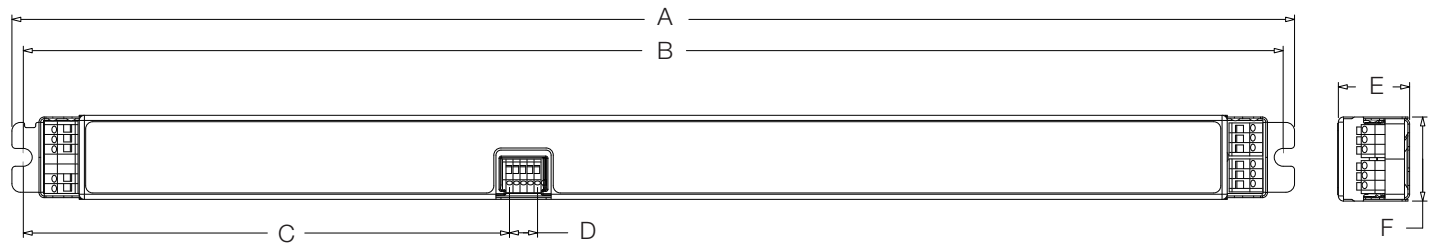


G Case Dimensions

- A = 9.5 in (241 mm)
- B = 8.9 in (226 mm)
- C = 7.1 in (180 mm)
- D = 1.0 in (25 mm)
- E = 2.38 in (60 mm)

G case ballasts with leads ship with 36 in (914 mm) leads for lamp connections and 18 in (457 mm) leads for Line/Hot, Neutral, E1 and E2 connections

J Case / C Case



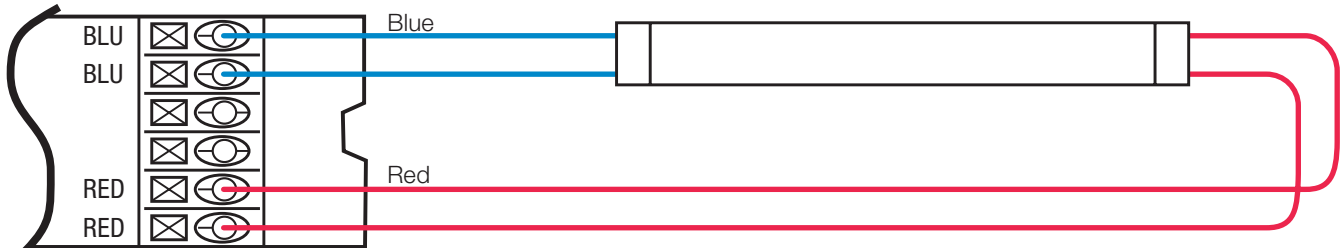
J Case / C Case Dimensions

- A = 18.0 in (457 mm)
- B = 17.68 in (449 mm)
- C = 6.82 in (173 mm) - J Case only
- D = 0.394 in (10 mm) - J Case only
- E = 1.0 in (25 mm)
- F = 1.18 in (30 mm)

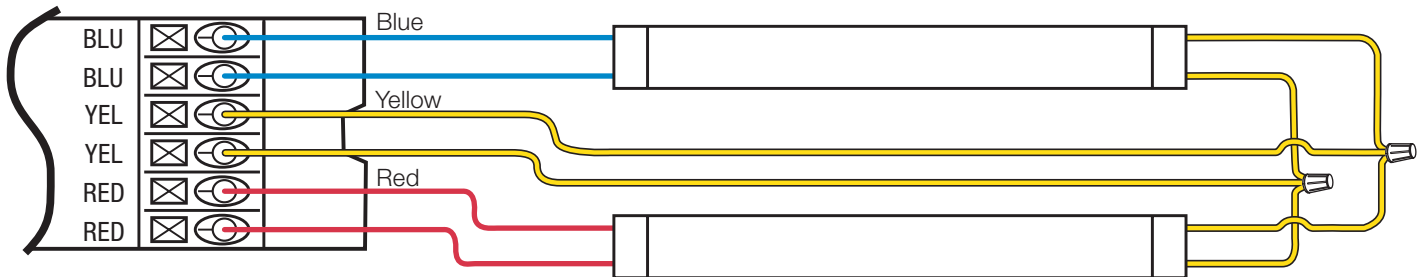
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EcoSystem Ballast Wiring Diagrams – T8, T5, T5 HO

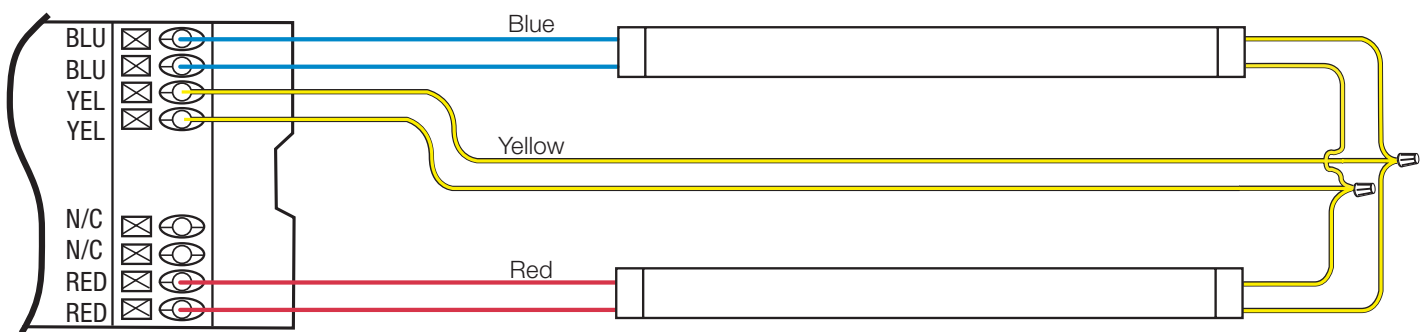
Wiring to One Lamp (J case shown)



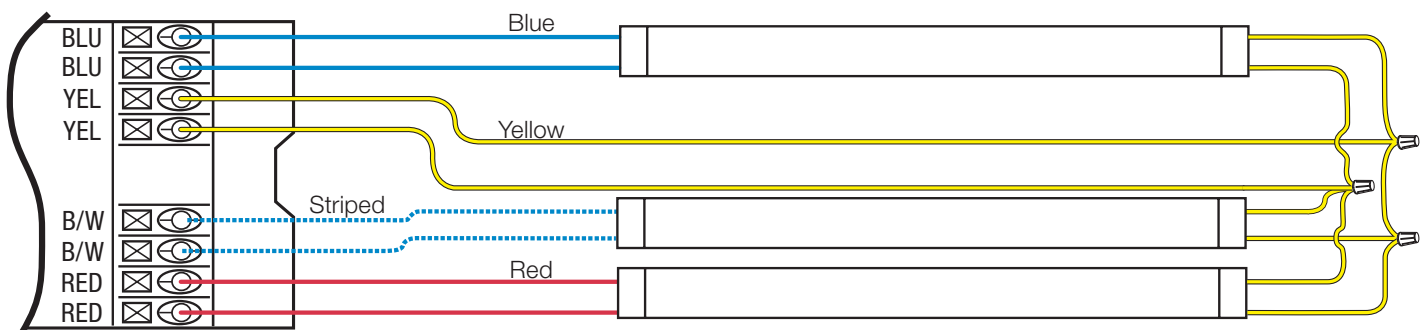
Wiring to Two Lamps (J case shown)



Wiring to Two Lamps (G case shown)



Wiring to Three Lamps (G case shown)



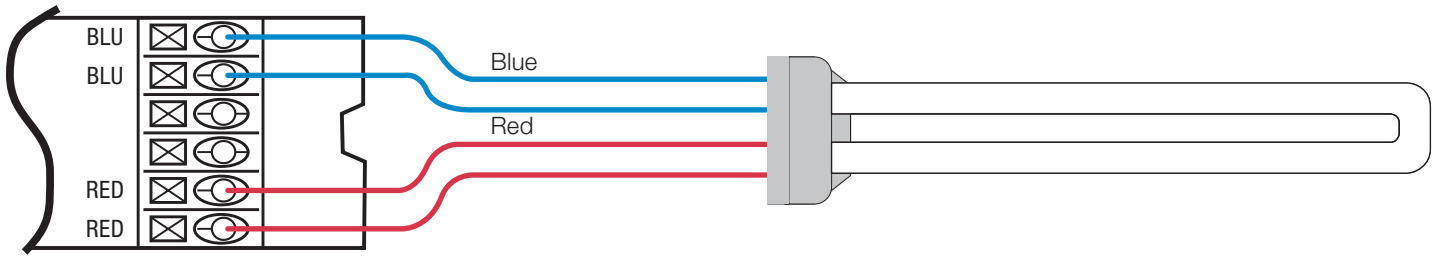
NOTICE

- Maximum ballast to lamp socket lead length is 7 ft (2 m)
- Wire colors shown are labeled on the ballast, but may vary depending upon fixture construction

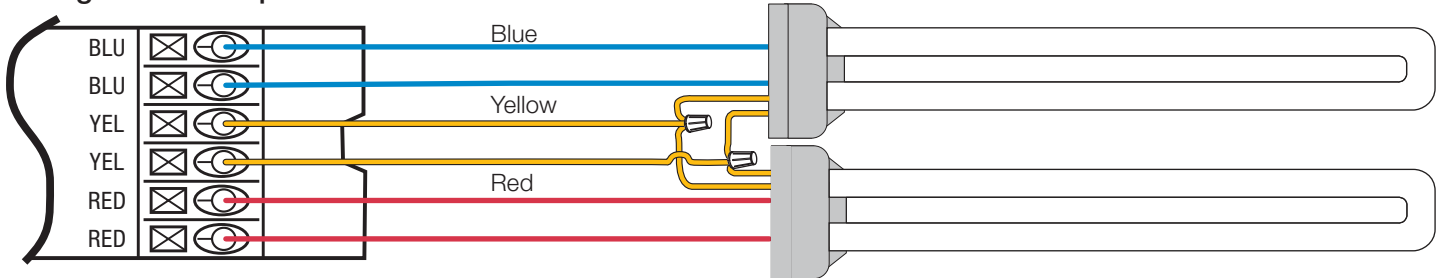
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EcoSystem Ballast Wiring Diagrams – T5 Twin-Tube

Wiring to One Lamp



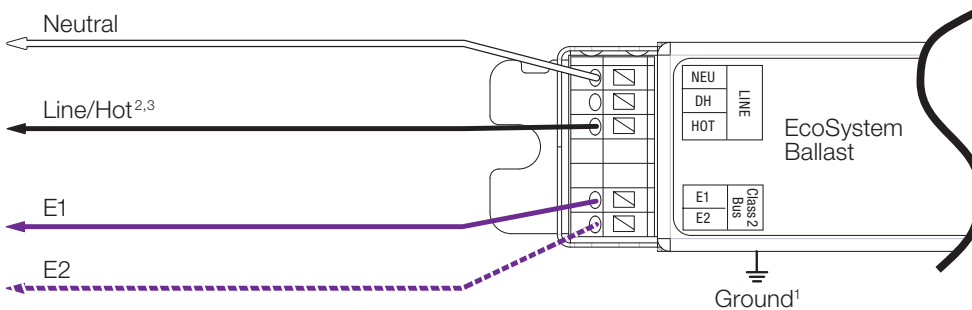
Wiring to Two Lamps



NOTICE

- Maximum ballast to lamp socket lead length is 3 ft (1 m)
- Wire colors shown are labeled on the ballast, but may vary depending upon fixture construction

EcoSystem Ballast Wiring: Power Wiring for EcoSystem Digital Link



¹ Ballast is grounded via the case
² Wire colors shown are for Lutron controls and ballasts only. Dimming control wires may not match ballast wire colors
³ The Hot must not be wired to a switching device or system functionality will be lost

Job Name:	Model Numbers:	
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Job Number:	<input type="text"/>	<input type="text"/>

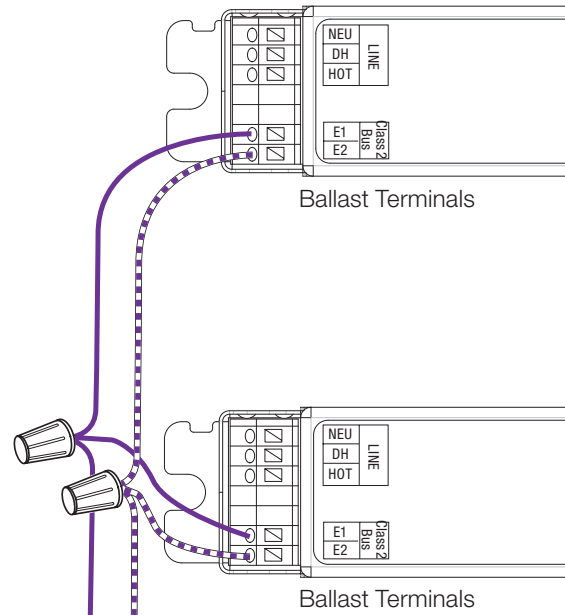
EcoSystem Ballast Wiring: EcoSystem Digital Link

EcoSystem Digital Link Overview

- The EcoSystem digital link wiring (E1 and E2) connects the ballasts together to form a lighting control system
- Each EcoSystem digital link supports up to 64 digital ballasts, 64 occupant sensors, 16 daylight sensors, and 64 wallstations or IR receivers
- E1 and E2 (EcoSystem digital link wires) are polarity insensitive and can be wired in any topology
- An EcoSystem Energi Savr Node device, GRAFIK Eye QS with EcoSystem connection, or Quantum system provides power for the EcoSystem digital link and supports system programming
- All EcoSystem digital link programming is completed by using the EcoSystem Programmer, GRAFIK Eye QS with EcoSystem connection, or Quantum system

EcoSystem Digital Link Wiring

- Driver EcoSystem digital link terminals only accept one solid wire per terminal from 18 AWG to 16 AWG (0.75 mm² to 1.5 mm²)
- Make sure that the supply breaker to the ballast and EcoSystem digital link supply is OFF when wiring
- Connect the two conductors to the two driver terminals E1 and E2
- Using two different colors for E1 and E2 will reduce confusion when wiring several ballasts 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 & up to 64 total ballasts, drivers, or modules

Notes

- The EcoSystem digital link supply does not have to be located at the end of the digital link
- E1 and E2 wires are not polarity sensitive
- 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

Job Name:	Model Numbers:	
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Job Number:	<input type="text"/>	<input type="text"/>