

EcoSystem® Ballasts for 347 V~

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.



EcoSystem® case type C

Features

- Continuous, flicker-free dimming from 100% to 10%
- Communicates status over the EcoSystem® Bus
- 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
- Nonvolatile memory restores all ballast settings after power failure
- Ballasts maintain consistent light output for linear lamp lengths
- 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
- 5-year limited warranty with Lutron® field service commissioning (3-year standard warranty) from date of purchase

Job Name:	Model Numbers:
Job Number:	

Specifications

Standards

- CSA certified (evaluated to the requirements of C22.2 No. 74)
- Class P thermally protected
- Meets ANSI C82.11 High Frequency Ballast Standard
- Meets Non-Consumer requirements for EMI/RFI emissions
- Meets ANSI C62.41 Category A surge protection standards up to and including 4 kV
- Manufacturing facilities employ ESD reduction practices that comply with the requirements of ANSI/ESD S20.20
- Lutron Quality Systems registered to ISO 9001.2000

Performance

- Operating Voltage: 347 V~ (±10%) at 60 Hz
- Grounding: ballast and fixture must be grounded for proper dimming
- Dimming Range: 100% to 10% measured relative light output
- Lamp Starting: programmed rapid start
- Lamp Current Crest Factor: less than 1.7
- Light Output Variation: Constant ±2% light output for line voltage variations of ±10%
- Lamp Life: Average lamp life meets or exceeds specified lamp ratings
- Power Factor: 0.95 minimum
- Total Harmonic Distortion (THD): Less than 20%
- Maximum Inrush Current: 3 A per ballast
- Frequency of Operation: >42 KHz

Environment

- Minimum lamp starting temperature: 50 °F (10 °C)
- Relative humidity: less than 90% non-condensing
- Sound Rating: inaudible in a 27 dB ambient
- Maximum ballast case temperature: 167 °F (75 °C)

Ballast Wiring & Mounting


- Ballast is grounded through case by a mounting screw to the fixture
- Terminal blocks accept one single 16 to 18 AWG (0.75 to 1.5 mm²) solid wire
- Only one wire per terminal
- Ballast mounts using two screws (or sheet metal feature and one screw) within a fluorescent fixture
- Wiring from the ballast to lamp sockets shall not exceed 7 ft (2 m).

Lamp Seasoning

Refer to lamp manufacturer for lamp seasoning requirements prior to dimming

Job Name: Job Number:	Model Numbers:
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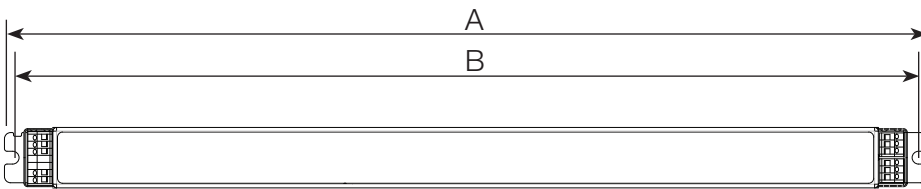
EcoSystem® Ballast for linear T5 HO Lamps

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	ECD T554 C 347 1	C	347	0.17	58.3	1.0	5000	85.8	1.70	0.93
	2	ECD T554 C 347 2	C	347	0.34	118.0	1.0	10,000	84.7	0.85	0.92

* Standard wattage lamps only. Not for use with energy-saving lamps. See Application Note #359 at www.lutron.com.

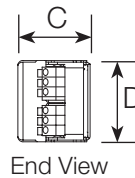
EcoSystem® Ballast Case Dimensions

C Case



C Case Dimensions

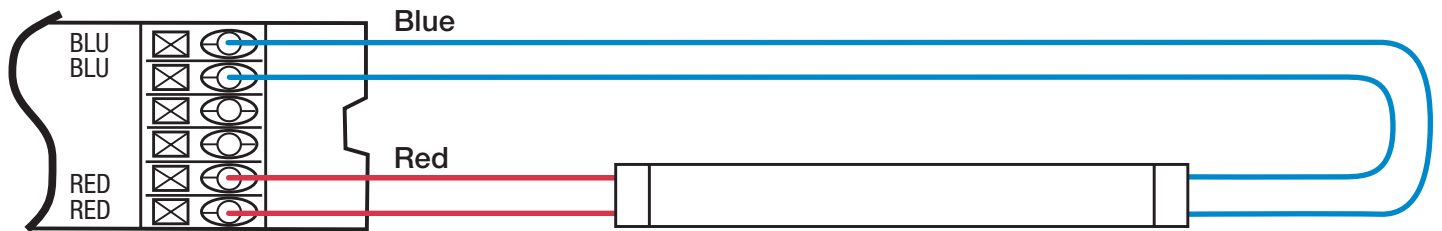
- A = 18.0 in (457 mm)
- B = 17.68 in (449 mm)
- C = 1.0 in (25 mm)
- D = 1.18 in (30 mm)



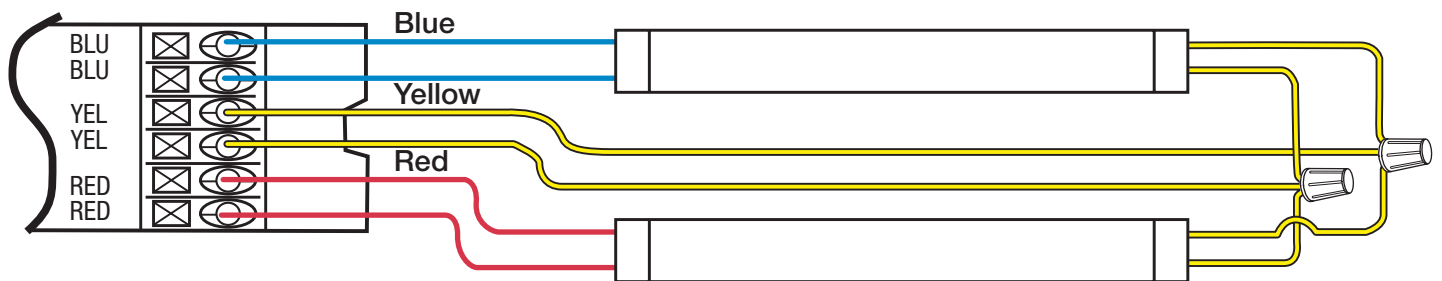
Job Name:	Model Numbers:
Job Number:	

EcoSystem® Ballast Wiring Diagram – T5 HO

Wiring to One Lamp



Wiring to Two Lamps



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

Job Name:	Model Numbers:
Job Number:	

EcoSystem® Ballast Wiring: EcoSystem® Bus

EcoSystem® Bus Overview

- The EcoSystem® Bus wiring (E1 and E2) connects the digital ballasts together to form a lighting control system
- Each EcoSystem® Bus supports up to 64 digital ballasts, 32 occupant sensors, 16 daylight sensors, and 64 wallstations or IR receivers
- E1 and E2 (EcoSystem® bus wires) are not polarity sensitive and can be wired in any topology
- An EcoSystem® Bus Supply provides power for the EcoSystem® Bus and supports system programming
- All EcoSystem® Bus programming is completed by using the EcoSystem® Programmer, GRAFIK Eye® QS with EcoSystem® control unit, or Quantum® System

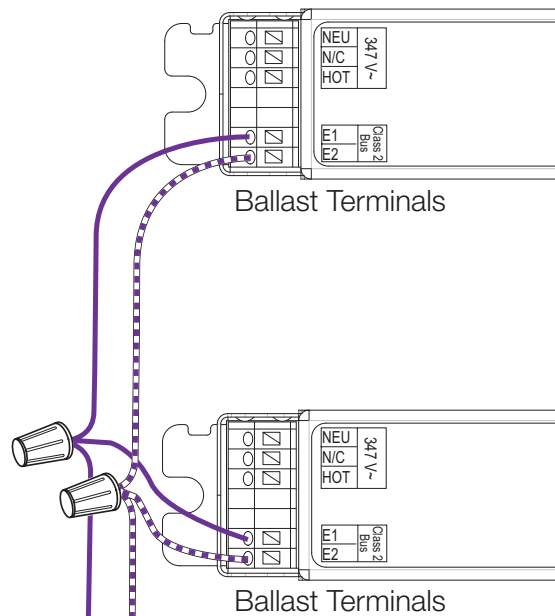
EcoSystem® Bus Wiring

- Ballast EcoSystem® Bus terminals accept only one 16 to 18 AWG (0.75 to 1.5 mm²) solid wire
- Make sure that the supply breaker to the Digital Ballast and EcoSystem® Bus Supply is OFF when wiring
- Connect the two conductors to the two Digital Ballast terminals E1 and E2 as shown
- Using two different colors for E1 and E2 will reduce confusion when wiring several ballasts together
- The EcoSystem® bus may be wired Class 1 or Class 2. Consult applicable electrical codes for proper wiring practices. See Application Note #142 at www.lutron.com.

Notes

- The EcoSystem® Bus Supply does not have to be located at the end of the Digital Loop
- E1 and E2 wires are not polarity sensitive
- EcoSystem® Bus length is limited by the wire gauge used for E1 and E2 as follows:

Wire Gauge	Bus Length (max)
12 AWG (4.0 mm ²)	2200 ft (670 m)
14 AWG (2.5 mm ²)	1400 ft (427 m)
16 AWG (1.5 mm ²)	900 ft (274 m)



To the EcoSystem® Bus Supply
& up to 64 total ballasts

Job Name:	Model Numbers:
Job Number:	

ATTENTION ELECTRICIANS AND CONTRACTORS

Ballast/Socket Leads

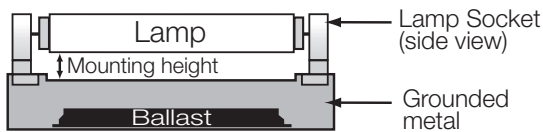
Lead lengths from ballast to socket must not exceed 7 ft (2 m) for linear lamps (T5-HO).

Lamp Sockets

Lamp sockets as per IEC 60400 are recommended to ensure positive lamp-pin to socket contact.

Lamp Mounting

Many fluorescent lamp sockets are available with mounting slots to vary the height of the lamp away from the grounded metal surface. Having a fluorescent lamp too close to the grounded metal will reduce lamp life. Having a fluorescent lamp too far away from the grounded metal will make the lamp flicker or not turn on at all. Please note that all of the lamp heights are measured between the grounded metal surface and the glass wall of the lamp.



IMPORTANT: Lamps must never touch ground plane and should be placed without obstruction.

Mounting for T5HO Lamps

Mount lamps 1/16 to 3/8 in (1.6 to 9.5 mm) away from the grounded metal surface.

Ballast Operating Temperature

Ballast case temperature must not exceed 167 °F (75 °C) at any point on ballast.

Cold Air Flow

Ensure that no cold air (from HVAC system, etc) is blowing across the lamps. Cooling the lamp will cause performance issues as noted in NEMA LSD-34.

ATTENTION FACILITIES MANAGERS

PERFORMANCE

Lamps Seasoning Requirements

Some fluorescent lamp manufacturers recommend that new fluorescent lamps be operated at full output (“seasoned”) before they can be dimmed, to render lamp impurities inert, ensuring proper dimming performance and average rated lamp life. Please contact your lamp manufacturer for seasoning requirements.

SERVICE

Replacement Parts

Use replacement parts with exact Lutron® model numbers. Consult Lutron if you have any questions.

Further Information

For further information, please visit us at www.lutron.com/ballasts or contact our 24-hour Technical Support Center at 1.800.523.9466.

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