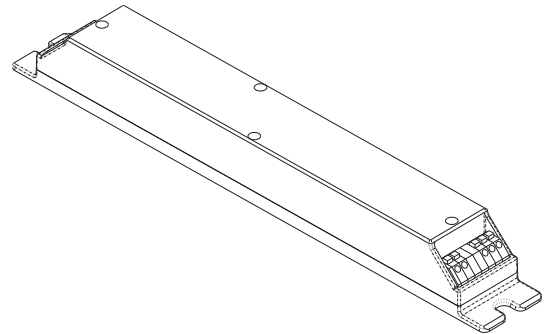


Fixture Mountable Ballast Module for 3-wire Fluorescent Ballasts

Lutron EcoSystem Ballast Module allows for integration of Lutron 3-wire phase controlled dimming ballasts into Lutron EcoSystem Bus (Eco-10, Hi-lume Compact SE, and Hi-lume series only). The Ballast Module combines digital commands and sensor data to determine the proper light level.



Features

- Continuous, flicker-free dimming from 100% to minimum ballast level, (10% for Eco-10, 5% for Hi-lume Compact SE, and 1% for Hi-lume).
- Powers and responds to one occupancy sensor, one photo sensor, and one personal control input (infrared receiver or wallstation).
- Communicates status and sensor levels over the EcoSystem Bus.
- Universal voltage input: 120/240/277 V~ 50/60 Hz.
- Non-volatile (EEPROM) memory stores specific system information for 10 years from removing power to restoring power.
- 100% performance-tested at factory.

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Specifications

Standards

- cULus Listed (evaluated to the requirements of UL[®] 935)
- Class P thermally protected
- 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
- For commercial use, Class A only
- EMC Information – This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's expense.

Power

- Operating Voltage: 120/240/277 V~ 50/60 Hz
- Dimming Range: 100% to minimum ballast level (10% for Eco-10, 5% for Hi-lume Compact SE, and 1% for Hi-lume) relative light output
- Output Rating: 2 A maximum for use with Lutron Eco-10, Hi-lume Compact SE, and Hi-lume Dimming Ballasts only
- Class 2 Output: +20 V^{DC}, 50 mA max

Wiring

- Terminal blocks on the ballast module accept only ONE solid wire of the following size:
Power Wiring (H, DH, N, SH) and EcoSystem Bus: 18–16 AWG (0.75–1.5 mm²) solid
Class 2 Sensors: 22 AWG (0.5 mm²) solid
- Mounts using two screws within a fluorescent fixture or other approved electrical enclosure

Environment

- Ambient Temperature Operating Range: 50–140 °F (10–60 °C)
- Relative humidity: less than 90% non-condensing

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Ballast Module Wiring to One Dimming Ballast

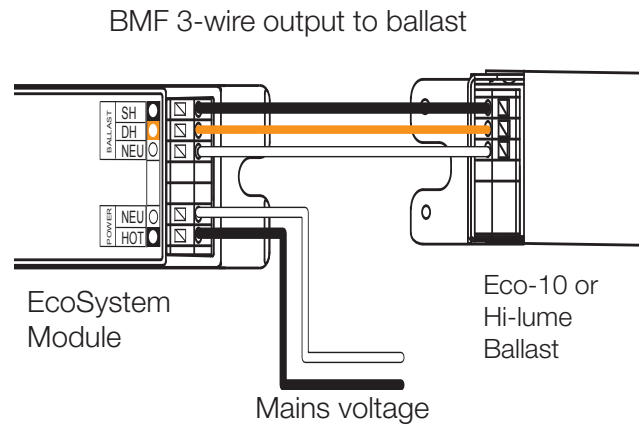
Line Voltage Ballast Terminals

Ballast module output to Lutron ballasts:

- 18–16 AWG (0.75–1.5 mm²) solid wire
- Maximum distance module to ballast: 50 ft (15 m)
- Terminal colors: Black = Switched Hot (HOT); Orange = Dimmed Hot (DH); White = Neutral (NEU)

Mains voltage input terminals:

- 18–16 AWG (0.75–1.5 mm²) solid wire connects to facility distribution wiring



Ballast Module Sensor and EcoSystem™ Bus Wiring

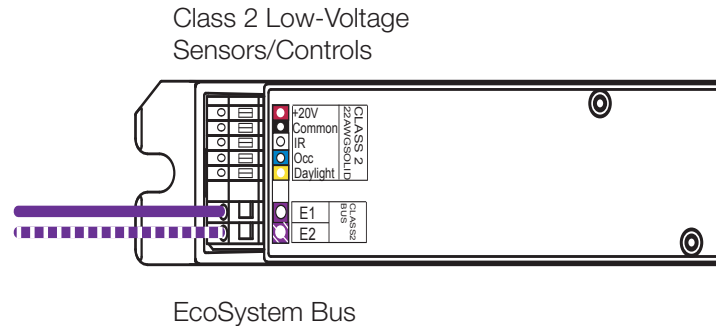
Low-Voltage Ballast Terminals

Class 2 Low Voltage Sensors/Controls:

- Accept only 22 AWG (0.5 mm²) wire only in module terminals
- Maximum distance from module to sensors or keypad is 100 ft (30 m)
- Only one IR device may be wired to a module (one keypad, IR receiver, or IR from the daylight sensor)

EcoSystem Bus:

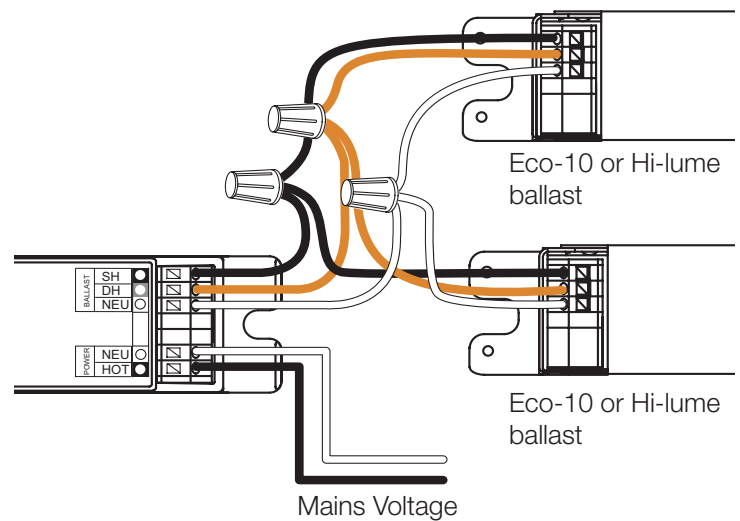
- 18–16 AWG (0.75–1.5 mm²) solid wire at E1 and E2 terminals
- Connect up to 64 ballasts and modules on the EcoSystem Bus
- EcoSystem Bus wiring between modules can be a larger wire gauge to support longer bus lengths, but each module terminal only accepts one 18–16 AWG (0.75–1.5 mm²) solid wire



Job Name:	Model Numbers:
Job Number:	

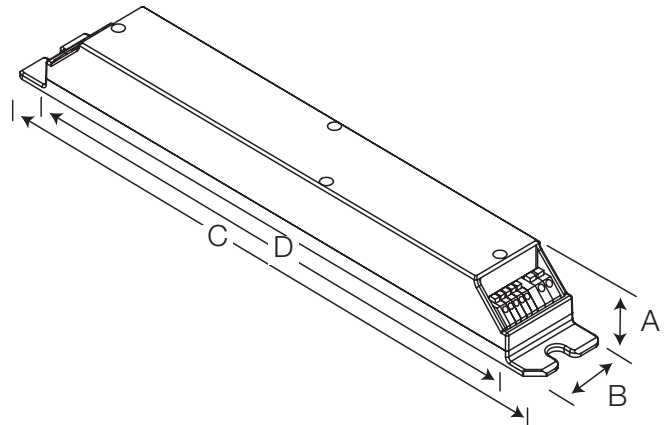
Wiring to Multiple Ballasts

- Only use the wiring shown when wiring multiple dimming ballasts to one EcoSystem module.
- Wire the module's 3-wire output to ballasts: SH (BLACK) to ballast HOT (BLACK); DH (ORANGE) to ballast DH (ORANGE); NEU (WHITE) to ballast NEU (WHITE).
- Do not exceed 2 A of ballast current per BMF output, consult Eco-10 or Hi-lume specifications for the current draw of the ballast.



Dimensions

- A = 1.0 in (25 mm)
- B = 1.18 in (30 mm)
- C = 9.3 in (236 mm)
- D = 8.9 in (226 mm) mounting centers



Job Name:

Model Numbers:

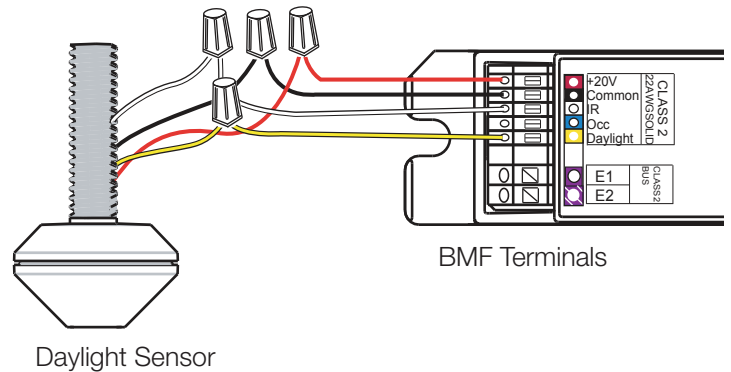
Job Number:

Low-Voltage Wiring

Wiring to a Daylight Sensor with Integrated Infrared Receiver

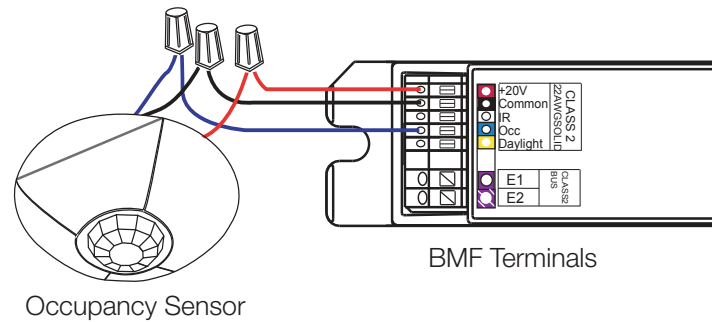
- Wire color designations of the sensor:
 Red = +20 V_{AC}
 Black = Common
 Yellow = Daylight Sensor Signal
 White = IR Signal
- Make sure that the supply breaker to the digital ballast module is OFF when wiring.
- Connect the four conductors to the four digital ballast module terminals as shown.

Note: The digital ballast module accepts only one IR Input. Use of the IR Input for the Daylight Sensor precludes the use of an Infrared Receiver or keypad with the attached digital ballast module.



Wiring to an Occupancy Sensor (LOS)

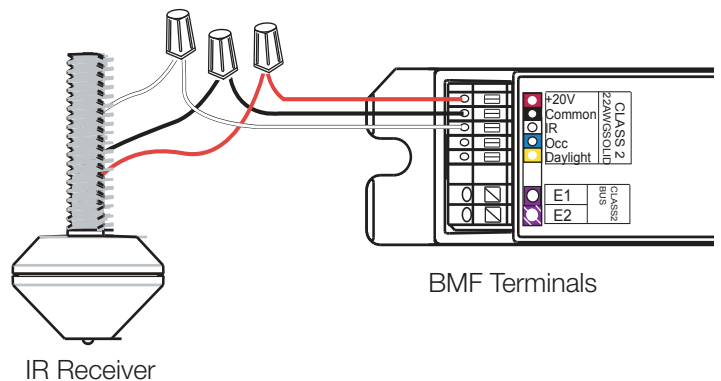
- Wire color designations of the sensor:
 Red = +20 V_{AC}
 Black = Common
 Blue = Occupancy Sensor Signal
- Make sure that the supply breaker to the digital ballast module is OFF when wiring.
- Connect the three conductors to the three digital ballast module terminals as shown.



Wiring to an Infrared Receiver or Keypad

- Wire color designations of the sensor:
 Red = +20 V_{AC}
 Black = Common
 White = IR Signal
- Make sure that the supply breaker to the digital ballast module is OFF when wiring.
- Connect the three conductors to the digital ballast module terminals as shown.

Note: The digital ballast module accepts only one IR Input. Use of the Infrared Receiver precludes the use of a keypad with this module and the IR output from the Daylight Sensor for programming.



Job Name:	Model Numbers:
Job Number:	

Low-Voltage Wiring (continued)

EcoSystem Bus Wiring

The EcoSystem Bus connects all ballasts together and requires a Power Supply. Each EcoSystem Bus can support a maximum of 64 Digital Ballasts or Digital Ballast Modules. For integration of multiple buses or other lighting control systems, please contact a Lutron Representative.

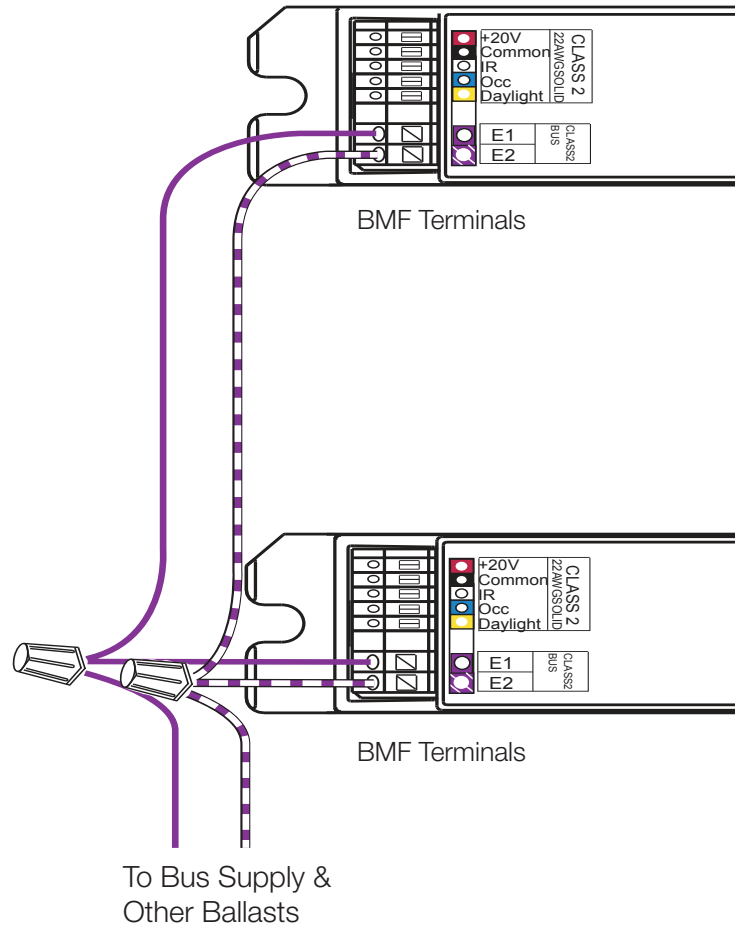
Notes

- E1 and E2 wires are not polarity sensitive.
- Bus length is limited by the wire gauge used for E1 and E2 as follows:

Wire Gauge	Loop Length (max)
12 AWG (4.0 mm ²)	2200 ft (828 m)
14 AWG (2.5 mm ²)	1400 ft (517 m)
16 AWG (1.5 mm ²)	900 ft (310 m)

Attention Electricians and Contractors

Regardless of bus wire gauge, ballast terminals will hold only one 18–16 AWG (0.75–1.5 mm²) solid wire. In most cases a wire connection to the EcoSystem Bus is required.



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Job Name:	Model Numbers:
Job Number:	