rES7 Sensor

Fixture Embedded Smart Sensor

360° COVERAGE • LOW VOLTAGE • WIRELESS

SPECIFICATIONS (rES7)

Electrical Specifications	Input Ratings	5-60 VDC
	Maximum Load	0.65 W
	Dimming Load	Sinks <20mA (0-10 VDC LED Drivers/Ballasts)
	Minimum Load	None
	Class Rating	Class 2
Mechanical	Mounting	Fixture-Mounted
	Mounting Height	Up to 20 ft (6.096m)
	Connection Type	Low Voltage Leads
Environmental	Warrantied Operating Temperature	-40º F to 185º F (-40º C to 85º C)
	Standards/ Ratings	RoHS, UL 916, UL 924 (optional), FCC / IC / IFETEL

IMPORTANT SAFEGUARDS

WHEN USING ELECTRICAL EQUIPMENT, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED INCLUDING THE FOLLOWING:

- **DO NOT USE OUTDOORS.**
- DO NOT MOUNT NEAR GAS OR ELECTRIC HEATERS.
- EQUIPMENT SHOULD BE MOUNTED IN LOCATIONS AND AT HEIGHTS WHERE IT WILL NOT READILY BE SUBJECTED TO TAMPERING BY UNAUTHORIZED PERSONNEL.
- THE USE OF ACCESSORY EQUIPMENT NOT RECOMMENDED BY THE MANUFACTURER MAY CAUSE AN UNSAFE CONDITION.

Contains FCC ID: 2ADCB-RMODIT or 2ADCB-RES7CD
Contains IC: 6715C-RMODIT or 6715C-RES7CD
IFT #: RCPACRM18-1879 or RCPACRE21-0154
Acuity Brands Lighting Inc. RMODIT or RES7CD

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.

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the radiator shall not be less than 20cm during normal operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

READ AND FOLLOW ALL SAFETY INSTRUCTIONS!
SAVE THESE INSTRUCTIONS AND DELIVER TO OWNER AFTER INSTALLATION

AcuityBrands.
Expanding the boundaries of lighting™

c UL US LISTED
TITLE 20/24

WARRANTY

5-year limited warranty.
Full warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx
Note: Specifications subject to change without notice.
Actual performance may differ as a result of end-user environment and application.

- To reduce the risk of death, personal injury or property damage from fire, electric shock, falling parts, cuts/abrasions, and other hazards please read all warnings and instructions included with and on the fixture box and all fixture labels.
- Before installing, servicing, or performing routine maintenance upon this equipment, follow these general precautions.
- Installation and service should be performed by a qualified licensed electrician.
- Maintenance should be performed by qualified person(s) familiar with the products' construction & operation & any hazards involved. Regular maintenance programs recommended.
- **DO NOT INSTALL DAMAGED PRODUCT!** This product has been properly packed so that no parts should have been damaged during transit. Inspect to confirm. Any part damaged or broken during or after assembly should be replaced.

⚠ CAUTION: RISK OF PRODUCT DAMAGE

- √ Electrostatic Discharge (ESD): ESD can damage product(s). Personal grounding equipment should be worn during all installation or servicing of the unit.
- √ Do not touch individual electrical components, as this can cause ESD and affect product performance.
- √ Do not stretch or use cable sets that are too short or are of insufficient length.
- √ Do not tamper with contacts.
- √ Do not modify the product.
- √ Do not change or alter internal wiring or installation circuitry.
- √ Do not use product for anything other than its intended use.

WARNING - RISK OF ELECTRIC SHOCK

- √ Disconnect or turn off power before installation or servicing.
- √ Verify that supply voltage is correct by comparing it with the product information.
- √ Make all electrical and grounded connections in accordance with the National Electrical Code (NEC) and any applicable local code requirements.
- √ All wiring connections should be capped with UL approved recognized wire connectors.
- √ All unused connector openings must be capped.

WARNING - RISK OF BURN or FIRE

- √ Do not exceed maximum wattage, ratings, or published operation conditions of product.
- √ Do not overload.
- √ Follow all manufacturer's warnings, recommendations and restrictions to ensure proper operation of product.

CAUTION - RISK OF INJURY

- √ Wear gloves and safety glasses at all times when installing, servicing or performing maintenance.

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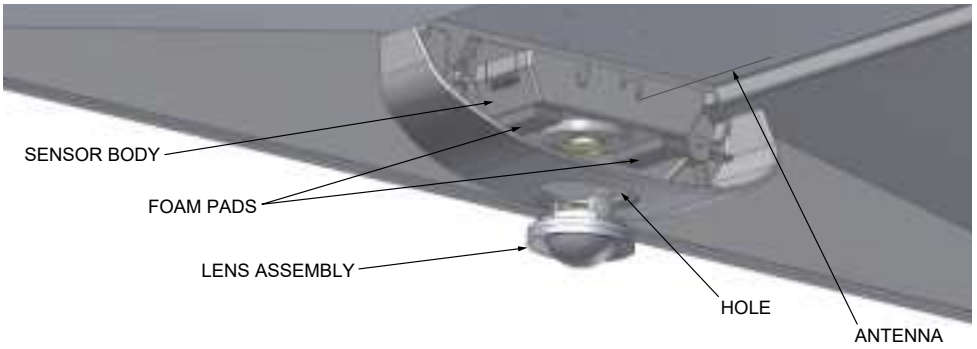
rES7 BASIC OVERVIEW

- **The rES7 is a wireless sensor that can be interconnected with the nLight® AIR network of wireless sensors and switches.**
- **The rES7 is compatible for use in fixtures with eldoLED drivers, or other analog (0-10VDC) third party aux drivers.**

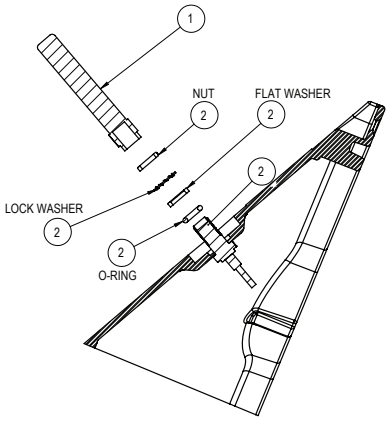
TYPICAL INSTALLATION INSTRUCTIONS (may vary by luminaire)

- Attach foam pads to surface of rES7 as shown. Adjust thickness of pad as needed to fill gap between sensor body and end cap.
- Attach wires to sensor according to the diagram below. Wire locations are also shown on product label.
- Ensure thin wire antenna points toward the center of the fixture, between the LEDs and diffuser.
- Place the rES7 in the fixture, with the rES7 cylinder aligned to the clearance hole.
- Insert rES7 lens assembly through the hole, securing it to the sensor body.
- Install diffuser.

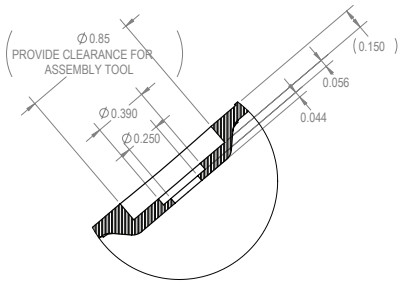


TYPICAL INSTALLATION FOR EXTERNAL ANTENNA (optional)

- Attach wires to sensor according to the wiring diagram below. Wire locations are also shown on product label.
- Route the coax cable through the inside of the fixture to the antenna hole.
- Affix the o-ring, washers, and nut as indicated on the drawing (2) to the external surface of the fixture.
- Attach external antenna (1) to the brass SMA connector. Torque spec for proper installation is 5in-lbs.
- Place the rES7 in the fixture, with the rES7 cylinder aligned to the clearance hole.
- Secure the lens assembly to the rES7 body.



SECTION VIEW OF EXPLODED DUALBAND ANTENNA IN CASTING DETAIL



MOUNTING HOLE DETAIL

OUT OF BOX OPERATION

- **Occupancy Control:** Enabled
- **Microphonics (with -PDT):** Enabled
- **Occupied Dim Level:** 100%
- **Unoccupied Time Until Dim:** 2.5 Minutes
- **Unoccupied Dim Level:** 1%
- **Dim to Off Time Delay:** 7.5 Minutes
- **Daylighting Control:** Enabled
- **Daylighting Set Point:** 10 fc
- **Daylighting Transition On Time:** 45 Seconds
- **Daylighting Transition Off Time:** 10 Minutes

For further troubleshooting guidance, please contact the Controls Technical Support Team

1(800)-535-2465

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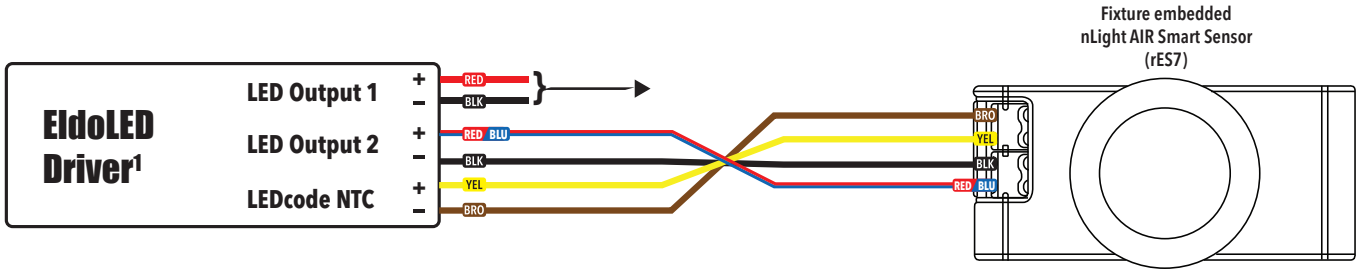
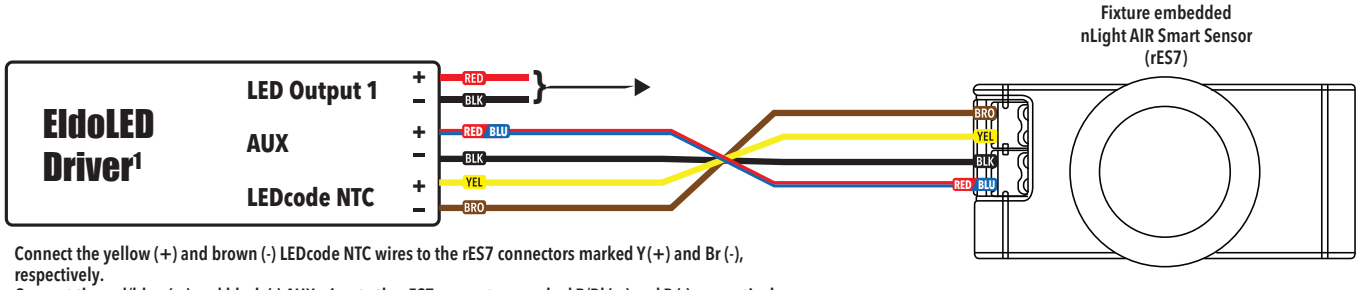
WIRING

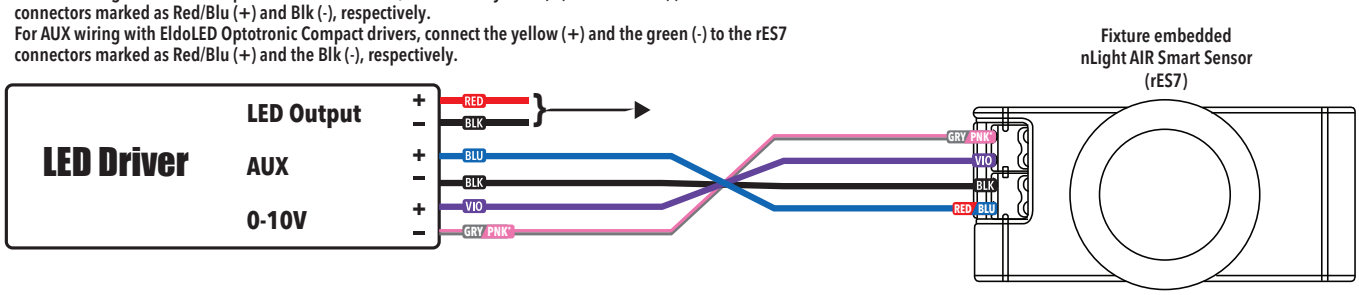


Connect the yellow (+) and brown (-) LEDcode NTC wires to the rES7 connectors marked Y (+) and Br (-), respectively
Connect the red/blue (+) and black (-) LED Output 2 wires to the rES7 connectors marked R/Bl (+) and B (-), respectively



Connect the yellow (+) and brown (-) LEDcode NTC wires to the rES7 connectors marked Y (+) and Br (-), respectively.
Connect the red/blue (+) and black (-) AUX wires to the rES7 connectors marked R/Bl (+) and B (-), respectively.

For AUX wiring with EldoLED Optotronic Linear drivers, connect the yellow (+) and the blue (-) to the rES7 connectors marked as Red/Blu (+) and Blk (-), respectively.
For AUX wiring with EldoLED Optotronic Compact drivers, connect the yellow (+) and the green (-) to the rES7 connectors marked as Red/Blu (+) and the Blk (-), respectively.



*0-10V Dimming Common from luminaire may be pink or as otherwise indicated per section 410.69 of the 2020 NEC

Connect the violet (+) and gray/pink (-) 0-10V wires to the rES7 connectors marked Y (+) and Br (-), respectively
Connect the red/blue (+) and black (-) AUX wires to the rES7 connectors marked R/Bl (+) and B (-), respectively

NOTE

Compatible EldoLED Drivers:

POWER [W]	DRIVER	PART #	NOTE
20	SOLOdrive 260/U	SL0260U2	1
30	ECOdrive 30B-M1M0Z	EC30B-M1M0Z1	2
30	SOLOdrive 30B-M1M0Z	SL30B-M1M0Z1	2
30	ECOdrive 368/L	EC0368L3-NLIGHTAIR	3
30	SOLOdrive 368/L	SL0368L3-NLIGHTAIR	3
30	ECOdrive 30S-M1M0Z	EC30S-M1M0Z1	2
30	SOLOdrive 30S-M1M0Z	SL30S-M1M0Z1	2
30	SOLOdrive 360/U	SL0360U2	1
50	SOLOdrive 560/A	SL0560A3	1
50	ECOdrive 568/L	EC0568L4	2
50	SOLOdrive 568/L	SL0568L4	2
50	ECOdrive 50L-M1M0Z	EC50L-M1M0Z1	2

POWER [W]	DRIVER	PART #	NOTE
50	SOLOdrive 50L-M1M0Z	SL50L-M1M0Z1	2
50	SOLOdrive 560/S	SL0560S4	1
50	SOLOdrive 560/U	SL0560U3	1
75	SOLOdrive 75B-M2A0D	SL75B-M2A0D1	1
75	ECOdrive 768/LHC	EC0768L2	2
75	SOLOdrive 768/LHC	SL0768L2	2
75	ECOdrive 75L-M1M0Z	EC75L-M1M0Z1	2
75	SOLOdrive 75L-M1M0Z	SL75L-M1M0Z1	2
100	ECOdrive 1065/M	EC1065M2	
100	ECOdrive 1068/M	EC1068M2	
100	ECOdrive 1065/S	EC1065S2	
100	ECOdrive 1068/S	EC1068S2	

1. **Request the second LED output as an AUX in Titan**
2. **Request these AUX settings in Titan: VAUX = 16V and AUX "ON" during standby**
3. **Load on LED output 1 shall exceed 42V**

