



# LR21F600

Trailing and Leading-Edge Phase  
Dimmer with 0-10V Control Input



## PRODUCT OVERVIEW

The LR21F600 enables both switching and dimming of phase-dimmable luminaires using either leading-edge or trailing-edge dimming methods. When paired with the **Radiar AF10**, this solution integrates seamlessly with the **Lumos Controls BLE network**, allowing full digital control over traditionally analog lighting systems.

Designed for convenience, both the Radiar AF10 and the LR21F600 can be mounted directly onto a standard junction box. Once installed, users gain access to the comprehensive features of the **Lumos Controls ecosystem**, including zoning, scenes, animations, sensor automations, schedules, energy analytics and dashboards. This combination bridges the gap between legacy lighting systems and modern smart control, delivering flexibility, scalability, and energy efficiency.

## FEATURES

- **High Load Support** – Handles up to 600W @120V and 1300W @277V.
- **Smart Phase-Cut Dimming** – Wireless control of leading/trailing-edge dimmable luminaires.
- **Lumos Controls Integration** – Unlocks scenes, automations, analytics, and more when used with Radiar AF10.
- **Easy Mounting** – Includes a Chase Nipple for direct junction box installation.
- **BLE Connectivity** – Operates on the Lumos BLE network for seamless wireless control.
- **Red LED Indicator** – Displays power status at a glance for quick diagnostics.

## SPECIFICATIONS

### Electrical

Specifications	Value
Power Input Ratings	10MA @ 120–277 VAC; 60HZ
Max Lighting Load	600W @ 120Vac, 1300W @ 277Vac, Incandescent/Halogen Recommended 50% derating for other dimmable lighting loads
Min Lighting Load	1W
0–10V Input Current Source	1mA maximum per IEC Standard 60929 Annex E
Dim to off	Yes
Dimming Modes	Trailing and Leading (selectable)
Selectable Low Dim Threshold	Yes

### Mechanical and Wires

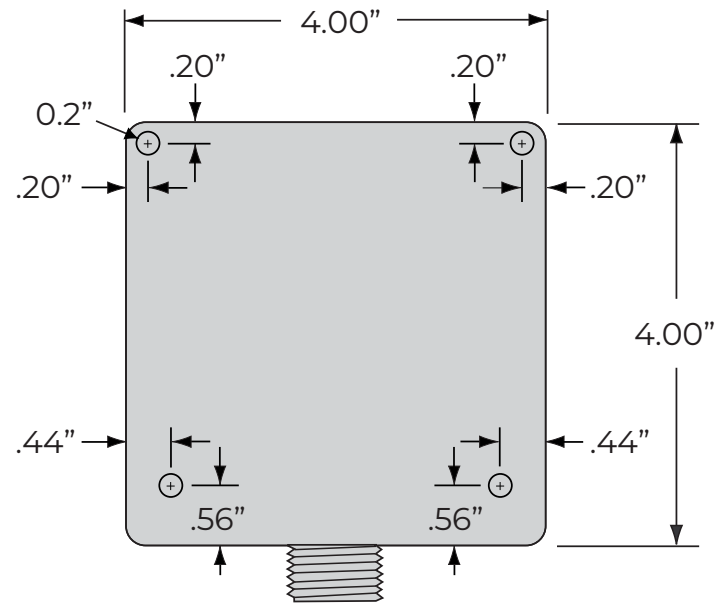
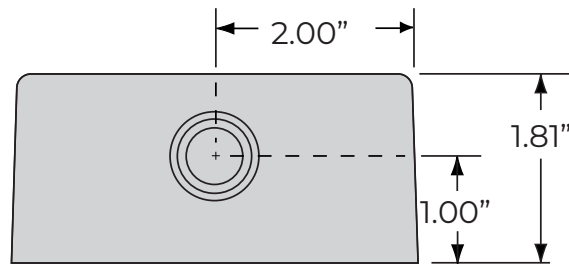
Specifications	Value
Dimensions	4.00" L x 4.00" W x 1.81" H with 0.50" NPT hub
Housing Rating	UL Accepted, NEMA 1
Wires	16", 600V rated

### Environmental and Approvals

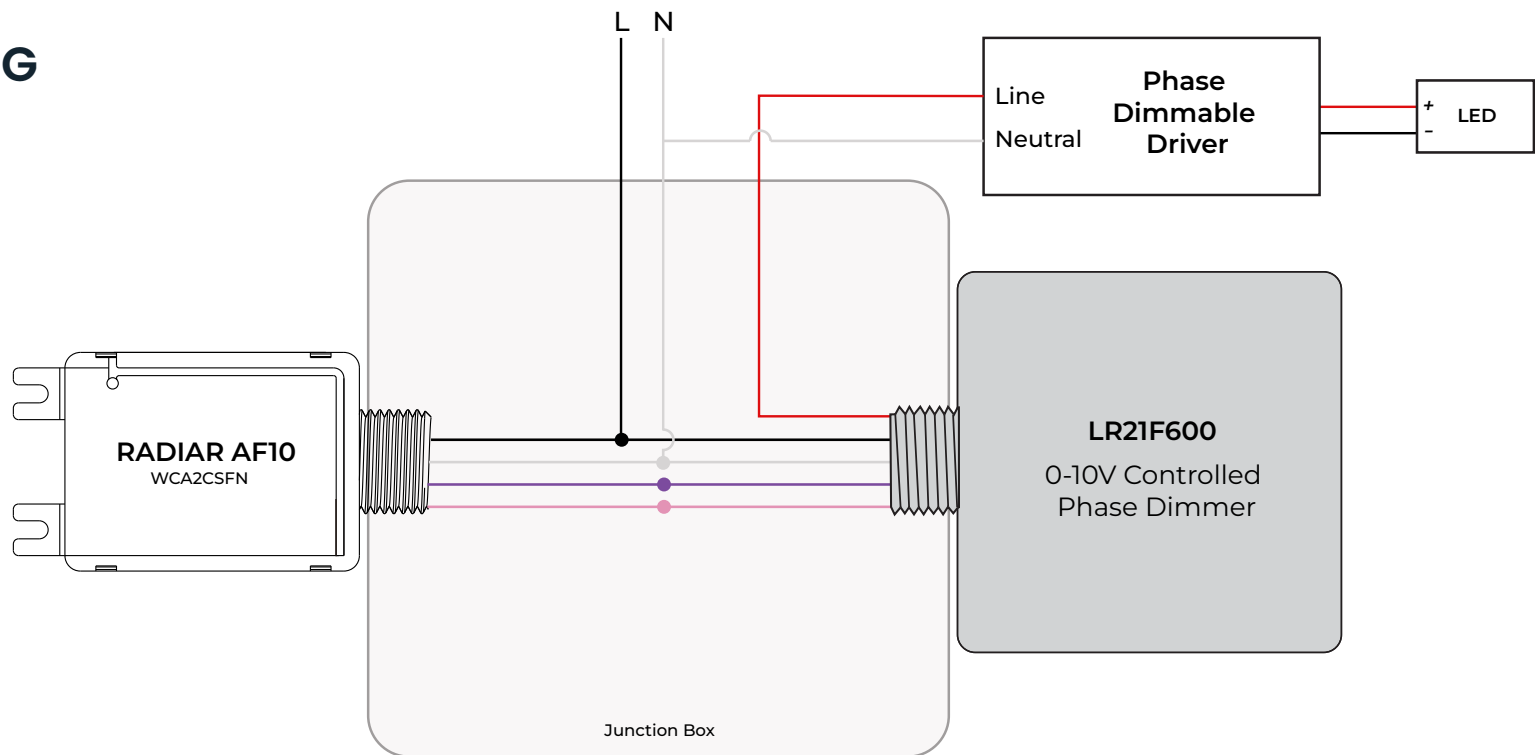
Specifications	Value
Operating Temperature	–30 to 122 F (–34°C to 50°C)
Humidity Range	5 to 95% (noncondensing)
Approvals	Class 2 UL Listed, UL916, C–UL, RoHS

## DIMENSIONS

All Dimensions are in inches



## WIRING



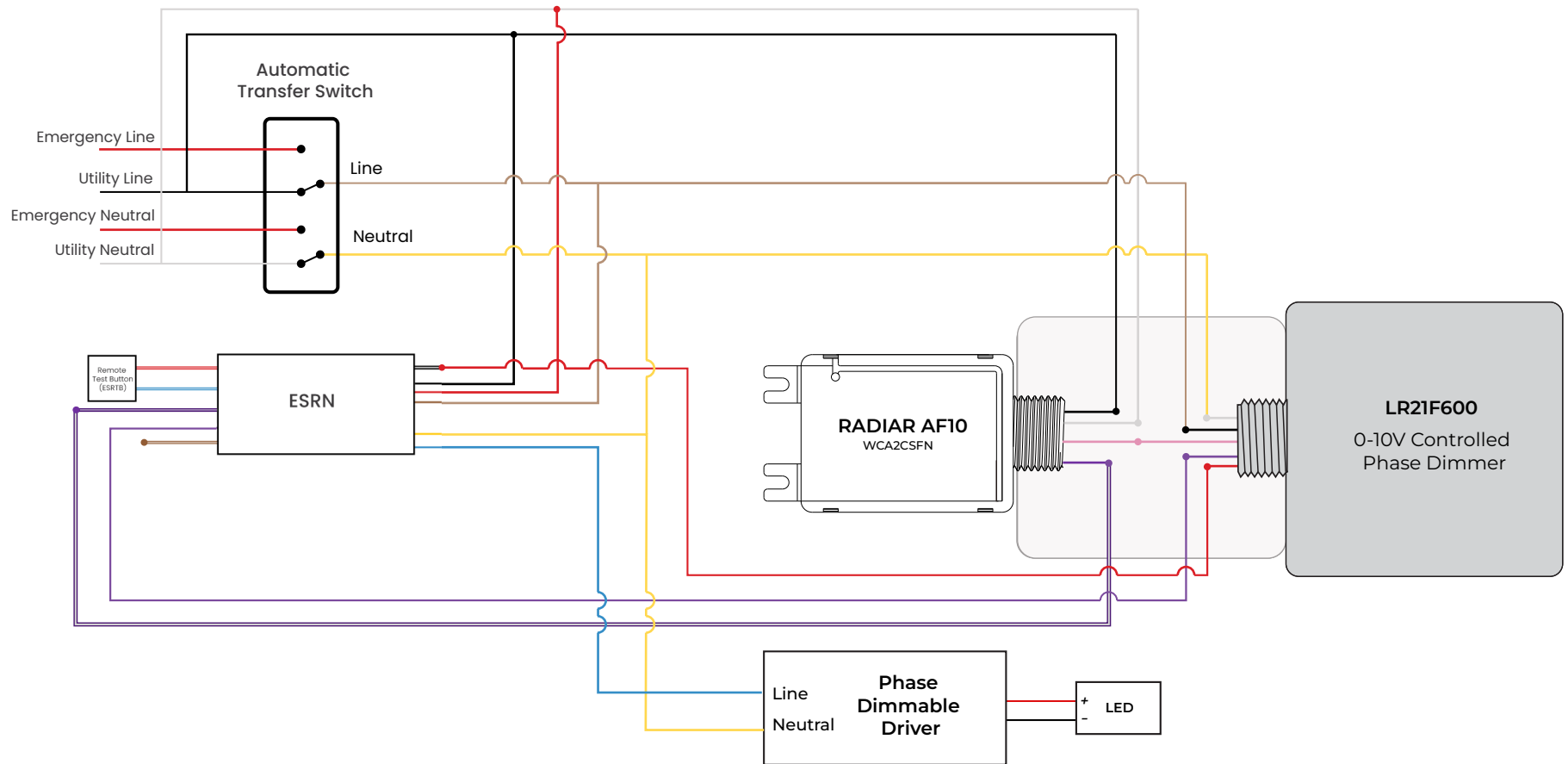
### Radiar AF10 wires

- Line (Black)
- Neutral (White)
- DIM1+ (Purple)
- DIM - (Pink)

### LR21F600 wires

- Line (Black)
- Neutral (White)
- Dimmed hot Load (Red)
- DIM1+ (Purple)
- DIM - (Pink)

## Wiring LR21F600 for Emergency Lighting Control with ESRN



### Radiar AF10 wires

- Line (Black)
- Neutral (White)
- DIM1+ (Purple)
- DIM - (Pink)

### LR21F600 wires

- Line (Black)
- Neutral (White)
- Dimmed hot Load (Red)
- DIM1+ (Purple)
- DIM - (Pink)

### Wire Description: ESRN

#### Feedback/Dimmer Contacts

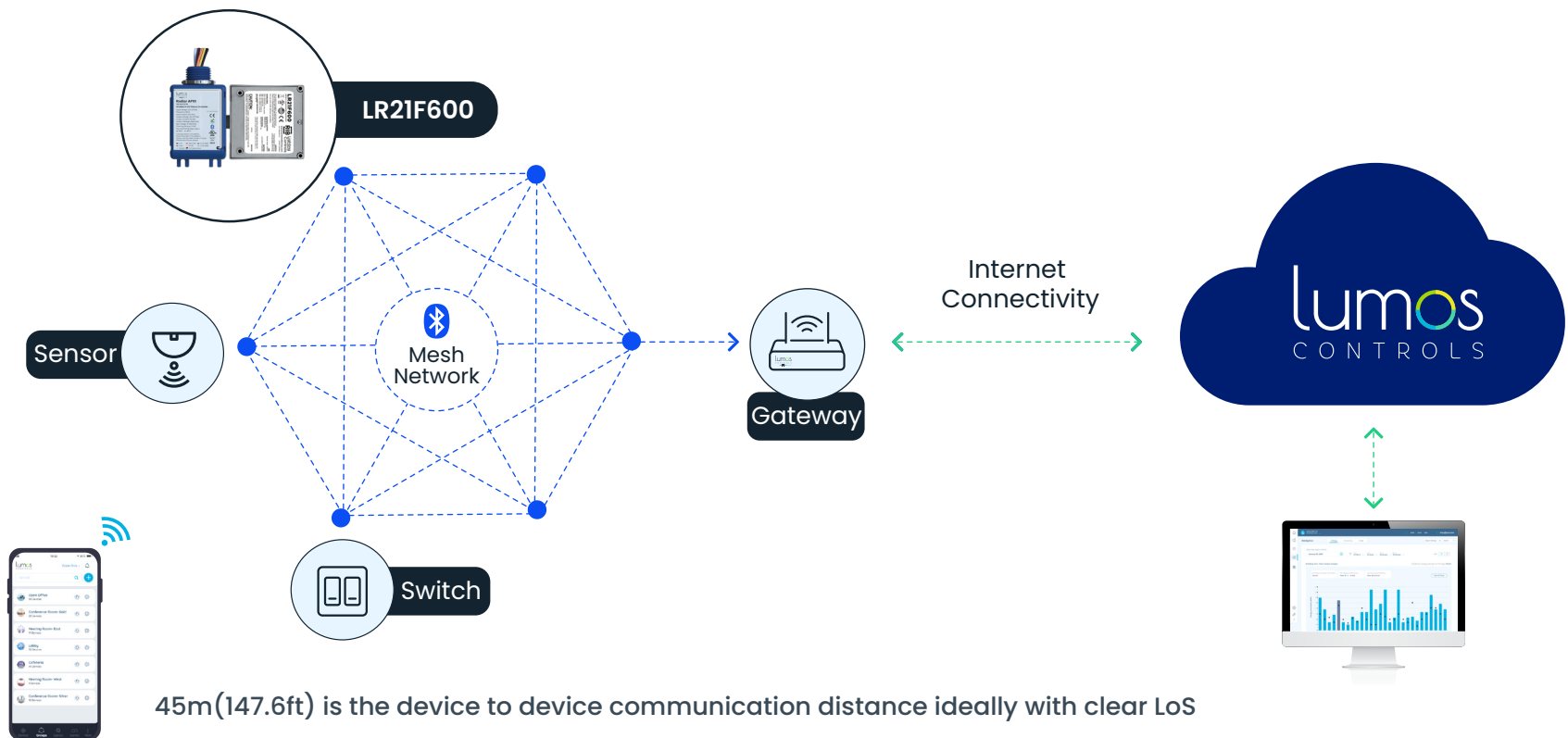
- NO (White/Violet)
- C (Violet)
- N/C (White/Brown)

#### Remote Test Input

- White/Red
- White/Blue

- Normal Hot (Black)
- Normal Switched Hot (White/Black)
- Normal Neutral (Red)
- Emergency Neutral (Yellow)
- Emergency Hot (Brown)
- Emergency Hot to Load (Blue)

# SMART ECOSYSTEM



## Notes

- For use with 60Hz only
- Not for use with Magnetic Low Voltage (MLV) loads
- It is best practice to run a separate Neutral for each phase dimmer to avoid common neutral interaction
- Switch on unit will change dimming between leading or trailing edge. Requires power cycle.
- “Low Dim Threshold” set with push button during operation. Pressing and holding the button for one second will log the present 0-10V value and turn off the load when 0-10V signal drops below that value.
- To reset “Low Dim Threshold”, short together or send 0V to Purple & Pink. Then press and hold the button for 1 second.
- The above method will set the “Low Dim Threshold” to the minimum value. However, factory default “Low Dim Threshold” is set slightly above this mark. Some lighting fixtures flicker at very low values
- The 0-10V wires (Purple and Pink) are Class 2 conductors.



# ORDERING INFORMATION

Product Code	Product Description	Load Rating	Dimming
LR2IF600	Trailing and Leading-Edge Phase Dimmer with 0-10V Control Input	600W @120V & 1300W @277V	Trailing and Leading-Edge Phase Dimming

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by WiSilica Inc. is under license. Other trademarks and trade names are those of their respective owners.



20321 Lake Forest Dr D6,  
Lake Forest, CA 92630

 [www.lumoscontrols.com](http://www.lumoscontrols.com)  
 +1 949-397-9330