



lumos Radiar AFD1 SLAVE DALI Fixture Controller Owner's Manual

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lumos Radiar AFD1 SLAVE DALI Fixture Controller



Radiar AFD1 – 1 SLAVE DALI Fixture Controller

The Radiar AFD1 is a compact device designed to control AC-powered lighting fixtures supporting Digitally Addressable Lighting Interface (DALI). It provides ON/OFF or dimming/tunable control for 1 LED driver. The device is a part of Lumos Controls ecosystem, which includes controllers, sensors, switches, modules, drivers, gateways, and analytical dashboards.

Specifications

- Input Voltage: 90-277VAC
- Input Current: 10mA
- Power Consumption: 2W
- Surge Transient Protection: 4kV
- Connection Distance (Device to Device by Mesh): 30m
- Frequency Range: 2400-2483MHz
- Tx Power: 8dBm
- Rx Sensitivity: -92dBm
- Bus Supply Voltage: 11-13VDC
- Bus Supply Current: 2mA
- Dimming Range: 100%
- Ambient Temperature: -20°C to +50°C
- Relative Humidity: 20% to 90%
- Dimensions: L x W x H

Remarks: Rated Input voltage @ 230 V Active Power L-N, Bi wave In an open office environment (Line of Sight) with 150mm external wire antenna.

Product Usage Instructions

Step 1: Turn off the power before wiring and installing the device.

Step 2: The controller with a compact formfactor can be installed anywhere within the light fixtures or within junction boxes. The screw hole available on the controller can be used to fix it firmly.

Step 3: To power the controller, connect the AC Line (Black) and Neutral (White) wires from the controller to the mains supply.

Step 4: To control the DALI driver, connect the DALI lines to the DALI+ (Purple color) and DALI- (Pink color) wires in the controller. Note that DALI is polarity insensitive.

Note: Installation should be performed by a qualified electrician in accordance with all applicable local and NEC

codes.

All wiring connections should be capped with UL-approved recognized wire connectors. All unused wiring must be capped.

Warning: Turn the power off at the circuit breaker before wiring. Do not install damaged products. Do not modify the product. Do not mount near gas or electric heater. Do not change or alter internal wiring or installation circuitry. Do not use a product for anything other than its intended use.

By following these instructions, you can install and use the Radiar AFD1 to control your DALI lighting fixtures with ease.

INSTALLATION AND QUICK START SHEET

WARNING AND GUIDELINES!!!

Read and follow all safety instructions!!

DO NOT INSTALL DAMAGED PRODUCTS! 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.

WARNING: TURN THE POWER OFF AT THE CIRCUIT BREAKER BEFORE WIRING

WARNING: Risk of Product Damage

- **Electrostatic Discharge (ESD):** ESD can damage the product(s). Personal grounding equipment should be worn during all installation or servicing of the unit
- Do not stretch or use cable sets that are too short or are of insufficient length
- Do not modify the product
- Do not mount near gas or electric heater
- Do not change or alter internal wiring or installation circuitry
- Do not use the product for anything other than its intended use

WARNING – Risk of Electric Shock

- Verify that the 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 wiring must be capped

Do's	Don'ts
Installation should be performed by a qualified electrician	Don't use outdoors
Installation shall be in accordance with all applicable local and NEC codes	Avoid input voltage exceeding the maximum rating
Turn the power OFF at circuit breakers before wiring	Don't disassemble the products
Observe the correct polarity of the output terminal	–

Specifications	Value	Remarks
Input Voltage	90-277VAC	Rated Input voltage
Input Current	10mA	@ 230 V
Power Consumption	2W	Active Power
Surge Transient Protection	4kV	L-N, Bi wave
Connection Distance (Device to Device by Mesh)	30m	In an open office environment (Line of Sight)
Frequency Range	2400-2483MHz	–
Tx Power	8dBm	With 150mm external wire antenna
Rx Sensitivity	-92dBm	–
Bus Supply Voltage	11-13VDC	–
Bus Supply Current	2mA	–
Dimming Range	100%	–
Ambient Temperature	-20-50°C	–
Relative Humidity	20-85%	–
Dimensions	1.7 x 1.4 x 0.8 In 43 x 35 x 20 mm	L x W x H

Product Overview

Radiar AFD1 is designed to control AC-powered lighting fixtures supporting Digitally Addressable Lighting Interface. It provides ON/OFF or dimming/tunable control for 1 LED driver. It is a part of Lumos Controls ecosystem, which includes controllers, sensors, switches, modules, drivers, gateways, and analytical dashboards.



Required tools & supplies



Screwdriver



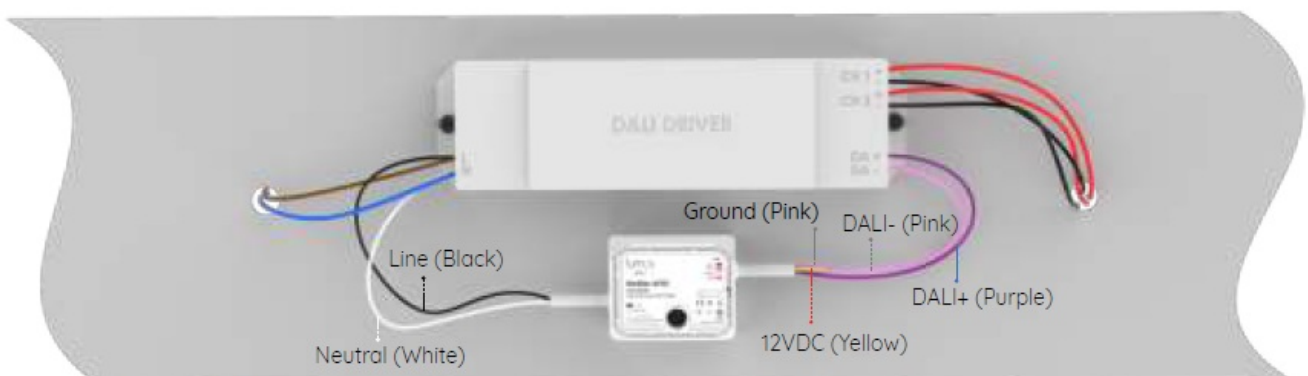
Wire nuts

INSTALLATION INSTRUCTIONS

Installation Steps

1. Turn off the power before wiring and installing the device
2. The controller with a compact form factor can be installed anywhere within the light fixtures, or within junction boxes. The screw hole available on the controller can be used to fix it firmly.
3. To power, the controller, connect the AC Line (Black) and Neutral (Wires) wires from the controller to the mains supply
4. To control the DALI driver, connect the DALI lines to the DALI+ (Purple color) and DALI- (Pink color) wires in the controller. *DALI is polarity insensitive

- Installing within a light fixture

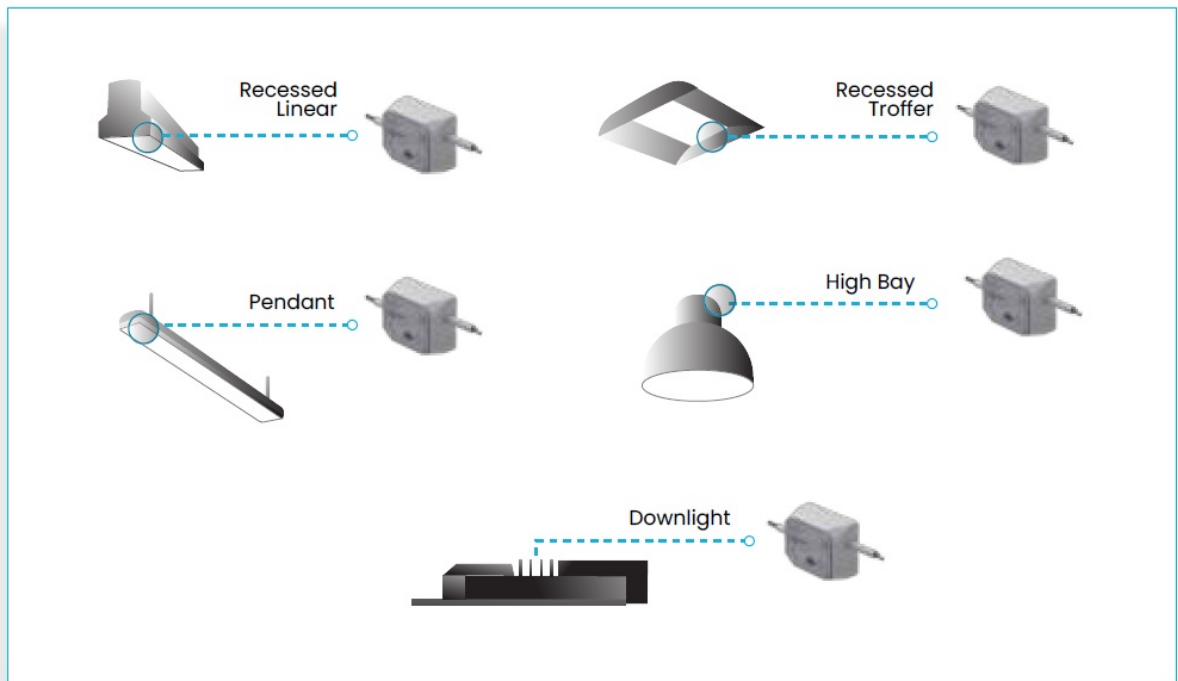


(Top view of a light fixture)

- You can also install the device in a box

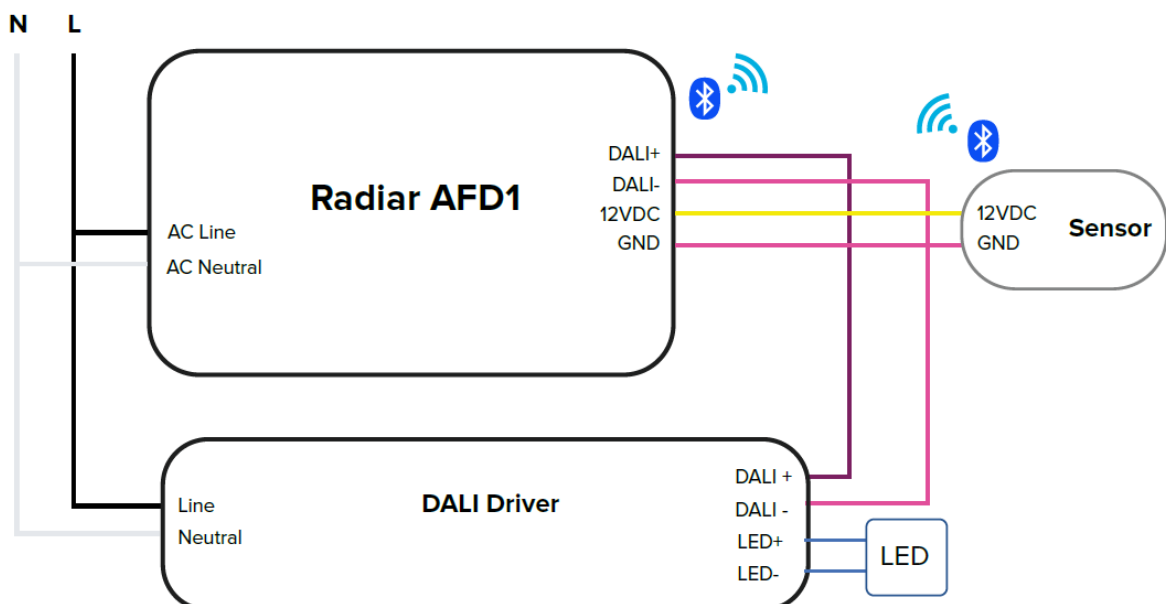


- On the extrusion or on top of the fixture

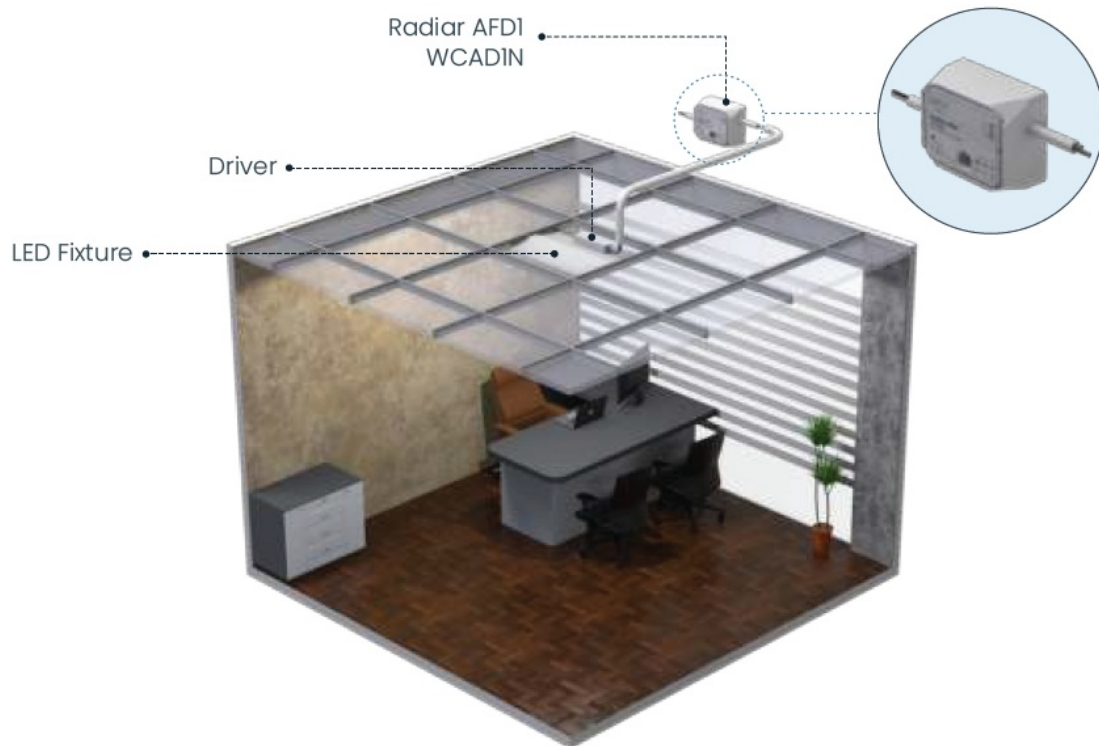


Wiring

Connecting DALI drivers to the Radlar AFD1 controller



Application



Troubleshooting

When returning from a Power Outage, lights go back to the ON state.	This is a normal operation. Our device has a fail-safe feature forcing the device to go to 50% or 100% and 0-10V at the full output on the loss of power. Alternatively, the device will return to its previous state after the power is restored, as configured using the Lumos Controls mobile app needs to be updated to Alternatively, the device will return to the previous state or a custom state as configured using the Lumos Controls mobile app after the power is restored
There is a delay for the device to turn on/off/dim	Check whether you have set up a transition time
Lights flickering	Check whether the connection is as per the wiring diagram Check for loose connections
The lights did not turn ON	Check whether the circuit breaker has tripped Check whether the fuse has blown Check for loose connections

Warranty

5-year limited warranty

Please find warranty terms and conditions

Note: Specifications may change without notice Actual performance can vary due to end-user environment and application

Commissioning

Once powered up, the device will be ready to be commissioned via the Lumos Controls mobile app, available for free download on iOS and Android. To begin commissioning, click the '+' icon from the top of the 'Devices' tab. The app allows you to preset certain configurations which will be loaded after the device is added. The pre-configurations made using 'Commissioning Settings' will be sent to the devices being commissioned.

Once commissioned, the device will be displayed in the 'Devices' tab and you can perform individual operations like ON/OFF/dimming on it from this tab.

Note: The 'Output Channel Configuration' will be 'Single Channel' by default. To configure dual channel settings, go to 'Additional Settings' and click 'Output Channel Settings'. Then select 'Controller-based color tuning' or 'Driver-based color tuning' based on the connected driver.

Please visit Help Center for more details

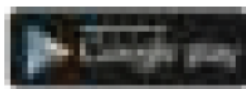


Lumos Controls Application

Download the '**Lumos Controls**' application from Play Store or App Store

OR

Scan the QR codes to download the '**Lumos Controls**' application



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Documents / Resources

	<p>lumos Radiar AFD1 SLAVE DALI Fixture Controller [pdf] Owner's Manual AFD1, Radiar AFD1 SLAVE DALI Fixture Controller, SLAVE DALI Fixture Controller, DALI Fixture Controller, Fixture Controller</p>
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References

- [Intelligent lighting controls | Lumos Controls](#)