

Radiar ARD32

32 Child DALI Room Controller



INSTALLATION AND QUICK START SHEET

⚠ WARNING AND GUIDELINES!!!

Read and follow all safety instructions!!

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.

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

Do's	Don't's
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 maximum rating
Turn the power OFF at circuit breakers before wiring	Don't disassemble the products
Observe the correct polarity of output terminal	
Place devices as far away as possible from metallic materials	
Devices work best in when there is a clear LOS between them	
When placing devices inside metallic boxes, please ensure the antenna comes out of the boxes	

WARNING: Risk of Product Damage

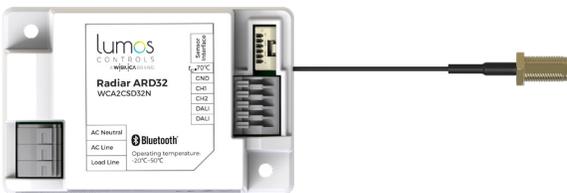
- Electrostatic Discharge (ESD): ESD can damage product(s). Personal grounding equipment should be worn during all installation or servicing of the unit
- Do not stretch or use cable sets that are too short or are of insufficient length
- Do not modify the product
- Do not mount near gas or electric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

WARNING - Risk of Electric Shock

- 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 wiring must be capped

Product Overview

Radiar ARD32 is a DALI room controller which can be connected to a maximum of 32 DALI LED drivers. It is a part of the Lumos Controls ecosystem, including controllers, sensors, switches, modules, drivers, gateways, and analytical dashboards.



Specifications	Value	Remarks
Input voltage	377VAC	Rated Input Voltage
Input current	40mA	@max RF transmitting
*SSR Load output	0.8A@ 230VAC	For LED loads > 30W
*SSR Leakage current	5-15mA	@Rated input voltage
Inrush current	20A	-
Dali bus voltage	12-20VDC	-
Dali bus current	35mA (max)	-
Power consumption	4.0W	Active power
Protection class	Built in Class II	Suitable for class I and class II luminaires
Sensor interface	0-3.3V digital input /UART	-
Surge transient protection	2kV	@Line to Line: Bi-Wave
Dimming output 1 & 2	10VDC	Max output tolerance ±0.5V
Dimming range	0-100%	-
Operating temperature	70°C	-
Dimensions	2.8×1.8×1.0 in 70.9×45.4×26.1 mm	L x W x H
Case temperature	70°C	-

*SSR- Solid State Relay

Required tools & supplies



INSTALLATION INSTRUCTIONS

using an IP68 box

Radiar ARD32 room controllers can be packed within an IP rated junction box to install in the wet locations

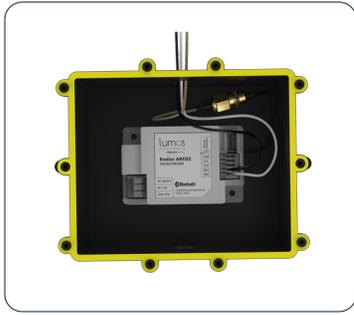
- Open the IP68 enclosure and remove the connectors and locknut using screw driver
- Take the electrical wire of 18AWG and cut in to 4 pcs (8-10cm) for AC line, Neutral, DALI+, DALI- respectively
- Insert one end of the wires into the 221-412 series Wago connector
- Connect the other end of the wire in to the device connector (AC line, Neutral, DALI+, DALI-) respectively
- Connect the 130mm wire antenna into the antenna connector
- Paste the double-sided tape on the backside of the device and fix it within the enclosure
- Remove the grommet from the connector-1 and insert the AC line, Neutral wires from the mains into the enclosure. Now connect the connector with the enclosure using the locknut
- Connect the Line and Neutral wires from the mains with the Line and Neutral wires of the DALI controller using the Wago connectors to power the controller
- Insert the DALI+ and DALI- from the drivers into the enclosure through the connectors and connect it with the DALI+ and DALI- of the device using Wago connectors to control the driver. Once the wires are in, tighten the connector with lock nut
- Take out the 130mm wire antenna from the enclosure via the connector for better communication. Similarly connect the AC input lines with the controllers to power it
- Cover the enclosure with the face plate /lid using screws

- 1 Connect the wire antenna onto the antenna connector in the device

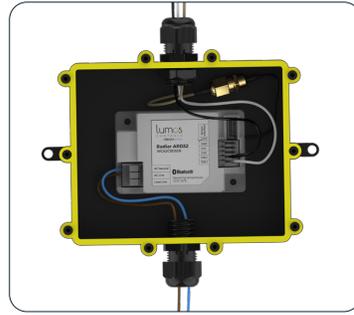


- 2 Open the box and fix the device into it using a double-sided tape

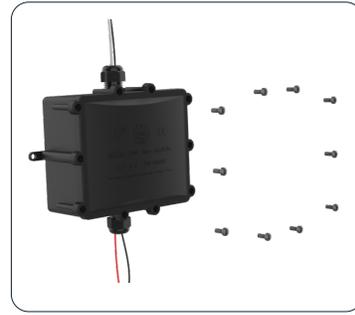




3 Take in the DALI wires from the driver through the connector on the box and connect them to the DALI push-in connectors on the device. Also, take out the wire antenna through the same connector



4 Take in the AC wires from the Mains through a connector (in the box) and connect to the AC Line(Brown) and AC Neutral(Blue) push-in connectors in the device.



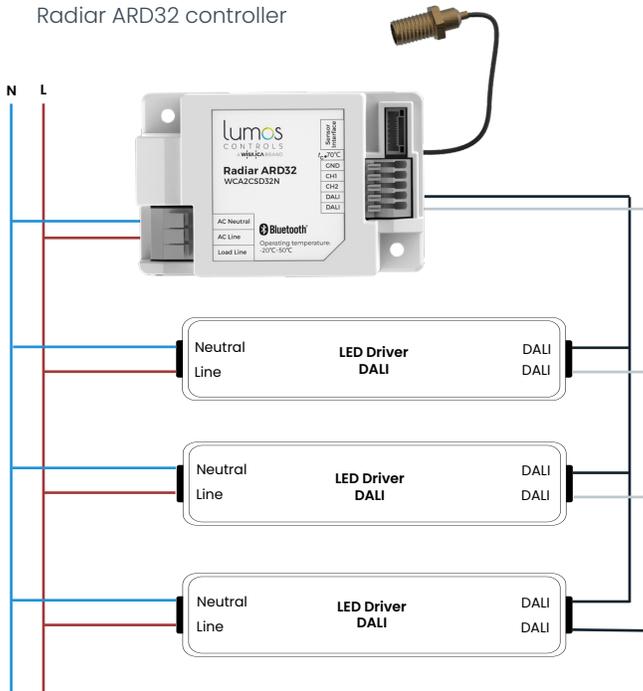
5 Cover the box with using screws



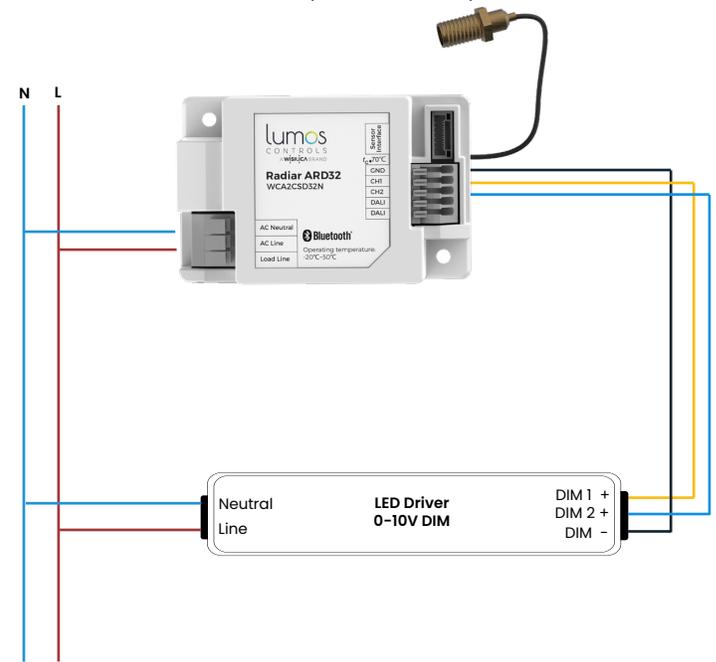
6 Fix this box onto a flat surface

Wiring

1 Connecting DALI drivers to the Radlar ARD32 controller



2 Connecting 0-10V drivers to the Radlar ARD32 controller (in 0-10V mode)

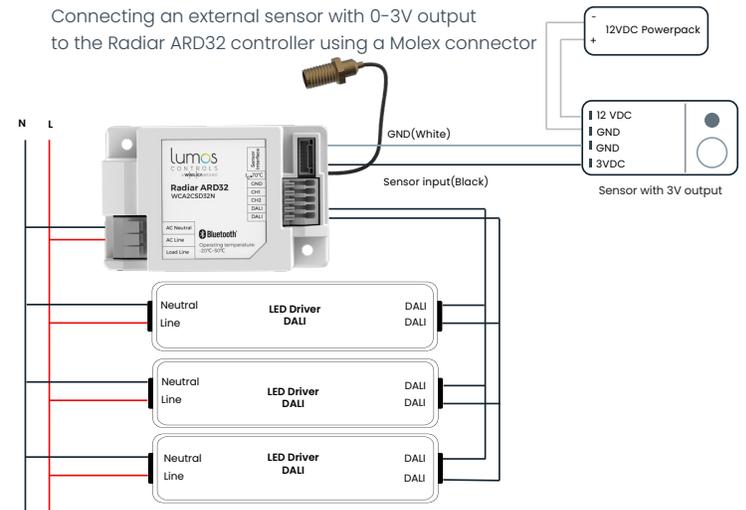


Steps involved

Radlar ARD32 room controllers can be connected with DT6 (dimmable/single channel drivers) and DT8 (tunable/multi-channel drivers)

- Connect the Line and Neutral wires from the mains into the AC Line and AC Neutral connector of the DALI Room Controller
- Similarly power the drivers from the mains supply by connecting the Line and Neutral wires into the Line and Neutral wires/connectors of driver
- To control the drivers, connect the DALI+ and DALI- wire from the nearest driver to the DALI+ and DALI- connectors of the controller. (DALI lines are polarity insensitive)
- Run the DALI+ and DALI- wires from one driver to the next driver's DALI+ and DALI- connectors/wires. Up to 32 drivers can be connected to Radlar ARD32 controller. (Ensure the DALI cable runs not beyond 300m max from the starting point.)

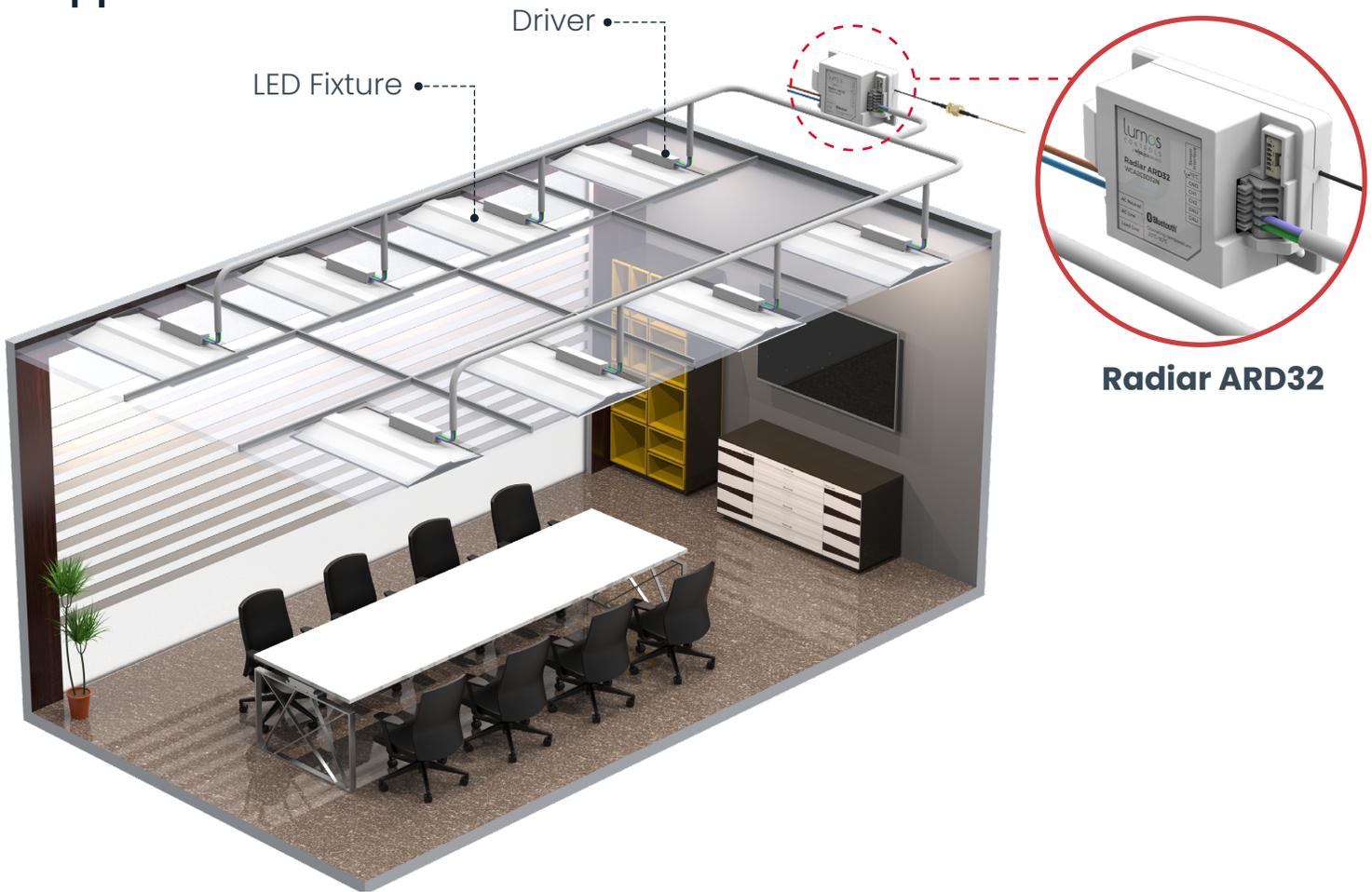
Connecting an external sensor with 0-3V output to the Radlar ARD32 controller using a Molex connector



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

Application



Radiar ARD32

RF Guidelines

If pairing of devices are getting failed continuously then it may be due to BLE traffic. To reduce the traffic, power OFF other devices in the vicinity and pair again.

Troubleshooting

When returning from a Power Outage, lights go back to ON state.	This is 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.
Device doesn't operate immediately after power ON	Check whether you have set up a transition time
Lights flickering	<ul style="list-style-type: none"> •The connection is not appropriate •The wires are not secured firmly with connectors
Lights did not turn ON	<ul style="list-style-type: none"> •Circuit breaker tripped •Fuse has blown •Inappropriate wiring

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.

Please visit - [Help center](#) for more details