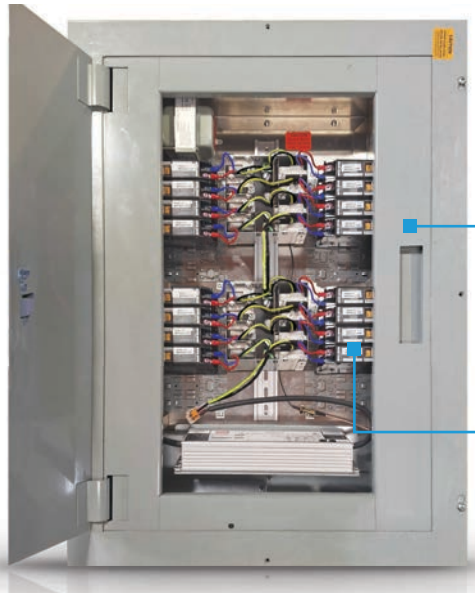
Relay Control Panel Retrofit Assembly



Easily and Quickly Retrofit the Controls Logic Boards of Lighting Control Panels

Full Range of Control Features

Time clock, motion sensing, wall stations, daylight harvesting, BACnet interfaces, remote commissioning and operation, floorplan view control, and more

Fully Pre-Wired 8 Circuit Blocks

Just snap on to the DIN rail and connect to the relays with pre-terminated wires

PRODUCT OVERVIEW

Description
The Relay Panel Retrofit Assembly fully replaces all control logic functions of relay panels without requiring the replacement of the actual relays or high voltage wiring. The Avi-on RCI controllers provide relay control, 0-10V dimming, and all operational functions, effectively upgrading the panel to a state-of-the-art control system.

The units come pre-wired in 8-relay, fully assembled, UL-listed configurations. Simply remove the existing controls, snap in as many 8-unit blocks as needed (supports up to 72 relay panels), install the provided power supplies and connect the pre-terminated relay control and 0-10V dimming wires. The system then becomes a fully supported Avi-on system with the full feature set of the Avi-on control platform with fully extensible wireless capabilities.

Existing sensors and wall stations are replaced with Avi-on units. Avi-on offers battery-powered switches and remote sensors that communicate wirelessly back to the panel, delivering a solution with no new wiring required. Avi-on will soon release low-voltage AC/DC versions of its wall station line, designed to run on existing 24V AC/DC wiring and power supplies.

Features
Once installed, the panel supports the full range of control features of the Avi-on platform, including dimming, time clock, motion sensing, wall stations, daylight harvesting, BACnet interfaces, remote commissioning and operation, Floorplan View control, and more.

The controls can be programmed and supported either remotely or locally using mobile phone or laptop commissioning tools, just like any other Avi-on system.

Benefits
With a quick and easy installation, Avi-on provides a path to restoring ongoing support for otherwise functional relay panels orphaned by other suppliers. Additionally, individual areas can be upgraded incrementally with dimming, motion sensing, and individual fixture controls, seamlessly blending multiple control strategies and hardware configurations into

COMPATIBILITY

- **All Douglas Relay Panel Systems** Newer than System 1000 (24,32,48 and 72 relay panels)
- Other systems with latching relay's compatible with the voltage and physical dimensions are currently in test. Contact Avi-on if you have a panel from another manufacturer.

Project		Location/Type	

ORDERING INFORMATION

	Part Number	Description	Application	Input Voltage
	AVI-B-RCI-8-277-ASSY	Relay Panel Interface Assembly. 8 Circuit block 110v-347V	Indoor	110-347 VAC
	AVI-B-RCI-8-480-ASSY	Relay Panel Interface - 8 Circuit block 110V-277 V	Indoor	127-277 VAC

To order please contact Avi-on sales at **(877) AVION-US,** (877) 284-6687 or **prosales@avi-on.com** for information on becoming an Avi-on partner and order details.

SPECIFICATIONS

RELAY CONTROL ASSEMBLY

Input Voltage (Power supplies): 90-305VAC (277 VAC version)
180-528 VAC (480 VAC version)

1 Power supply per two 8 relay assemblies (included)

Physical Parameters:

Relay Control Unit - RCU: 4.7x4.3x2.6 in (119x110x67mm)*
**Not including DIN rail*

Power Supply Rack: 4.7x4.3x2.6 in (119x110x67mm)

Power Supply Shelf: 9.4x2.9x0.8 in (240x73x2mm)
9.8x2.9x0.8 in (250x73x2mm)

AVI-PS-305-24-HLG-240: 9.6x2.7x1.5 in (244x68x39mm) (277 VAC Version)

AVI-PS-528-24-HVG-240: 10x2.7x1.5 in (254x68x39mm) (480 VAC version)

Mounting: DIN Rail Clip (included)

Antenna: Single Remote Antenna Frame Mount RPSMA cable with included Magnetic Antenna

Weight:

Relay Control Unit - RCU: 25 oz (709 g)

Power Supply Rack: TBD

Power Supply Shelf: 12.7 oz (360 g)

AVI-PS-305-24-HLG-240: 45.9 oz (1300 g) (277 VAC version)

AVI-PS-528-24-HVG-240: 46.2 oz (1310 g) (480 VAC version)

RCI-B LATCHING RELAY CONTROLLER

Input Voltage: 12-24VDC

Current: 15mA without a Sensor
19mA with a DC PIR Sensor
48mA with a DC Microwave Sensor

0-10V Dimming: 5mA per Channel

Size: 2.30in x 1.43in x 0.75in (58.2mm x 36.4mm x 19mm)

Mounting: Removable mounting tabs

Weight (per controller): 0.45 oz (16g)

Terminal Blocks: 22-16 AWG wires

Operating Temperature: -40C to +70C (Power Supplies are limited to an Ambient Ta=50C)

Storage Temperature: -40F to +185F (-40C to +85C)

Humidity Rating: 95% non-condensing

Radio Frequency: 2.4GHz

Wireless Standard: BLE 4.2 with Mesh

Point to Point Range*: 25m (80ft) with obstructions and 107m (350ft) unobstructed

Security: AES 128-bit encryption for device to device communication
AES 256-bit encryption for device to cloud communication

Warranty: 5 years; 10 years optional

Regulatory:

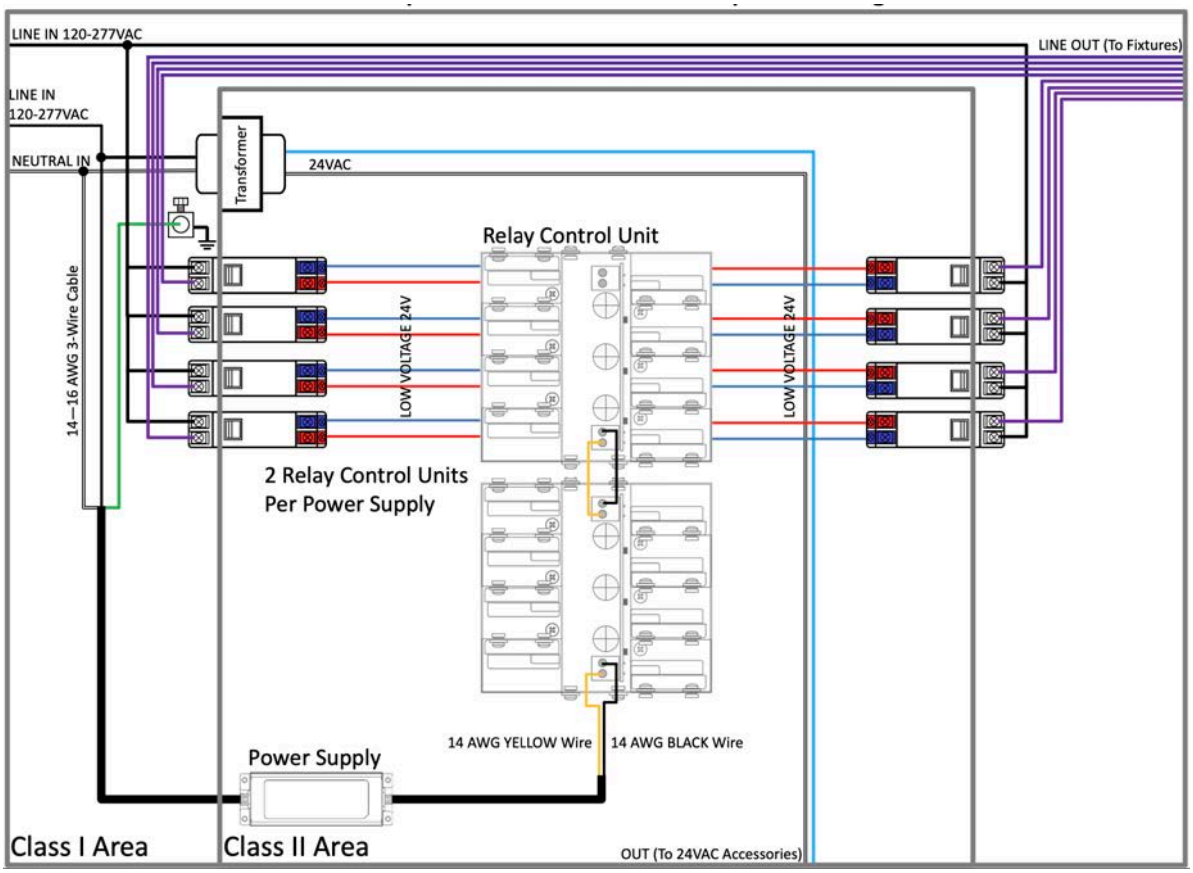
FCC: FCC: 2AFZI-AVIBG21
FCC Part 15, Subpart B (Class B)
FCC Part 15.247

IC: IC: 20544-AVIBG21
ICES-003, Issue 7, Oct. 2020
RSS-GEN Issue 5, Feb. 2021 Amendment 2
RSS-247 Issue 2, Feb. 2017

BQB: DID: D063032
Qualified Design ID (QDID):
205509
178212
175341

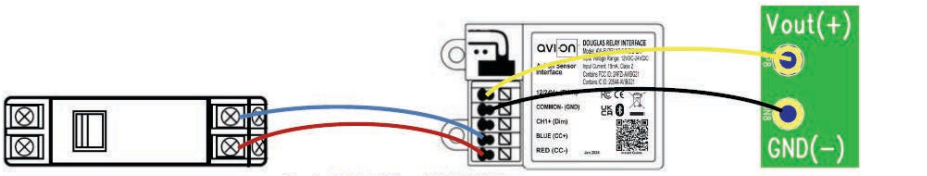
**When communicating through the mesh, range is essentially unlimited (5000ft+) Repeaters may be necessary if the nearest switches or sensors are located more than 25m (80 feet) from the panel*

WIRING DIAGRAMS



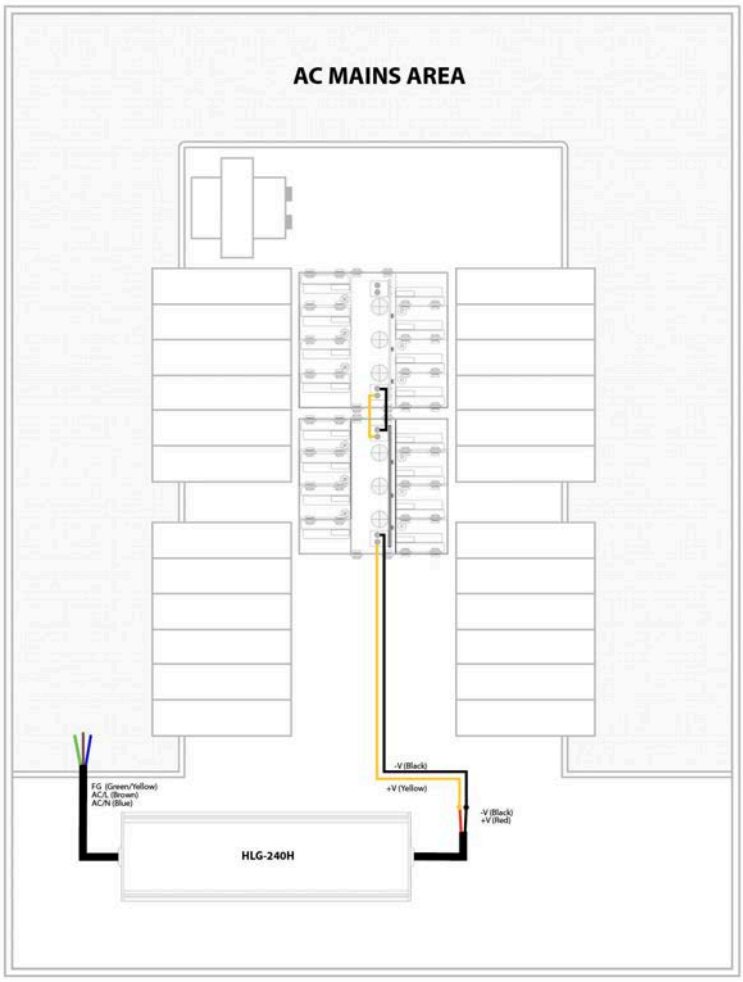
Avi-on Relay Control Panel Assembly Riser Diagram
(2 Relay Control Units Per Power Supply)

DRI-B & Douglas Relay Wiring

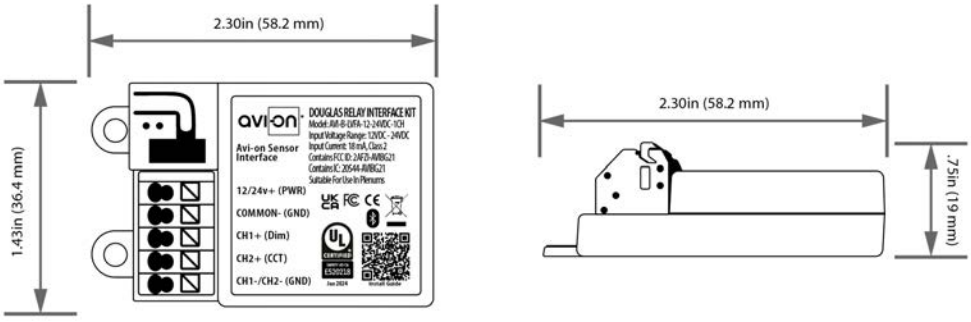


Internal Assembly Wiring Diagram

WIRING DIAGRAMS



Assembly Wiring Diagram



RCI-B Dimensions