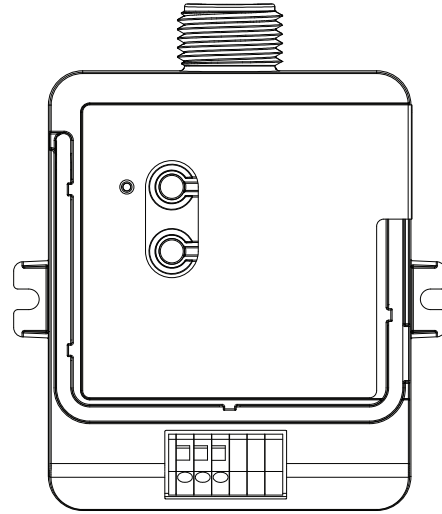


## RF CCO Module

The RF CCO Module is a low-voltage radio frequency (RF) control that provides a single dry contact closure output based on input from RadioRA 2 and HomeWorks QS systems. It can be powered by 24 V~ or 24 V== for easy connection and integration into building management, HVAC, VAV, and other 3rd-party systems.

- Single contact closure output including both normally open (NO) and normally closed (NC) dry contacts
- Maintained or momentary output type
- Operates at 24 V~ or 24 V==
- Utilizes Lutron Clear Connect RF Technology – refer to model number chart below for frequency band data, and Lutron system compatibility
- Screw tabs provided for surface mounting (recommended); or mounts to an electrical junction box through a 1/2 in or 21 mm trade size knockout opening
- Complies with requirements for use in a compartment handling environmental air (plenum) per NEC® 2011 300.22(C)(3) (LMJ- model only)



### Models

Model Number	Region	Operating Voltage	Frequency Band	Compatible Systems
LMJ-CCO1-24-B	U.S.A., Canada, Mexico	24 V~ or 24 V==	431.0 – 437.0 MHz	RadioRA 2, HomeWorks QS
LMK-CCO1-24-B	Europe, U.A.E.	24 V~ or 24 V==	868.125 – 868.850 MHz	

**NOTE:** Contact Lutron for frequency band compatibility for your geographic region if it is not indicated above.

# RF CCO Module

## Specification

<b>Model Number</b>	LMJ-CCO1-24-B, LMK-CCO1-24-B
<b>Power</b>	IEC PELV/NEC® Class 2 Operating voltage: 24 V~ / 24 V== Operating current, nominal: 45 mA (24 V~), 35 mA (24 V==)
<b>Typical Power Consumption</b>	< 1.0 W Typical power test conditions: all loads off, CCO LED on
<b>Regulatory Approvals</b>	UL®, UL 2043 Plenum Rated, FCC Approved. Complies with the limits for a Class B device, pursuant to Part 15 of FCC rules, IC, (LMJ- model only), CE, TRA, CITC (LMK- model)
<b>Environment</b>	Ambient operating temperature: 32 °F to 131 °F (0 °C to 55 °C) Ambient operating humidity: 0% to 90% humidity, non-condensing. Indoor use only.
<b>Communications</b>	Operates using Clear Connect RF Technology for reliable wireless communication; refer to model number chart on Page 1 for frequency band details. RF range is 30 ft (9 m) from repeaters. Contact Lutron for applications using foil-backed or metallic ceiling tiles.
<b>Contact Closure Output</b>	Accepts input voltages of 0 to 24 V~ / 0 to 24 V== Resistive Load: 1.0 A (0 to 24 V==), 0.5 A (0 to 24 V~) Provides both normally open (NO) and normally closed (NC) dry contacts. Maintained or momentary output type. Output is latching. Minimum Close Time: 500 ms.
<b>Mounting</b>	Screw tabs provided for surface mounting (recommended); or mounts to a electrical junction box through a 1/2 in or 21 mm trade size knockout opening.
<b>Low Voltage CCO Wiring</b>	CCO terminals accept 20 to 16 AWG (0.5 to 1.5 mm <sup>2</sup> ) solid or stranded wire.
<b>Warranty</b>	<a href="http://www.lutron.com/TechnicalDocumentLibrary/Warranty.pdf">www.lutron.com/TechnicalDocumentLibrary/Warranty.pdf</a> <a href="http://www.lutron.com/TechnicalDocumentLibrary/Intl_Warranty.pdf">www.lutron.com/TechnicalDocumentLibrary/Intl_Warranty.pdf</a>

**⚠️ WARNING – Entrapment Hazard** – May result in serious injury or death. These controls should only be used to control equipment which is visible from every control location.

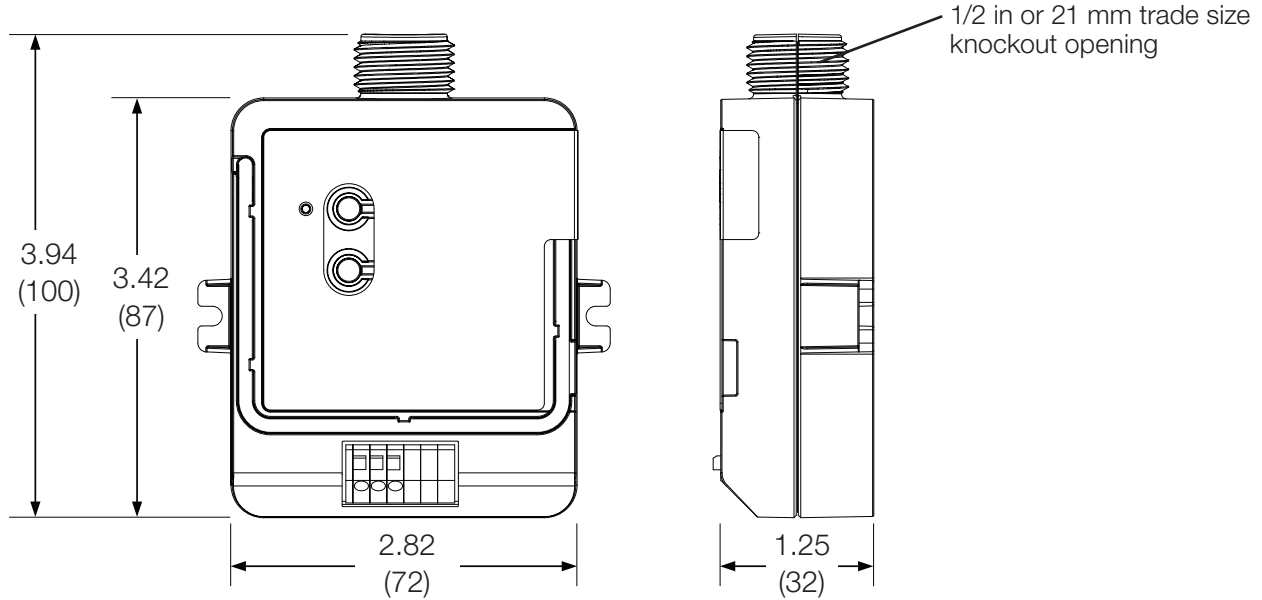
**⚠️ WARNING – Fire Hazard** – May result in serious injury or death. Only use these controls to operate approved load and equipment types.

**IMPORTANT NOTE:** Examples of such equipment which must not be operated by these controls include (but are not limited to) motorized gates, garage doors, industrial doors, microwave ovens, heating pads, fireplaces, space heaters, etc. It is the installer’s responsibility to ensure that the equipment being controlled is visible from every control location and that only suitable equipment is connected to these controls. Failure to do so could result in serious injury or death.

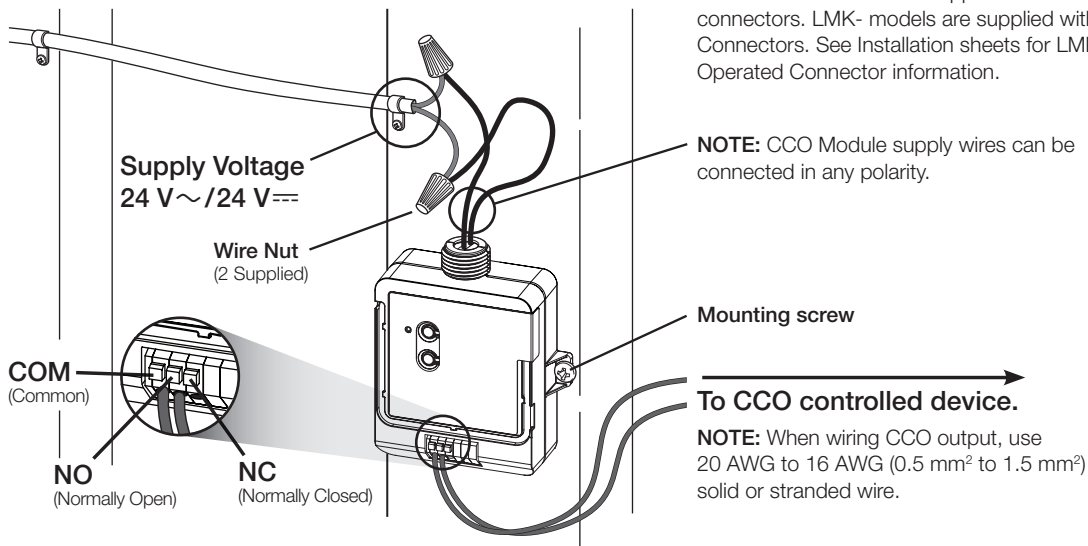
# RF CCO Module

## Dimensions

Dimensions are shown as: in (mm)



## Wiring Diagram (Recommended)



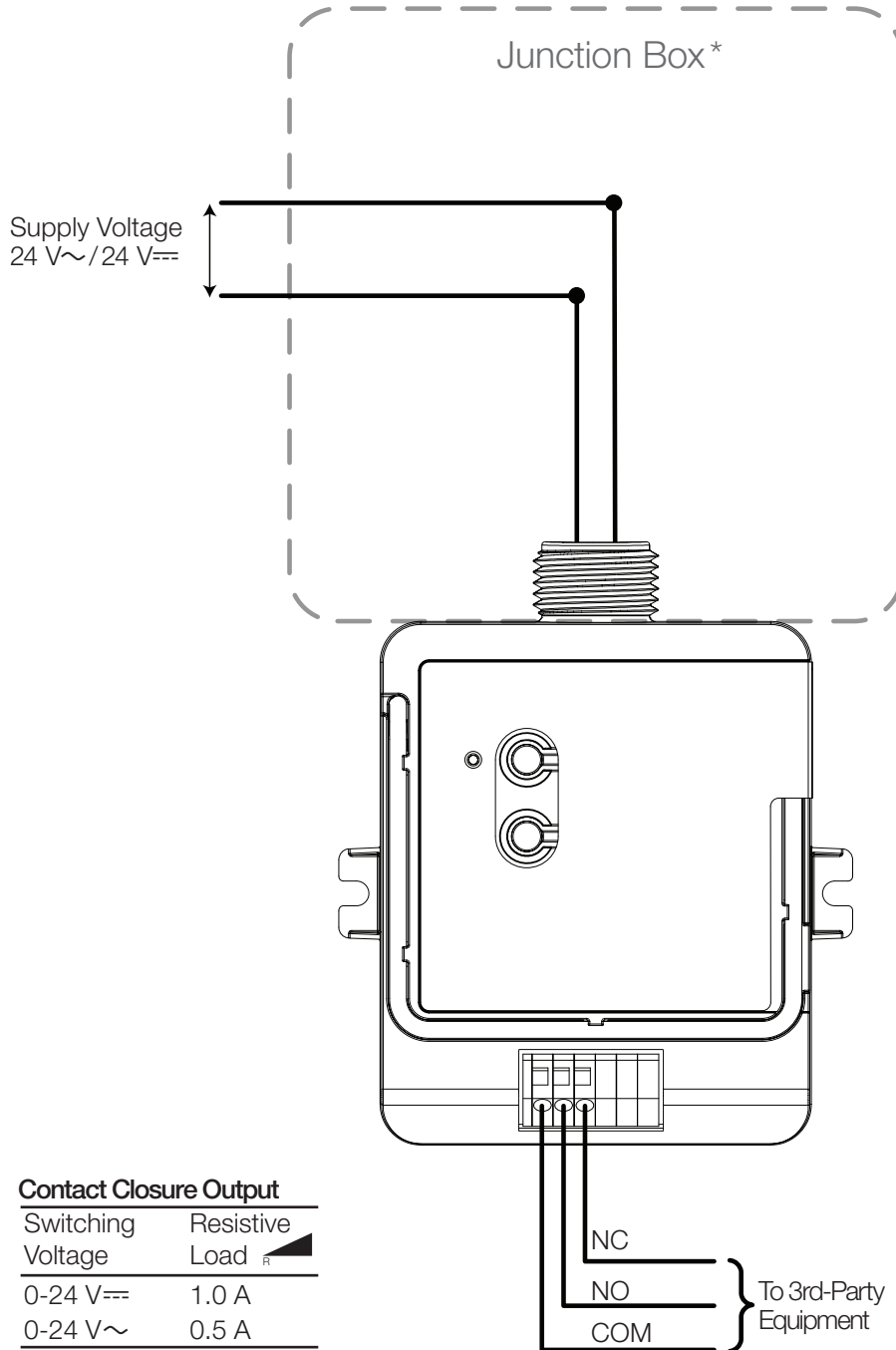
**NOTE:** LMJ- models are supplied with three twist-on wire connectors. LMK- models are supplied with Lever Operated Connectors. See Installation sheets for LMK- models for Lever Operated Connector information.

**NOTE:** CCO Module supply wires can be connected in any polarity.

**NOTE:** The CCO output may be wired using either the NO or NC terminal.

# RF CCO Module

## Wiring Diagram (Junction Box Optional)



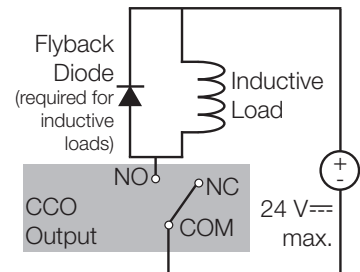
**Contact Closure Output**

Switching Voltage	Resistive Load
0-24 V==	1.0 A
0-24 V~	0.5 A

**\* NOTE:** Some applications (in USA) require the CCO module to be installed inside an additional junction box. For information about how to perform this installation, please visit [www.lutron.com](http://www.lutron.com), Application Note #423 (P/N 048423). Please consult all local and national electric codes for proper installation methods.

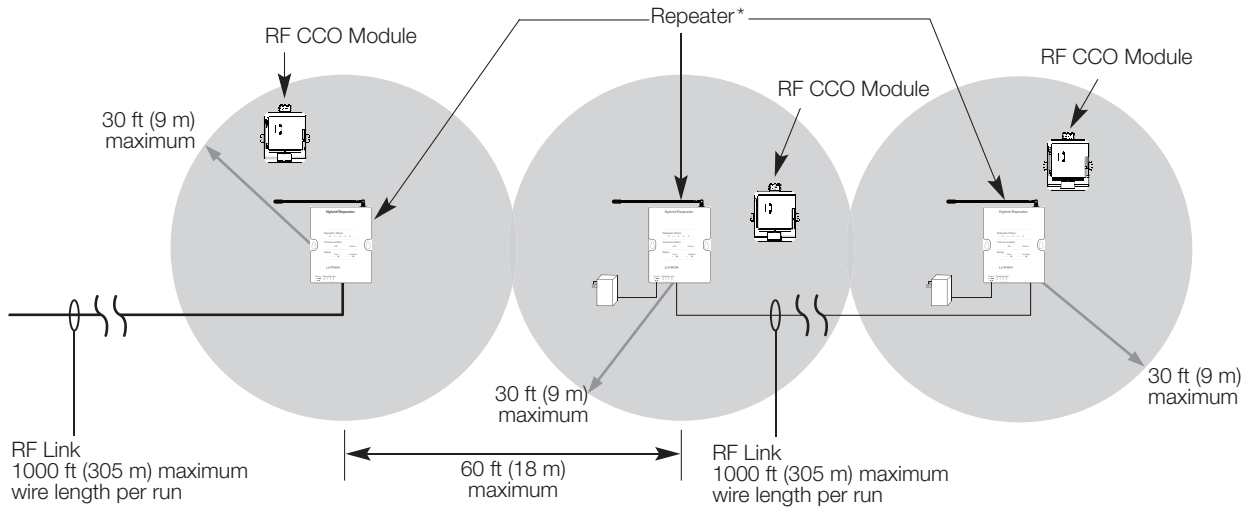
**NOTE:**

The CCO is not rated to control unclamped, inductive loads. Inductive loads include (but are not limited to): relays, solenoids, and motors. To control these types of equipment, a flyback diode must be used (DC voltages only). For more information, please see Application Note #434 (P/N 048434)



# RF CCO Module Communications

## Wired and RF Configuration (RadioRA 2 and HomeWorks QS)



\* In HomeWorks QS systems, use Hybrid Repeaters for range extension. In RadioRA 2, the repeater shown may be either a main repeater (1 required) or auxiliary repeater (up to 4 permitted).

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