

RadioRA 3 RF Sunnata Local Controls

RadioRA 3 Sunnata local controls function much like standard dimmers and switches, but can be controlled as part of a lighting control system. Local lighting controls are useful in locations where single circuits of lighting need to be dimmed or switched.

RadioRA 3 Sunnata dimmers and companion dimmers incorporate advanced features such as fade-on/fade-off, delayed long fade-to-off, and rapid full-on.

RadioRA 3 Sunnata local controls include a locator light to assist in locating the controls at night. RadioRA 3 Sunnata local controls install in single pole or multi-location applications (fan control is single pole only). Sunnata companion dimmers and companion switches must be used for multi-location control.

RadioRA 3 Sunnata local controls include a Front Accessible Service Switch (FASS) for safe light bulb replacement.

Use Lutron Designer (Claro gloss or satin finish) wallplates or designer-style wallplates from other manufacturers. Wallplates are sold separately. Lutron Claro wallplates snap on with no visible means of attachment. Available colors are in the Colors and Finishes section on page 16 at the end of this document.



Dimmer



Switch



Companion Dimmer



Companion Switch



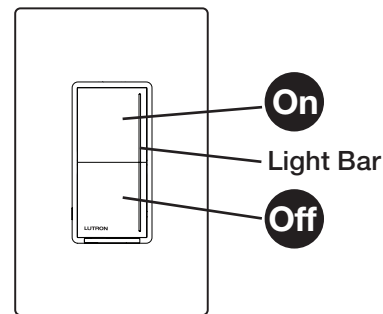
Fan Control

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Design Features

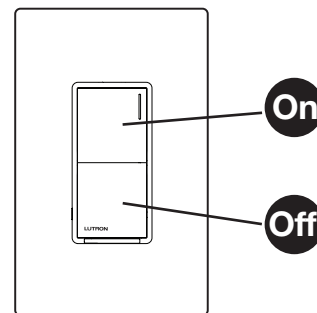
Dimmer and Companion Dimmer

- Pressing the top of the button, lights fade ON.
- Pressing the bottom of the button, lights fade OFF.
- Anytime - Double tap the top of the button, lights fade rapidly to full brightness.
- Pressing and holding the bottom of the button for more than 1 second - Delayed long fade to OFF (30 second delay).
- Light levels can be fine-tuned by touching your finger to the light bar and sliding your finger up or down until the desired light level is reached.
- Neutral is required. (Dimmer only)



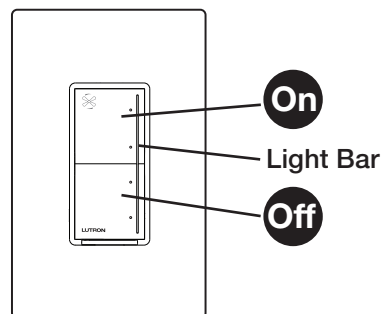
Switch and Companion Switch

- Pressing the top of the button, lights or motors turn ON.
- Pressing the bottom of the button, lights or motors turn OFF.
- Neutral is required. (Switch only)
- Pressing and holding the bottom of the button for more than 1 second - Delayed Off (30 second delay)



Fan Control

- Pressing the ON button, the fan to the previous speed
- Double-tapping anytime, the fan goes to high speed
- Fan speed can be adjusted by touching the light bar for one of the four speeds
- Neutral is required
- AC fan only
- Use to control one paddle-type ceiling fan
- Not for use with DC motor fans or fans with remote controls
- Not for use with bathroom or kitchen exhaust-type fans
- Not for use with Wi-Fi only fans.
- Not for use to control lighting loads on a fan.



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Model Numbers

Dimmers

LED/CFL/Incandescent/Halogen/MLV/ELV/Mark 10 Ballasts/Hi-lume 1% 2-wire Drivers (120 V~)

RRST-PRO-N-XX 250 W (LED/CFL)* or 500 W Incandescent/Halogen/ELV or 400 VA MLV
Phase Selectable Neutral Dimmer

* Go to www.lutron.com/ledtool to see all compatible LED/CFL lamps.

Switches

Lighting and Motor Loads (120 V~)

RRST-8ANS-XX 8 A Light, 1/4 HP 5.8 A Motor
Neutral Wire Electronic Switch

Fan Controls

Fan Control (120 V~)

RRST-ANF-XX 1.5 A max. one (1) paddle-type AC ceiling fan only

Companions (for multi-location installations)

RRST-RD-XX Companion Dimmer (120 V~)

RRST-RS-XX Companion Switch (120 V~)

Note: "XX" in the model number represents color/finish code. See **Colors and Finishes** at end of document.

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Specifications

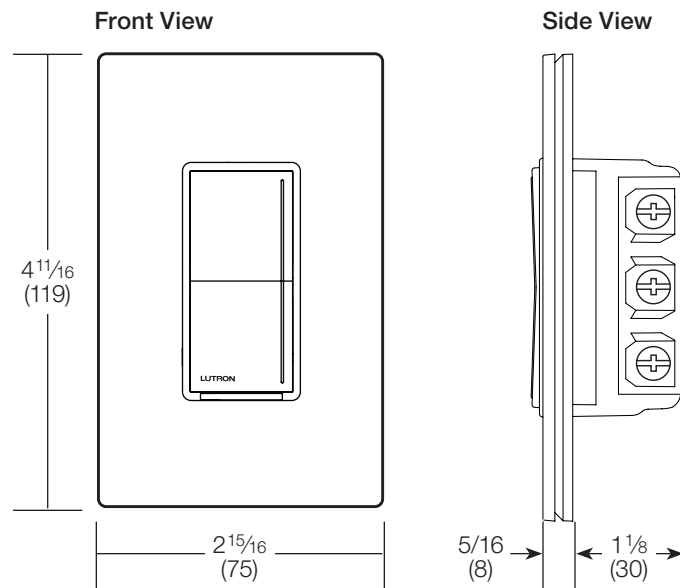
Model Numbers	Dimmer: RRST-PRO-N Companion Dimmer: RRST-RD Switch: RRST-8ANS Companion Switch: RRST-RS Fan Control: RRST-ANF
Power	120 V~ 50/60 Hz: -PRO-N, -8ANS, -RD, -RS, -ANF
Typical Power Consumption	Dimmer / Switch / Fan: 0.5 W Test conditions: Load is off and locator light is enabled. Companion Dimmer / Switch: 0.2 W Test conditions: Load is off.
Regulatory Approvals	cULus, NOM, FCC, IC, IFT (-ANF, PRO-N and -8ANS) cULus, NOM, FCC, IC (-RD and -RS)
Environment	Ambient operating temperature: 32 °F to 104 °F (0 °C to 40 °C), 0% to 90% humidity, non-condensing. Indoor use only.
Communications	Dimmers and switches communicate with the system through Clear Connect-Type X Radio Frequency (RF) and must be located within 75 ft (22.8 m) of a centrally located RadioRA 3 wireless processor/gateway. Each Sunnata dimmer should have at least two other non-battery powered Clear Connect-Type X devices within 25 ft (7.6 m). Clear Connect-Type X devices include, for example, the RadioRA 3 wireless processor/gateway, Sunnata dimmers, Sunnata switches, and Sunnata keypads. Companion dimmers/switches are not Clear Connect-Type X devices, and are not required to be within a specific range of a RadioRA 3 wireless processor/gateway. System devices operate on a frequency of 2.4 GHz.
ESD Protection	Tested to withstand electrostatic discharge without damage or memory loss, in accordance with IEC 61000-4-2.
Surge Protection	Tested to withstand surge voltages without damage or loss of operation, in accordance with IEEE C62.41-1991 Recommended Practice on Surge Voltages in Low-Voltage AC Power Circuits.
RTISS Equipped	Circuitry compensates in real time for incoming line-voltage variations (-PRO-N only).
Power Failure	Power failure memory: Should power be interrupted, the control will return to its previous state when power is restored.
Mounting	Requires a U.S. wallbox. 3½ in (89 mm) deep recommended, 2¼ in (57 mm) deep minimum. For best wireless performance, use a metal wallbox when installing the product in a concrete or stone wall. RRST-ANF requires 2.5 in (63.5 mm) minimum depth.
Wiring	Use only companion dimmers (-RD) and companion switches (-RS) with dimmers/switches. Up to four companion dimmers (-RD) may be connected to the dimmer and four companion switches (-RS) may be connected to the switch. Total wire length may be up to 150 ft (45 m).
Warranty	www.lutron.com/TechnicalDocumentLibrary/Warranty.pdf

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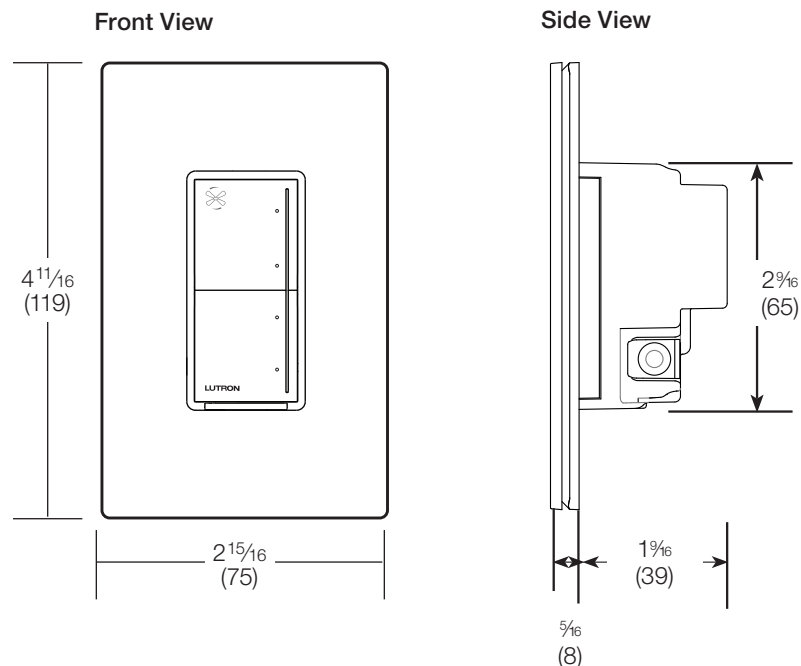
Dimensions

All dimensions are shown as: in (mm)

Dimmer/Switches



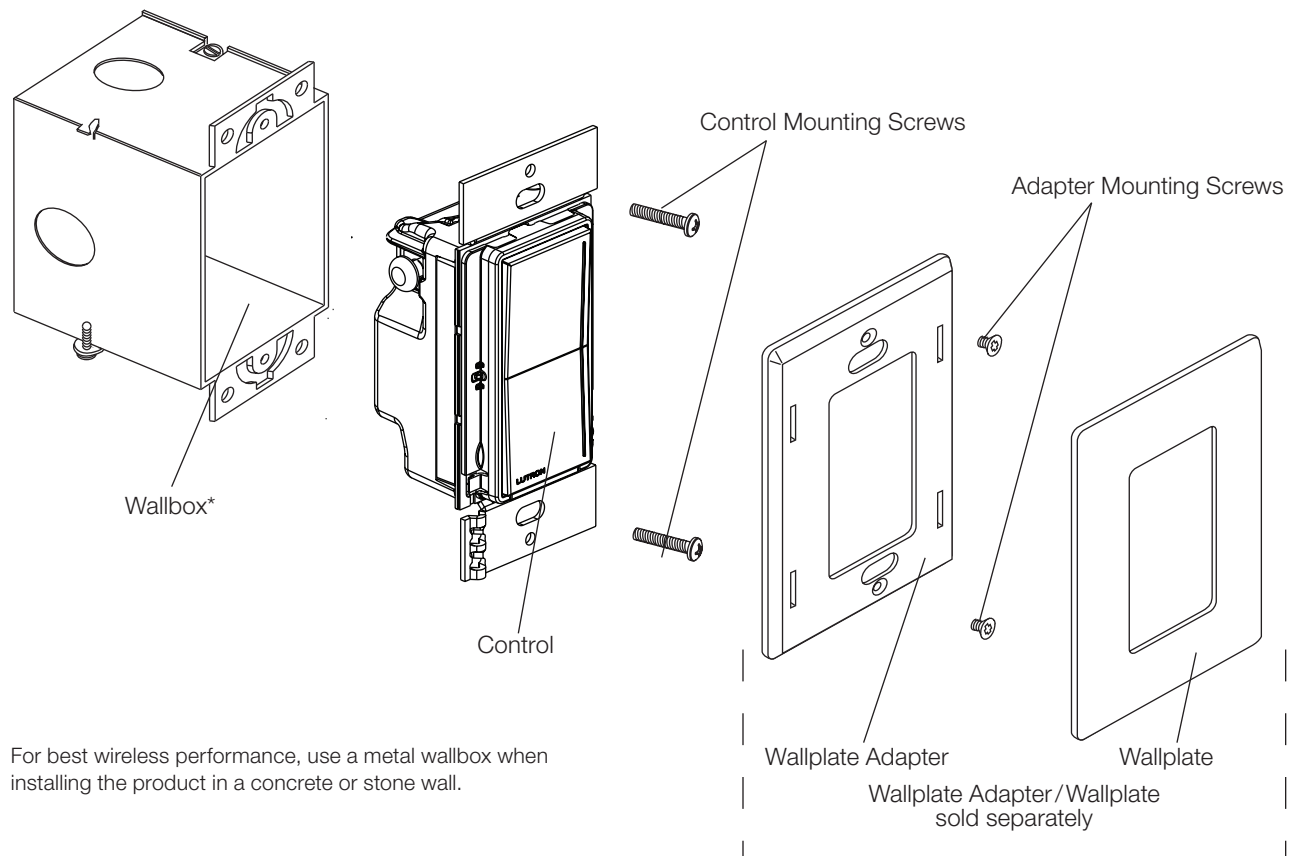
Fan Control



Note: RRST-ANF- requires a U.S. wallbox $2\frac{1}{2}$ in (64 mm) deep minimum.

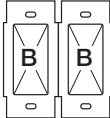
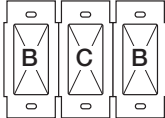
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Mounting and Parts Identification



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Load Type and Capacity

							
Load Type	Minimum Load	A Not Ganged	B End of Gang	C Middle of Gang	Neutral Connection	Required Phase Mode ⁴	
RRST-PRO-N ²							
LED	1 bulb	250 W	200 W	150 W	Required ¹	Either	
MLV Transformer with LEDs	See Application Note #559 (P/N 048559) at www.lutron.com No Derating Required					Forward	
ELV Transformer with LEDs						Reverse	
MLV Transformer with Halogen	10 W	400 VA (300 W)	No Derating Required			Forward	
ELV Transformer with Halogen	10 W	500 W	400 W	300 W		Reverse	
Incandescent/Halogen	10 W	500 W	400 W	300 W		Either	
Dimmable Fluorescent Ballast	1 ballast	3.3 A (400 VA)	No Derating Required			Forward	
Hi-lume 1% 2-wire (LTE) LED Driver	1 driver	3.3 A (400 W) 20 drivers max.	No Derating Required			Forward	
PHPM-PA/3F and GRX-TVI ³	1 interface	3 interfaces	No Derating Required			Forward	
CFL	1 bulb	250 W	200 W	150 W		Forward	

¹ Neutral is required for all load types.

² Do not install dimmers to control receptacles or motor-operated appliances.

³ Power Boosters/Load Interfaces: -RRST-PRO-N can be used to control power boosters/load interfaces. For a list of compatible power boosters/load interfaces see **Compatible Power Boosters and Load Interfaces**, page 10.

⁴ Phase Mode default setting is Reverse-Phase.

Note: For dimming MLV fixtures, the maximum lamp wattage is typically 70%-85% of the transformer's VA rating. For actual transformer efficiency, contact the manufacturer. The total VA rating of the transformer(s) shall not exceed the VA rating of the dimmer.

Notes for dimming MLV fixtures:

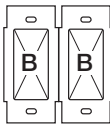
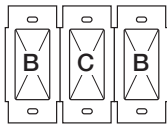
- The total VA rating of the transformer(s) shall not exceed the VA rating of the dimmer. The VA rating of the transformer should be written on the nameplate label or determined by contacting the manufacturer. The maximum halogen lamp wattage is typically 70%–85% of the transformer's VA rating.
- MLV transformer loads powered by utility power and emergency backup generators should have a minimum one (1) second delay between switching power sources. Rapid non-synchronous switching can cause the transformer(s) to draw high currents which would cause breakers to trip or the dimmers controlling them to trip a protection.

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Load Type and Capacity (continued)

					
Load Type	Minimum Load	A Not Ganged	B End of Gang	C Middle of Gang	Neutral Connection
RRST-8ANS ^{1,2}					
LED Lighting	1 bulb	8 A	6 A	4.5 A	Required
Other Lighting Sources	10 W/VA	8 A	6 A	4.5 A	
Motor	0.08 A	1/4 HP 5.8 A	1/4 HP 5.8 A	1/6 HP 4.4 A	
RRST-ANF ³					
Paddle-Type Ceiling Fan	0.08 A	1.5 A	1.5 A	1.5 A	Required

Note: Do not install switches to control receptacles or motor-operated appliances.

¹ Power Boosters/Load Interfaces: -8ANS can be used to control power boosters/load interfaces. For a list of compatible power boosters/load interfaces see **Compatible Power Boosters and Load Interfaces**, page 9.

² Switch Load Type:
-8ANS: Designed for use with permanently installed 120 V~ incandescent, MLV, ELV, tungsten halogen, fluorescent, LED, CFL, or motor loads.

³ Do not use to control DC motor fans, fans with remote controls, Wi-Fi only fans, lighting loads on a fan, bathroom or kitchen exhaust-type fans.

Mixing Lamp Types

Example: If you have two dimmers ganged together and you have two 13 W LED bulbs installed (total LED Wattage = 26 W) on one dimmer, you may add up to 300 W of incandescent or halogen lighting to that one dimmer. Repeat the exercise for the other dimmer with which it is ganged.

¹ Do not install dimmers to control receptacles or motor-operated appliances.

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Compatible Power Boosters and Load Interfaces

Some local controls can be used to control power boosters or load interfaces. Up to three power boosters or load interfaces can be used with one control. See table below for a list of controls and compatible power boosters and load interfaces.

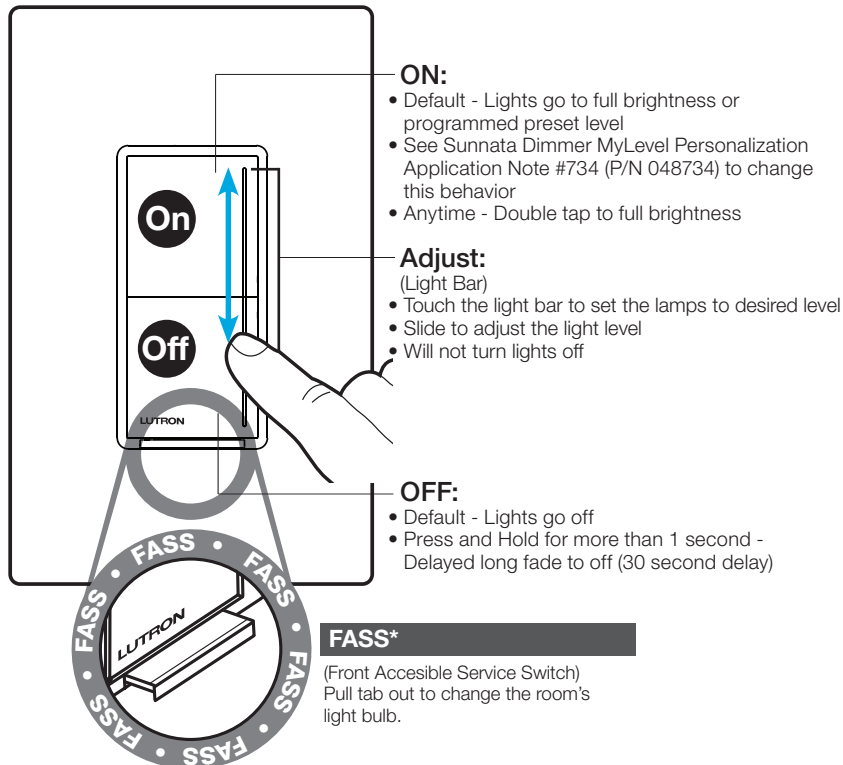
Control	Phase Adaptive Power Modules: PHPM-PA-120-WH; PHPM-PA-DV-WH	3-wire Fluorescent Power Modules: PHPM-3F-120-WH; PHPM-3F-DV-WH	Switched Power Module: PHPM-SW-DV-WH	0–10 V _{DC} Interface and Switching Module: GRX-TVI
RRST-8ANS			✓	
RRST-PRO-N	✓	✓		✓

* All power modules are 120 V_{AC} only.

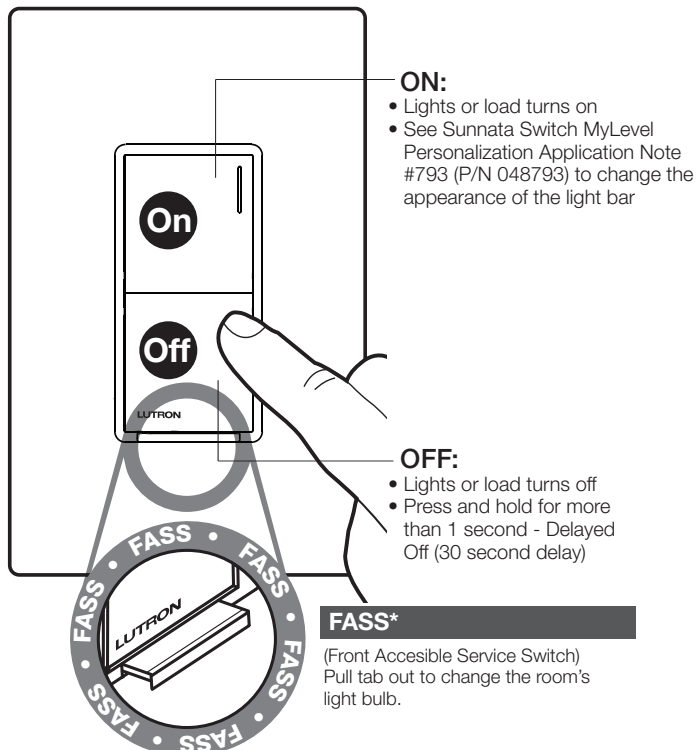
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Operation

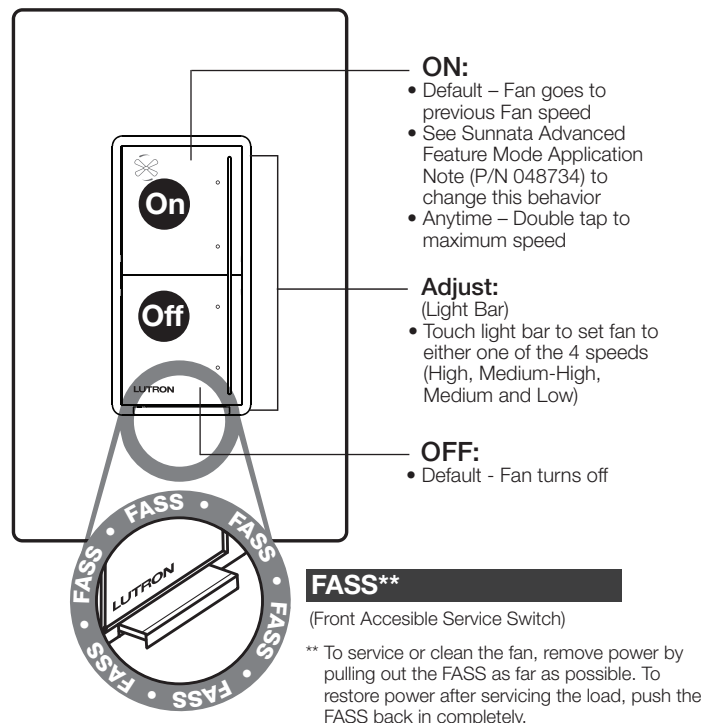
Dimmer



Switch



Fan Control



* FASS switch is **ONLY** for changing light bulbs in permanently wired fixtures. Changing wiring or installing dimmers/switches/companion devices requires turning off the breaker at the breaker panel.

RadioRA 3 RF Sunnata Local Controls

MyLevel Personalization Advanced Features

Sunnata RF dimmers and switches contain Advanced Features that allow users to customize the control to meet their specific needs. For a detailed description of the features and uses, please refer to the Sunnata Dimmer/Fan Control MyLevel Personalization Application Note #734 (P/N 048734) or Sunnata Switch MyLevel Personalization Application Note #793 (P/N 048793) at www.lutron.com. Before entering MyLevel, it is important to have a good understanding of the features. Please note that these local AFM features described below will be disabled when the device(s) are commissioned into a system. All AFM settings will then be based on the system programming. See **Additional MyLevel Features Available in System Programming** below.

Dimmer

Available MyLevel Personalization Advanced Features	
Feature	Description
High-end trim	Select the maximum available light limit.
Low-end trim	Select the minimum available light limit.
Preset light level	Change the behavior of the device when the ON button is pressed from the OFF state to ON.
Light bar brightness	Select between high, medium, and low brightness of the control's light bar.
Light level indicator/ locator light	Select between ON and OFF for the light bar when the lights are on (light level indicator) and when the lights are off (locator light). Default - ON / ON.
Phase select	Select the Phase mode in which the dimmer operates. Forward or Reverse (Default).
Restore factory default settings	Select to return dimmer to its original factory settings.

Additional MyLevel Features Available in System Programming	
Feature	Description
Fade On/Off rate	The rate at which the load turns ON and OFF from its previous state.
Delayed Long Fade To Off	Allows for control to delay the load from starting the dimming sequence. This setting delays the time between when the OFF button is pressed and the load begins the Fade to Off process.

Switch

Available MyLevel Personalization Advanced Features	
Feature	Description
Light bar brightness	Select between high, medium, and low brightness of the control's light bar.
Light level indicator/ locator light	Select between ON and OFF for the light bar when the lights are on (light level indicator) and when the lights are off (locator light). Default - ON / ON.

Additional MyLevel Features Available in System Programming	
Feature	Description
Delayed Off	Allows for control over how quickly/slowly the load turns off. This setting delays the time between when the OFF button is pressed (normal operation) and when the lights actually turn off.

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MyLevel Personalization Advanced Features (continued)

Fan Control

Available MyLevel Personalization Advanced Features	
Feature	Description
Preset fan speed	Change the behavior of the device when the ON button is pressed from the OFF state to ON.
Light bar brightness	Select between high, medium, and low brightness of the control's light bar.
Light level indicator / locator light	Select between ON and OFF for the light bar when the fan is on (light level indicator) and when the fan is off (locator light). Default - ON / ON.

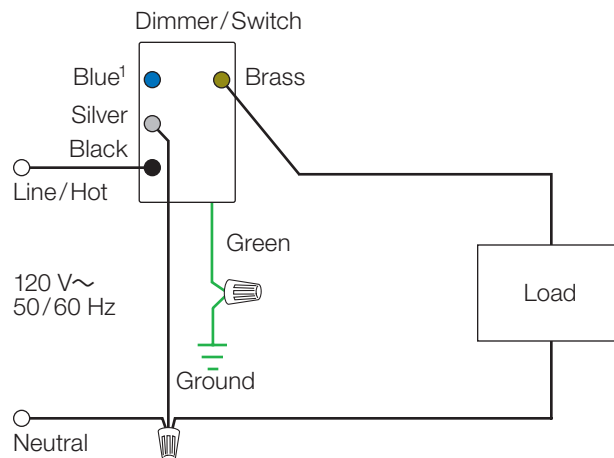
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Wiring Diagrams

Wiring Diagram 1

Single-Location Installation with required Neutral¹

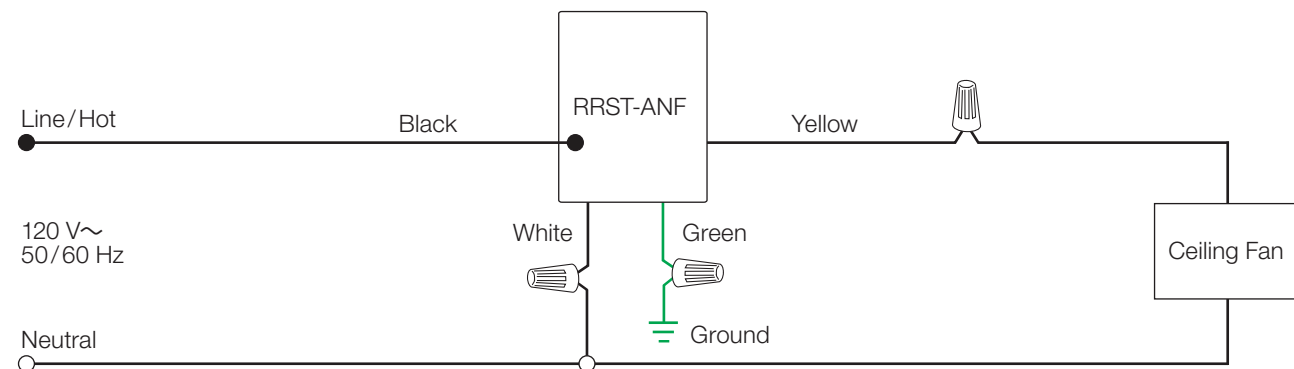
-PRO-N, -8ANS



Note: Bolded lines in diagrams indicate leads on products.
¹ When using controls in single-location installations, tighten the blue terminal.
 Do not connect the blue terminal to any other wiring or to ground.

Wiring Diagram 2

Single Pole Installation (load is controlled from 1 location): RRST-ANF



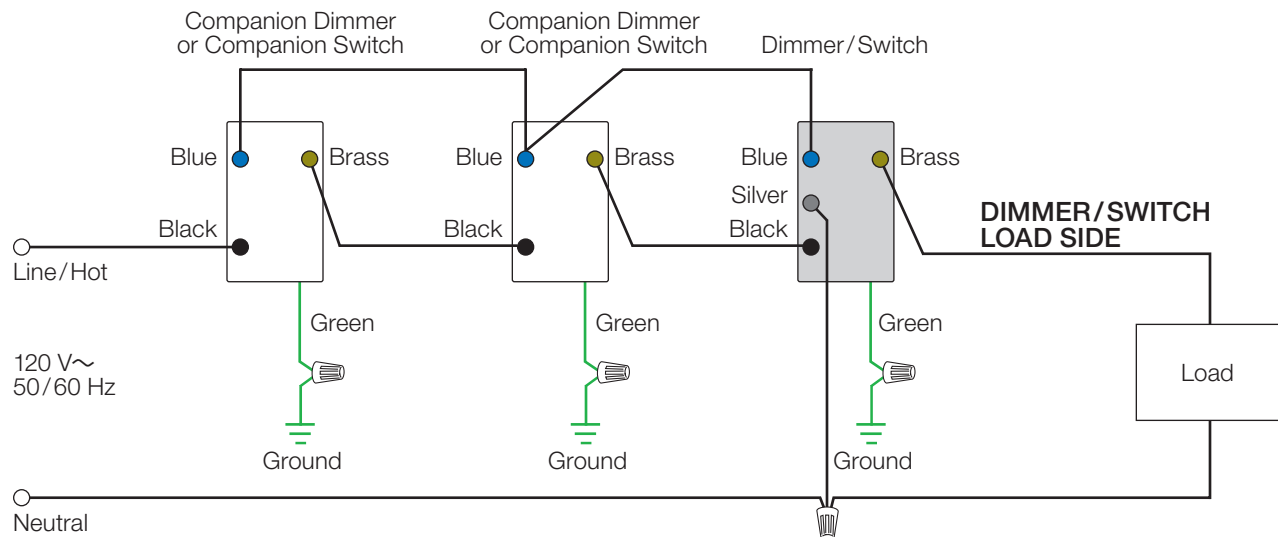
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Wiring Diagrams (continued)

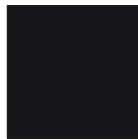
Wiring Diagram 3

Multi-Location Installation with required Neutral¹-PRO-N with -RD OR -8ANS with -RS**Note:** Dimmer and switch must be on the load side**Note:** Bolded lines in diagrams indicate leads on products.¹ Up to four companion dimmers/companion switches may be connected to the dimmer/switch.
Total blue terminal wire length may be up to 150 ft (45 m).

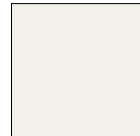
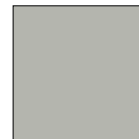
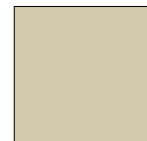
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Colors and Finishes

Gloss Finishes

White
WHIvory
IVLight Almond
LABlack
BL

Satin Finishes

Brilliant White
BWGlacier White
GLSnow White
SWArchitectural
White
RWLunar Gray
LGMist
MIPebble
PBCobblestone
CSSlate
SLMidnight
MNBiscuit
BISand
SDTaupe
TPPumice
PMClay
CYSage
SAEspresso
EPTruffle
TFDeep Sea
DESignal Red
SR

- Due to printing limitations, colors and finishes shown cannot be guaranteed to perfectly match actual product colors.
- Color chip keychains are available for more precise color matching:
Gloss Finishes: DG-CK-1
Satin Finishes: SF-CK-1

* RadioRA 3 Sunnata dimmer, companion dimmer, switch, and companion switch are NOT field colorizable.

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