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#### Maestro Wireless® Dimmers and Switches

The Maestro Wireless® solution incorporates Maestro Wireless® load controls, wireless sensors, and wireless remote controls, which provides a system that delivers energy savings, convenience, and ease of installation.

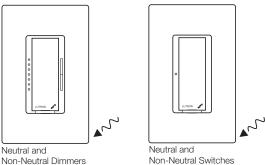
Maestro Wireless<sub>®</sub> dimmers and switches use Lutron patented Clear Connect<sub>™</sub> RF Technology, which enables wireless communication with Radio Powr Savr<sub>™</sub> sensors and Pico<sub>®</sub> wireless controls for light control and general switched loads.

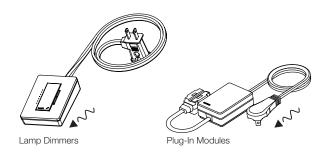
#### **Features**

- The Maestro Wireless<sub>®</sub> solution provides dimming/ switching of multiple load types, occupancy/vacancy sensing, daylight harvesting, and high-end trim.
- Lutron patented Clear Connect™ RF Technology works through walls and floors.
- Incorporates advanced features such as fade on/ fade off, high-end trim, and rapid full on.
- Controls include Front Accessible Service Switch (FASS™) for safe lamp replacement.
- Two-wire dimmers and switches available for retrofit applications.
- Power failure memory: If power is interrupted, the control will return to its previously set level prior to interruption.

#### **Receiving Devices**

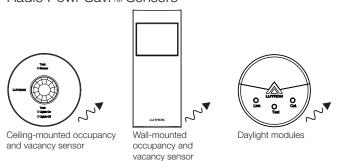
Maestro Wireless<sub>®</sub> Controls





#### **Transmitting Devices**

Radio Powr Savr™ Sensors



#### Pico<sub>®</sub> Wireless Controls



#### 

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#### Maestro Wireless Dimmers

#### **Model Numbers**

#### **Dimmers**

Halogen/Incandescent/Magnetic Low-voltage

MRF2-600M-XX 600 W Incandescent

Dimmer 120 V~

MRF2-6MLV-XX 600 W/600 VA Incandescent/

MLV Dimmer 120 V~

MRF2-6ND-120-XX\* 600 W/600 VA

Spec Grade Neutral wire

Dimmer 120 V∼

MRF2-10D-120-XX 1000 W/1000 VA

Spec Grade Dimmer 120 V∼

3-wire Fluorescent

MRF2-F6AN-DV-XX\* 6 A 3-wire Fluorescent

Spec Grade Neutral wire Dimmer 120–277 V∼

Electronic Low-Voltage Dimmer-

MRF2-6ELV-120-XX\* 600 W ELV Dimmer 120 V~



#### Dimmer



#### Companion Dimmer



#### **Companion Controls**

Claro<sub>®</sub> Gloss Finishes

MA-R-XX Companion Dimmer 120 V~
MA-R-277-XX Companion Dimmer 277 V~

Satin Colors<sub>®</sub> Satin Finishes

MSC-AD-XX Companion Dimmer 120 V~ MSC-AD-277-XX Companion Dimmer 277 V~

"XX" in the model number represents color/finish code.

**LUTRON.** SPECIFICATION SUBMITTAL

THOM GOBINITINE

Job Name:

Model Numbers:

Job Number:

Designer-style: Maestro

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## **Dimmer Load Type and Capacity**

#### **Neutral Required**

Control	Voltage	1 = 1 :	Minimum Load	Maximum Load		
				Not Ganged	End of Gang	Middle of Gang
		Incand.	25 W	600 W	500 W	400 W
MRF2-6ND-120¹.².⁴ 120 V∼	120 V∼	MLV <sup>2</sup>	25 W/VA	450 W / 600 VA	400 W/ 500 VA	300 W/ 400 VA
MRF2-6ELV <sup>2</sup>	120 V∼	ELV <sup>2</sup>	5 W	600 W	500 W	400 W
MRF2-F6AN-DV <sup>3,5</sup>	120–277 V∼	Lighting	1 ballast 0.05 A	6 A	5 A	3 A

#### No Neutral Required

Control	1 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Maximum Load				
		Type L	Load	Not Ganged	End of Gang	Middle of Gang
MRF2-600M <sup>1,4</sup>	120 V∼	Incand.	50 W	600 W	500 W	400 W
MRF2-6MLV <sup>1,2,4</sup>	120 V~	MLV <sup>2</sup>	50 VA	450 W / 600 VA	400 W/ 500 VA	300 W/ 400 VA
		Incand.	50 W	1000 W	800 W	650 W
MRF2-10D-120 <sup>1,2,4</sup>	120 V~	MLV <sup>2</sup>	50 W/VA	800 W / 1000 VA	600 W/ 800 VA	500 W / 650 VA

- Do not operate low-voltage circuits without operative lamps in place.
- Replace burned-out lamps as quickly as possible.
- Use transformers that incorporate thermal protection or fused transformer primary windings to prevent transformer failure due to overcurrent.
- 3 Can control the following power boosters/load interfaces: Phase-adaptive Power Modules (PHPM-WBX-DV-WH), 3-wire Fluorescent Power Modules (PHPM-3F-DV-WH), Tu-Wires Fluorescent Power Modules (PHPM-PA-DV-WH), and 0–10 V (GRX-TVI).
- 4 Can control the following power booster/load interface: Hi-Power 2-4-6 m Boosters (HP-2, HP-4, HP-6) for control of most popular lighting sources including Lutrona 3-wire line voltage control fluorescent dimming ballasts (Hi-lumea, Hi-lume Compact SEm, Eco-10a, and EcoSystema).
- 5 Dimmer Load Type: MRF2-F6AN-DV is designed for use with permanently installed 3-wire line voltage control fluorescent ballasts or LED drivers only (Hi-lume, Hi-lume Compact SE<sub>10</sub>, Eco-10, and EcoSystem).

<b>LUTRON</b> . SPECIFICATION	TRON. SPECIFICATION SUBMITTAL				
Job Name:	Model Numbers:				
Job Number:					

<sup>1</sup> Dimmer Load Type: MRF2-6ND-120, MRF2-6MLV and MRF2-10D-120 are designed for use with permanently installed incandescent, magnetic low-voltage, or tungsten halogen only. MRF2-600M is designed for use with permanently installed incandescent or tungsten halogen only. MRF2-6ELV is designed for use with permanently installed electronic low-voltage only. Do not install dimmers to control receptacles or motor-operated appliances.

<sup>2</sup> Low-Voltage Applications: Use MRF2-6ND-120, MRF2-6MLV and MRF2-10D-120 with magnetic (core and coil) low-voltage transformers only. Not for use with electronic (solid-state) low-voltage transformers only. Operation of a low-voltage circuit with lamps inoperative or removed may result in transformer overheating and premature failure. Lutron strongly recommends the following:

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#### Maestro Wireless® Switches

#### **Model Numbers**

#### **Switches**

Lighting and motor loads

MRF2-6ANS-XX\* 6 A Lighting/3 A Fan (1/10 HP

motor), Electronic Switch

120 V~

MRF2-8ANS-120-XX\* 8 A Lighting, 5.8 A Fan (1/4 HI

motor), Spec Grade Electronic

Switch 120 V~

MRF2-6ANS-277-XX\* 6 A Lighting, Spec Grade

Electronic Switch 277 V∼

MRF2-8S-DV-XX 8 A Lighting, 3 A Fan (1/10 HF

motor, 120 V∼ only), Spec Grade Electronic Switch 120–277 V∼, NO NEUTRAL

WIRE REQUIRED



#### Companion Switch



#### **Companion Controls**

Claro<sub>®</sub> Gloss Finishes

MA-AS-XX Companion Switch 120 V~ MA-AS-277-XX Companion Switch 277 V~

Satin Colors<sub>®</sub> Satin Finishes

MSC-AS-XX Companion Switch 120 V~ MSC-AS-277-XX Companion Switch 277 V~

"XX" in the model number represents color/finish code.

Job Name:	Model Numbers:	
Job Number:		

<sup>\*</sup> NEUTRAL WIRE REQUIRED.

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# Switch Load Type and Capacity

## **Neutral Required**

Control	Voltage Load Type Minimum		Maximum Load			
			Load	Not Ganged	End of Gang	Middle of Gang
MRF2-8ANS-120 <sup>1,3</sup> 120 V~		Lighting	25 W	8 A	6.5 A	5 A
	Fan Motor	0.2 A	1/4 HP 5.8 A	1/4 HP 5.8 A	1/6 HP 4.4 A	
		Lighting	25 W	6 A	5 A	3.5 A
MRF2-6ANS <sup>1</sup>	120 V~	Fan Motor	0.2 A	1/10 HP 3 A	1/10 HP 3 A	1/10 HP 3 A
MRF2-6ANS-277 <sup>2</sup>	277 V∼	Lighting	25 W	6 A	5 A	3.5 A

#### No Neutral Required

Control	Voltage	Load Type	Minimum Load	Maximum Load		
				Not Ganged	End of Gang	Middle of Gang
	120–277 V∼	Incandescent/ Halogen	25 W	8 A	8 A/7 A <sup>4</sup>	7 A
MRF2-8S-DV <sup>2</sup>	120–277 V∼	Fluorescent/ LED/CFL	40 W (LUT-MLC) <sup>5</sup>	8 A	8 A/7 A <sup>4</sup>	7 A
	120 V∼	Fan Motor	0.4 A	1/10 HP 3 A	1/10 HP 3 A	1/10 HP 3 A

<b>LUTRON</b> . SPECIFICATION	RON, SPECIFICATION SUBMITTAL		
Job Name:	Model Numbers:		
Job Number:			

<sup>1</sup> Switch Load Type: MRF2-8ANS-120 is designed for use with permanently installed lighting loads and with fan motor loads up to 1/4 HP (5.8 A).

MRF2-6ANS is designed for use with permanently installed lighting loads and with fan motor loads up to 1/10 HP (3 A).

MRF2-8S-DV is designed for use with permanently installed lighting loads and with fan motor loads up to 1/10 HP (3 A, 120 V~ only).

<sup>2</sup> Switch Load Type: MRF2-6ANS-277 and MRF2-8S-DV are designed for use with permanently installed lighting loads.

<sup>3</sup> For loads larger than 8 A @ 120 V∼, the MRF2-8ANS-120 switch can be used with the PHPM-SW-DV-WH power booster. For loads larger than the MRF2-6ANS-277 capacity of 6 A @ 277 V∼, the MRF2-8ANS-120 can also be used with the PHPM-SW-DV-WH power booster to switch 277 V∼ loads. Please note that in this application, the MRF2-8ANS-120 switch is providing an input at 120 V∼ and the power booster is switching 277 V∼.

<sup>4</sup> Maximum load for double gang application is 8 A. Triple gang application derates maximum load to 7 A.

<sup>5</sup> The LUT-MLC ensures proper function with certain fluorescent, CFL, and LED load types.

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## **Specifications**

#### Regulatory Approvals

- UL Listed.
- · CSA Certified.
- FCC Approved. Complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.
- Industry Canada Certified.

#### Power

Operating voltage: 120 V~ 50/60 Hz 277 V~ 50/60 Hz (MRF2-6ANS-277, MRF2-8S-DV, MRF2-F6AN-DV)

## **Key Design Features**

#### **Dimmers**

- On a single-tap, lights fade UP or DOWN.
- On a double-tap, lights go to full ON.
- When ON, press and hold to engage 20-second fade to OFF.
- Light levels can be fine-tuned by pressing and holding the dimming rocker until the desired light level is reached.
- Two-wire dimmers available.

#### Switch

- On a single-tap, lights turn ON or OFF.
- Two-wire switches available.

#### All RF Local Controls

- Tested to withstand electrostatic discharge without damage or memory loss, in accordance with IEC 61000-4-2.
- 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.

- Controls always operate locally and do not require system control.
- Power failure memory: should power be interrupted, the control will return to its previously set level prior to the interruption when power is restored.
- Uses conventional 3-way and 4-way wiring.
- Multiple location control from Dimmer/Switch and up to 9 Companion Dimmer(s)/Switch(es).
- Use Lutron<sub>®</sub> Designer (Claro<sub>®</sub> and Satin Colors<sub>®</sub>)
   wallplates or designer-style wallplates from other
   manufacturers. Wallplates are sold separately.
- Lutron Claro<sub>®</sub> and Satin Colors<sub>®</sub> wallplates snap on with no visible means of attachment.
- Requires a 1-gang U.S. wallbox. 3½ in (89 mm) deep recommended, 2¼ in (57 mm) deep minimum.
- Green indicator lights.

# System Communications and Capacity

- Maestro Wireless<sub>®</sub> controls communicate with the Pico<sub>®</sub> wireless controls and Radio Power Savr<sub>™</sub> sensors through radio frequency (RF).
- Maestro Wireless<sub>®</sub> local controls must be located within 60 ft (18 m) line of sight or 30 ft (9 m) through walls, of Radio Power Savr<sub>™</sub> sensors.
- Maestro Wireless<sub>®</sub> local controls must be located within 100 ft (30 m) line of sight or 30 ft (9 m) through walls, of a Pico<sub>®</sub> wireless control.
- Up to 10 Maestro Wireless<sub>®</sub> controls can be configured to work together.

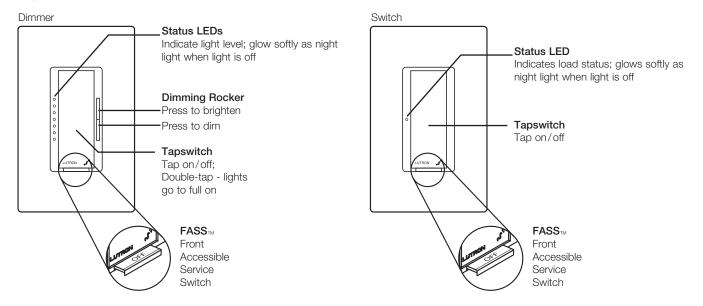
#### **Environment**

 Ambient operating temperature: 32 °F to 104 °F (0 °C to 40 °C), 0%-90% humidity, non-condensing. Indoor use only.

-	<b>ELUTRON</b>	SPECIFICATIO	N SUBMITTAL	Pag	e 6
	Job Name:		Model Numbers:		
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	Job Number	·:			

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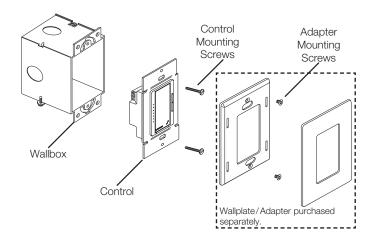
# Operation



#### **IMPORTANT NOTICE:**

**FASS**<sub>TM</sub> - Front Accessible Service Switch - to service load, remove power by pulling the FASS<sub>TM</sub> switch out completely on either the Dimmer/Switch or Companion Dimmer/Switch. After servicing load, push the FASS<sub>TM</sub> switch back in fully to restore power to the control.

# Mounting

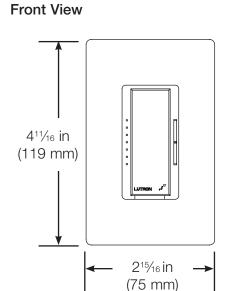


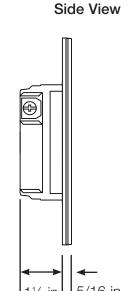
#### **<b>ELUTRON.** SPECIFICATION SUBMITTAL

Job Name:	Model Numbers:	
Job Number:		

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#### **Dimensions**

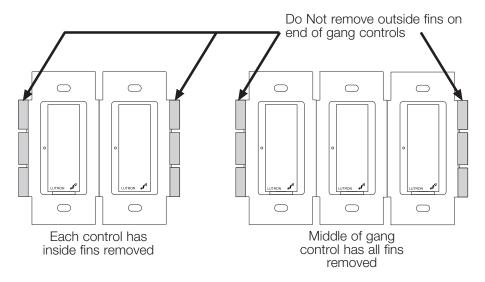




(30 mm) (8 mm)

# Ganging and Derating

When ganging with other controls in the same wallbox, derating is required. See Load Type and Capacity chart. Only MRF2-8ANS controls have fins that need to be removed for multigang installations. No other controls have fins, but they must still be derated in multigang installations.



#### **<b>\$LUTRON.** SPECIFICATION SUBMITTAL

Job Name:	Model Numbers:	
Job Number:		

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## Wiring Diagrams

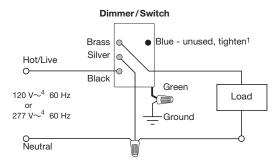
#### **Single Location Installation**

MRF2-600M, MRF2-6MLV, MRF2-10D-120

# Brass Blue - unused, tighten¹ Hot/Live O 120 V~4 60 Hz or 277 V~4 60 Hz ONeutral

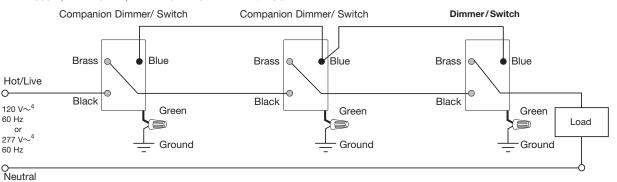
#### Single Location Installation with Neutral

MRF2-6ND-120, MRF2-6ELV-120, MRF2-6ANS-120, MRF2-8ANS-120, MRF2-6ANS-277



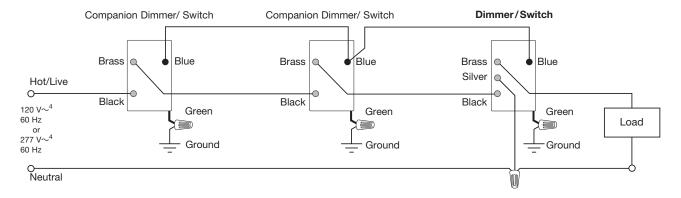
#### Multi-Location Installation<sup>2</sup>

MRF2-600M, MRF2-6MLV, MRF2-10D-120 with MA-R/MSC-AD



#### Multi-Location Installation with Neutral<sup>2,3</sup>

MRF2-6ND-120, MRF2-6ELV-120 with MA-R/MSC-AD; MRF2-6ANS-120, MRF2-8ANS-120 with MA-AS/MSC-AS; MRF2-6ANS-277 with MA-AS-277/MSC-AS-277



<sup>&</sup>lt;sup>1</sup>When using controls in single location installations, tighten the blue terminal without any wires attached. **DO NOT** connect the blue terminal to any other wiring or to ground.

 $^4$  120 V $\sim$  : MRF2-6ND, MRF2-6ANS-120, MRF2-8ANS-120, MRF2-6ELV-120 277 V $\sim$  : MRF2-6ANS-277, MRF2-8S-DV

<b>LUTRON</b> , SPECIFICATION SUBMITTAL				
Job Name:	Model Numbers:			
Job Number:				

<sup>&</sup>lt;sup>2</sup>Up to 9 Maestro<sub>®</sub> Companion Dimmers/Switches may be connected to the Maestro Wireless<sub>®</sub> Dimmer/Switch. Total blue terminal wire length may be up to 250 ft (76 m).

<sup>&</sup>lt;sup>3</sup> Neutral wire Dimmers/Switches must be connected on the Load side of a multi-location installation.

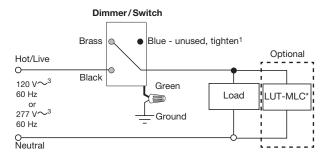
 $<sup>^{\</sup>rm 5}$  Requires MA-AS/MSC-AS for 120 V  $\sim$  applications, and MA-AS-277/MSC-AS-277 for 277 V  $\sim$  applications.

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# Wiring Diagrams

#### Single Location Installation

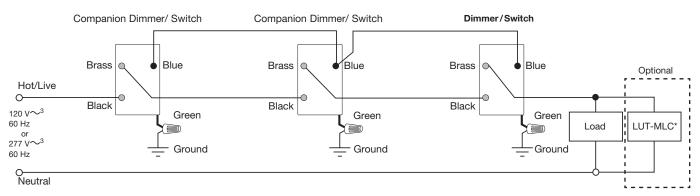
MRF2-8S-DV



\* A LUT-MLC ensures proper function when fluorescent, CFL, or LED loads are used. Install the LUT-MLC inside a load fixture or in a separate J-box of the circuit.

#### Multi-Location Installation<sup>2</sup>

MRF2-8S-DV<sup>4,\*</sup> with MA-AS/MA-AS-277 or MSC-AS/MSC-AS-277



<sup>&</sup>lt;sup>1</sup>When using controls in single location installations, tighten the blue terminal without any wires attached. **DO NOT** connect the blue terminal to any other wiring or to ground.

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Job Name:	Model Numbers:	
Job Number:		

<sup>&</sup>lt;sup>2</sup>Up to 9 Maestro<sub>®</sub> Companion Dimmers/Switches may be connected to the Maestro Wireless<sub>®</sub> Dimmer/Switch. Total blue terminal wire length may be up to 250 ft (76 m).

 $<sup>^3</sup>$  120 V  $\sim$  : MRF2-6ND, MRF2-6ANS-120, MRF2-8ANS-120, MRF2-6ELV-120 277 V  $\sim$  : MRF2-6ANS-277, MRF2-8S-DV

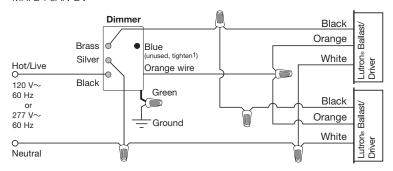
 $<sup>^4</sup>$  Requires MA-AS/MSC-AS for 120 V  $\sim$  applications, and MA-AS-277/MSC-AS-277 for 277 V  $\sim$  applications.

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# Wiring Diagrams

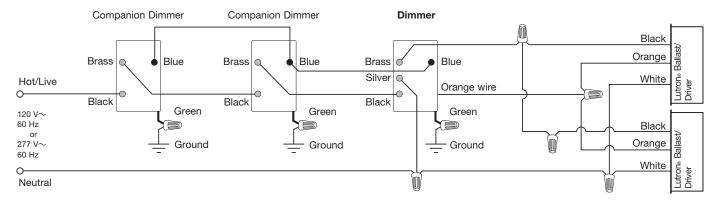
#### **Single Location Installation with Neutral**

MRF2-F6AN-DV



#### Multi-Location Installation with Neutral<sup>2,3</sup>

MRF2-F6AN-DV with MA-R/MA-R-277 or MSC-AD/MSC-AD-2774



<b>"LUTRON</b> " SPECIFICATIO	N SUBMITTAL	Page 11
Job Name:	Model Numbers:	
Job Number:		

<sup>&</sup>lt;sup>1</sup>When using controls in single location installations, tighten the blue terminal. DO NOT connect the blue terminal to any other wiring or to ground.

<sup>&</sup>lt;sup>2</sup>Up to 9 Maestro<sub>®</sub> Companion Dimmers may be connected to the Maestro Wireless<sub>®</sub> Dimmer. Total blue terminal wire length may be up to 250 ft (76 m).

<sup>&</sup>lt;sup>3</sup> Neutral wire Dimmers must be connected on the Load side of a multi-location installation.

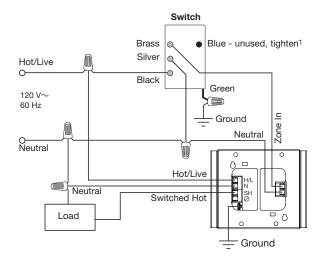
 $<sup>^4</sup>$  Requires MA-R/MSC-AD for 120 V $\sim$  applications, and MA-R-277/MSC-AD-277 for 277 V $\sim$  applications.

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## Wiring Diagrams

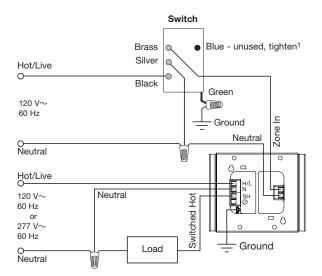
# Single Location Installation with Power Booster Single Feed

MRF2-6ANS-120, MRF2-8ANS-120 with PHPM-SW-DV-WH



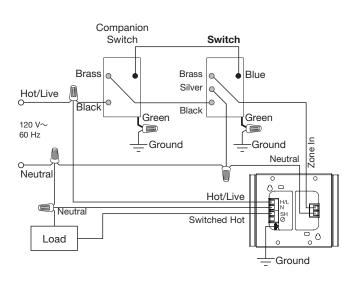
# Single Location Installation with Power Booster Dual Feed

MRF2-6ANS-120, MRF2-8ANS-120 with PHPM-SW-DV-WH



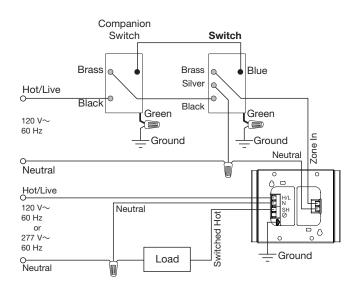
#### Multi-Location Installation with Power Booster<sup>2,3</sup> Single Feed

MRF2-6ANS-120, MRF2-8ANS-120 with MA-AS/MSC-AS and PHPM-SW-DV-WH



# Multi-Location Installation with Power Booster<sup>2,3</sup> Dual Feed

MRF2-6ANS-120, MRF2-8ANS-120 with MA-AS/MSC-AS and PHPM-SW-DV-WH



<sup>&</sup>lt;sup>1</sup>When using controls in single location installations, tighten the blue terminal. **DO NOT** connect the blue terminal to any other wiring or to ground.

#### **ELUTRON.** SPECIFICATION SUBMITTAL

Job Name:	Model Numbers:	
Job Number:		

<sup>&</sup>lt;sup>2</sup>Up to 9 Maestro<sub>®</sub> Companion Switches may be connected to the Maestro Wireless<sub>®</sub> Switch. Total blue terminal wire length may be up to 250 ft (76 m).

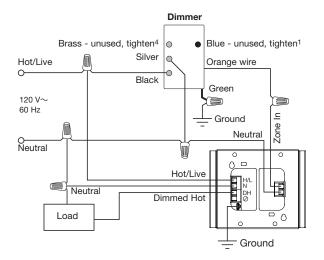
<sup>&</sup>lt;sup>3</sup> Neutral wire Switches must be connected on the Load side of a multi-location installation.

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# Wiring Diagrams

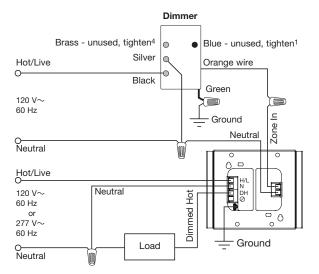
# Single Location Installation with Power Booster Single Feed

MRF2-F6AN-DV with PHPM-3F-DV-WH, PHPM-PA-DV-WH, or PHPM-WBX-DV-WH



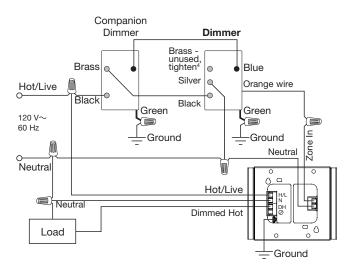
# Single Location Installation with Power Booster Dual Feed

MRF2-F6AN-DV with PHPM-3F-DV-WH, PHPM-PA-DV-WH, or PHPM-WBX-DV-WH



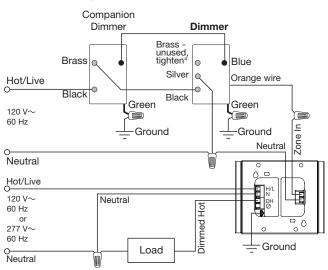
#### Multi-Location Installation with Power Booster<sup>2,3</sup> Single Feed

MRF2-F6AN-DV with MA-R/MSC-AD and PHPM-3F-DV-WH, PHPM-PA-DV-WH, or PHPM-WBX-DV-WH



# Multi-Location Installation with Power Booster<sup>2,3</sup> Dual Feed

MRF2-F6AN-DV with MA-R/MSC-AD and PHPM-3F-DV-WH, PHPM-PA-DV-WH, or PHPM-WBX-DV-WH



<sup>&</sup>lt;sup>1</sup> When using controls in single location installations, tighten the blue terminal. DO NOT connect the blue terminal to any other wiring or to ground.

# **LUTRON** SPECIFICATION SUBMITTAL

Job Name:	Model Numbers:	
Job Number:		

<sup>&</sup>lt;sup>2</sup>Up to 9 Maestro<sub>®</sub> Companion Dimmers may be connected to the Maestro Wireless<sub>®</sub> Dimmer. Total blue terminal wire length may be up to 250 ft (76 m).

<sup>&</sup>lt;sup>3</sup> Neutral wire Dimmers must be connected on the Load side of a multi-location installation.

<sup>&</sup>lt;sup>4</sup>When using a PHPM, tighten the brass (Sw Hot) terminal of the MRF2-F6AN-DV. DO NOT connect the brass terminal to any other wiring or to ground.

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## Colors and Finishes

## **Gloss Finishes**











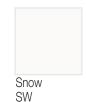
Almond











TQ







PD

Palladium Midnight





TC





actual product colors.

guaranteed to perfectly match



GB



BG

Mocha Stone





Desert Stone

DS

Stone

Limestone LS

MS

# Metal Finish (wallplate only)



Stainless Steel SS

When using Stainless Steel wallplates, it is recommended to order the controls in Black (BL) or Midnight (MN).

## **LUTRON.** SPECIFICATION SUBMITTAL

Job Name:	Model Numbers:	
Job Number:		