Vive Maestro Wireless Dimmers and Switches

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

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

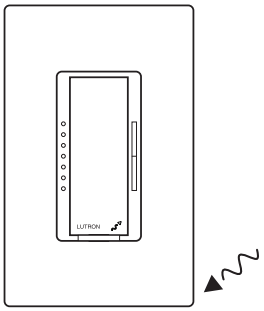
These products are also compatible with the Vive hub which enables a simple setup process using a standard web browser on any Wi-Fi enabled phone, tablet or computer. It also enables control and monitoring of all Vive devices. The Vive hub can be added at any time. System reprogramming will be required. For a complete list of features supported with the Vive hub, see specification submittal 369902.

Note for Replacement: MRF2S - the “S” model can replace the non-”S” model.

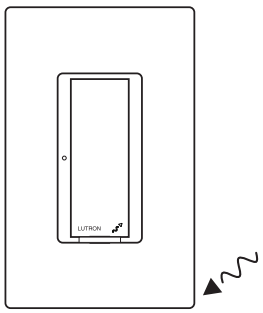
Features

- The Maestro Wireless solution provides dimming/switching of multiple load types, occupancy/vacancy sensing, and daylight harvesting.
- 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 (a Vive hub is required to set high-end trim).
- 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 Controls

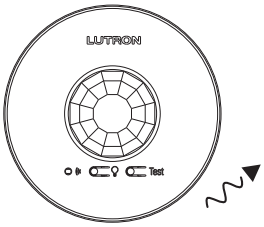


Neutral and Non-Neutral Dimmers

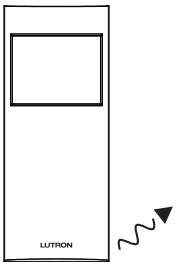


Neutral and Non-Neutral Switches

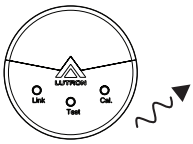
Transmitting Devices
Radio Powr Savr Sensors



Ceiling-Mounted Occupancy and Vacancy Sensors

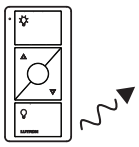


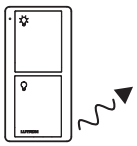
Wall-Mounted Occupancy and Vacancy Sensors



Daylight Sensors

Pico Remote Controls





Job Name:	Model Numbers:	
Job Number:		

Maestro Wireless Dimmers

Models Available

Dimmers

Dimmer

CFL/LED/Halogen/Incandescent

MRF2S-6CL-XX[1]	150 W CFL/LED Dimmer ; 600 W/600 VA Incandescent, 120 V~
MRF2S-6ND-120-XX[1,2]	600 W/600 VA Spec-Grade Neutral Wire Dimmer, 120 V~ 150 W CFL/LED Dimmer

Electronic Low-Voltage Dimmer

MRF2S-6ELV120-XX[1]	600 W ELV Dimmer 120 V~ (neutral required) 150 W CFL/LED Dimmer

Companion Dimmers

Companion Dimmer

Claro Gloss Finishes

MA-R-XX[1,2]	Companion Dimmer 120 V~

Satin Colors Satin Finishes

MSC-AD-XX[1]	Companion Dimmer 120 V~

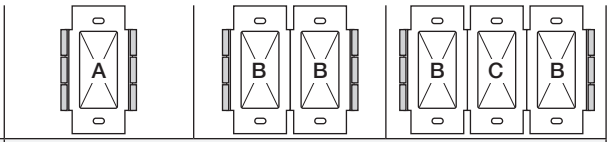
1 "XX" in the model number represents color/finish code. See **Colors and Finishes** at end of document.
2 BAA-compliant model numbers available. Add a "U" prefix to the model number.

Job Name:	Model Numbers:	
Job Number:		

Ganging and Derating

When combining controls in the same wallbox, derating is required.

Dimmer Load Type and Capacity



No Neutral Required

Control	Voltage	Load Type	Minimum Load	Maximum Load		
				A: Not Ganged	B: End of Gang	C: Middle of Gang
MRF2S-6CL [1,2,3]	120 V~	CFL/LED	See lamp list	See *Mixing Lamp Types*		
		Incandescent/Halogen	50 W	600 W	500 W	400 W

Neutral Required

Control	Voltage	Load Type	Minimum Load	Maximum Load		
				A: Not Ganged	B: End of Gang	C: Middle of Gang
MRF2S-6ELV120 [1,2]	120 V~	ELV	5 W	600 W	500 W	400 W
		CFL/LED	See lamp list	See *Mixing Lamp Types*		
MRF2S-6ND-120 [1,2,3]	120 V~	Incandescent/Halogen	25 W	600 W	500 W	400 W
		MLV [2]	25 W/VA	450 W/600 VA	400 W/500 VA	300 W/400 VA
		CFL/LED	See lamp list	See *Mixing Lamp Types*		

Note: Do not mix ELV and MLV load types on a single control.

1 Dimmer Load Type:
- MRF2S-6CL is designed for use with permanently-installed incandescent, CFL, LED, or tungsten halogen only.
- MRF2S-6ND-120 is designed for use with permanently-installed incandescent, CFL, LED, magnetic low-voltage, or tungsten halogen only. Can control Power Modules (PHPM-PA-DV, PHPM-3F-DV-WH, PHPM-WBX-DV-WH, and GRX-TVI) and legacy interfaces Hi-Power 2•4•6 Boosters (HP-2, HP-4, HP-6).
- MRF2S-6ELV120 is designed for use with permanently-installed electronic low-voltage, incandescent, CFL, LED or tungsten/halogen only. Do not install dimmers to control receptacles or motor-operated appliances.

2 Low-Voltage Applications:
- Use MRF2S-6ND-120 with magnetic (core and coil) low-voltage transformers only. Not for use with electronic (solid-state) low-voltage transformers.
- Use MRF2S-6ELV120 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:
  - 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.
- See Application Note #559 for dimming low voltage LEDs.

3 BAA-compliant model numbers available. Add a “U” prefix to the model number.

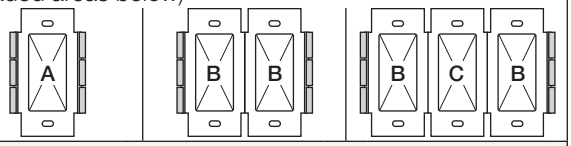
Mixing Lamp Types

Mixing lamp types (using a combination of CFL/LED, and Incandescent/Halogen bulbs) and ganging with other dimmers or electronic switches may reduce maximum wattage, as shown.

Example: If fins from one side of dimmer are removed and you have two 24 W bulbs installed (total CFL Wattage = 48 W), you may add up to 300 W of incandescent or halogen lighting.

Example: If a dimmer is installed in location “B” above and there are two 24 W CFL bulbs installed (Total CFL Wattage = 48 W), you may add up to 300 W of incandescent or halogen lighting.

Do not remove outside fins on ends of ganged controls (shaded areas below)



Total CFL/LED Wattage		Total Incandescent/Halogen Wattage				
		A: Not Ganged		B: End of Gang		C: Middle of Gang
MRF2S-6CL						
0 W	+	50 W–600 W	Or	50 W–500 W	Or	50 W–400 W
1 W–25 W	+	0 W–500 W	Or	0 W–400 W	Or	0 W–300 W
26 W–50 W	+	0 W–400 W	Or	0 W–300 W	Or	0 W–200 W
51 W–75 W	+	0 W–300 W	Or	0 W–200 W	Or	0 W–100 W
76 W–100 W	+	0 W–200 W	Or	0 W–100 W	Or	0 W–50 W
101 W–125 W	+	0 W–100 W	Or	0 W–50 W	Or	0 W
126 W–150 W	+	0 W	Or	0 W	Or	0 W

Job Name:	Model Numbers:	
Job Number:		

Maestro Wireless Switches

Models Available

Switches

Lighting and motor loads

MRF2S-6ANS-XX[1,2,4]	6 A Lighting/3 A Fan (1/10 HP motor), Electronic Switch 120 V~
MRF2S-8ANS120-XX[1,2,4]	8 A Lighting, 5.8 A Fan (1/4 HP motor), Spec-Grade Electronic Switch 120 V~
MRF2S-8S-DV-XX[2,3,4]	8 A Lighting, 3 A Fan (1/10 HP motor, 120 V~ only), Spec-Grade Electronic Switch 120–277 V~, no neutral wire required

Switch

Companion Switch

Companion Switches

Claro Gloss Finishes

MA-AS-XX[2,4]	Companion Switch 120 V~
MA-AS-277-XX[2,4]	Companion Switch 277 V~

Satin Colors Satin Finishes

MSC-AS-XX[4]	Companion Switch 120 V~
MSC-AS-277-XX[4]	Companion Switch 277 V~

1 Neutral wire required.

2 BAA-compliant model numbers available. Add a “U” prefix to the model number.

3 May require LUT-MLC (included with MRF2S-8S-DV models) to ensure proper function with low-wattage load types. See page 11 for details.

4 “XX” in the model number represents color/finish code. See **Colors and Finishes** at end of document.

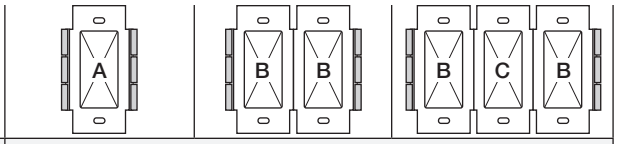
Job Name:	Model Numbers:	
Job Number:		

Ganging and Derating

When combining controls in the same wallbox, derating is required.

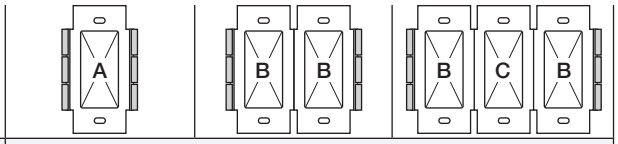
Switch Load Type and Capacity

Neutral Required



Control	Voltage	Load Type	Minimum Load	Maximum Load		
				A: Not Ganged	B: End of Gang	C: Middle of Gang
MRF2S-8ANS120 [1,2,5]	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)
MRF2-6ANS [1]	120 V~	Lighting	25 W	6 A	5 A	3.5 A
		Fan Motor	0.2 A	1/10 HP (3 A)	1/10 HP (3 A)	1/10 HP (3 A)

No Neutral Required



Control	Voltage	Load Type	Minimum Load	Maximum Load		
				A: Not Ganged	B: End of Gang	C: Middle of Gang
MRF2S-8S-DV [1,5]	120–277 V~	Incandescent/Halogen	25 W	8 A	8 A/7 A[4]	7 A
	120–277 V~	Fluorescent/LED/CFL	40 W (LUT-MLC)[3]	8 A	8 A/7 A[4]	7 A
	120 V~	Fan Motor	0.4 A	1/10 HP (3 A)	1/10 HP (3 A)	1/10 HP (3 A)

1 Switch Load Type:
- MRF2S-8ANS120 is designed for use with permanently-installed lighting loads and with fan motor loads up to 1/4 HP (5.8 A).
- MRF2S-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).
- MRF2-6ANS is designed for use with permanently-installed lighting loads and with fan motor loads up to 1/10 HP (3 A).

2 For loads larger than 8 A (120 V~), the MRF2S-8ANS120 switch can be used with the PHPM-SW-DV-WH power booster.

3 The LUT-MLC ensures proper function with low-wattage fluorescent, CFL, and LED load types. See page 11 for details.

4 Maximum load for double-gang application is 8 A. Triple-gang application derates maximum load to 7 A.

5 BAA-compliant model numbers available. Add a “U” prefix to the model number.

Job Name:	Model Numbers:	
Job Number:		

Specifications

Regulatory Approvals

- UL® Listed.
- cUL® Listed (MRF2S-6CL only).
- CSA Certified (except for MRF2S-6CL).
- FCC Approved. Complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.
- Industry Canada Certified.
- The following model numbers have been tested and found compliant with UL 2043 for use in air handling spaces: MRF2S-6CL-GR, MRF2S-6ELV-GR, MRF2S-6ND-GR

Power

Operating voltage:

- 120 V~ 50/60 Hz (all models)
- 277 V~ 50/60 Hz (MRF2S-8S-DV)

Environment

- Ambient operating temperature: 32 °F to 104 °F (0 °C to 40 °C)
- 0% to 90% humidity, non-condensing.
- Indoor use only.
- All drivers and ballasts used with Vive wireless controls must comply with the limits for a Class A device pursuant to Part 15 of the FCC Rules.

Key Design Features

Dimmers

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

Switches

- 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 nine Companion Dimmers/Switches.
- Use Lutron Designer (Claro and Satin Colors) wallplates or designer-style wallplates from other manufacturers. Wallplates are sold separately.
- Lutron Claro and Satin Colors wallplates snap on with no visible means of attachment.
- Requires a one-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 controls communicate with the Pico remote controls and Radio Power Savr sensors through radio frequency (RF).
- Receives wireless inputs from up to 10 Pico remote controls, 10 Radio Powr Savr occupancy/vacancy sensors, and 1 Radio Powr Savr daylight sensor
- Maestro Wireless local controls must be located within 60 ft (18 m) line-of-sight or 30 ft (9 m) through walls, of Radio Power Savr sensors. The 60 ft (18 m) range is not reduced by a ceiling tile obstruction.
- Maestro Wireless local controls must be located within 60 ft (18 m) line-of-sight or 30 ft (9 m) through walls, of a Pico remote control. The 60 ft (18 m) range is not reduced by a ceiling tile obstruction.

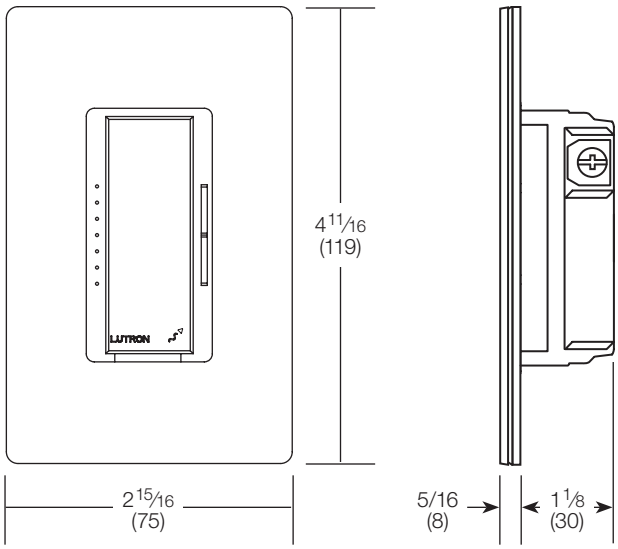
Job Name:	Model Numbers:	
Job Number:		

Dimensions

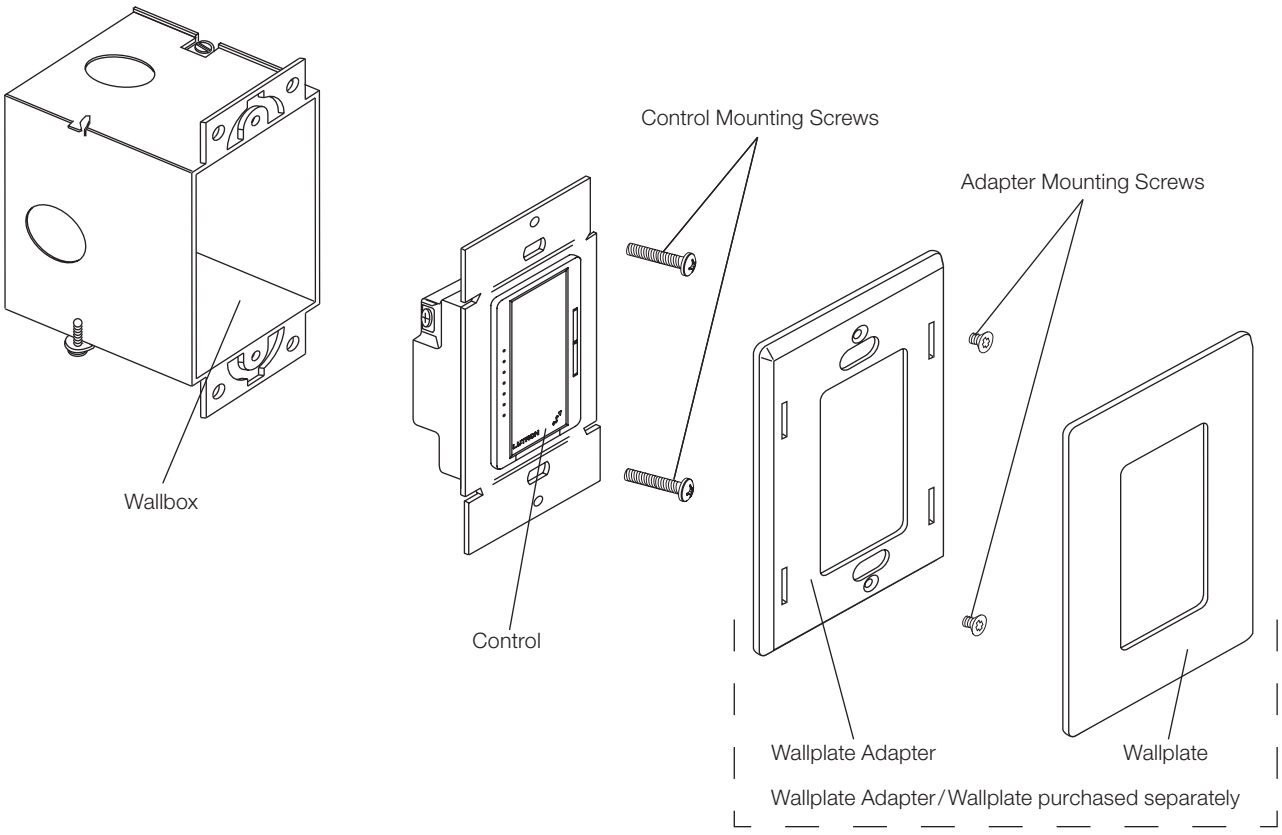
All dimensions are shown as: in (mm)

Front View

Side View



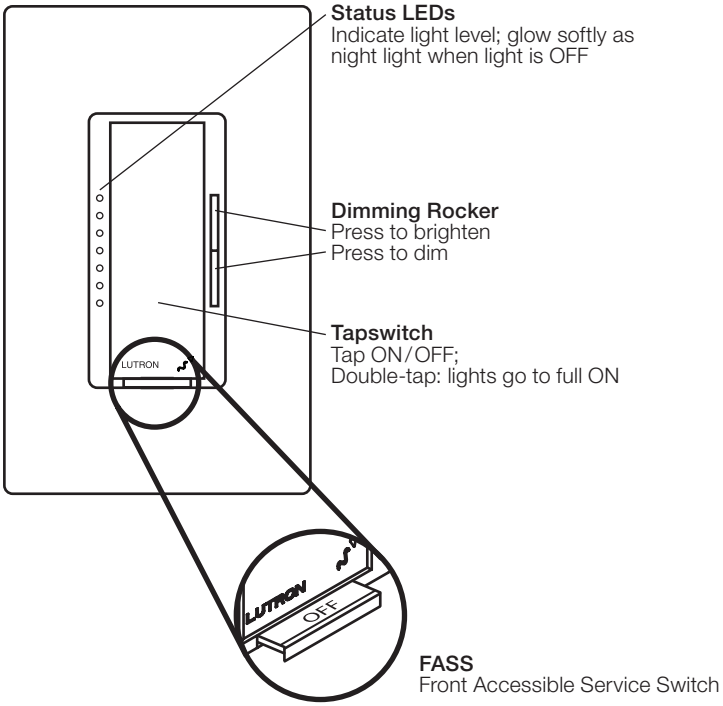
Mounting



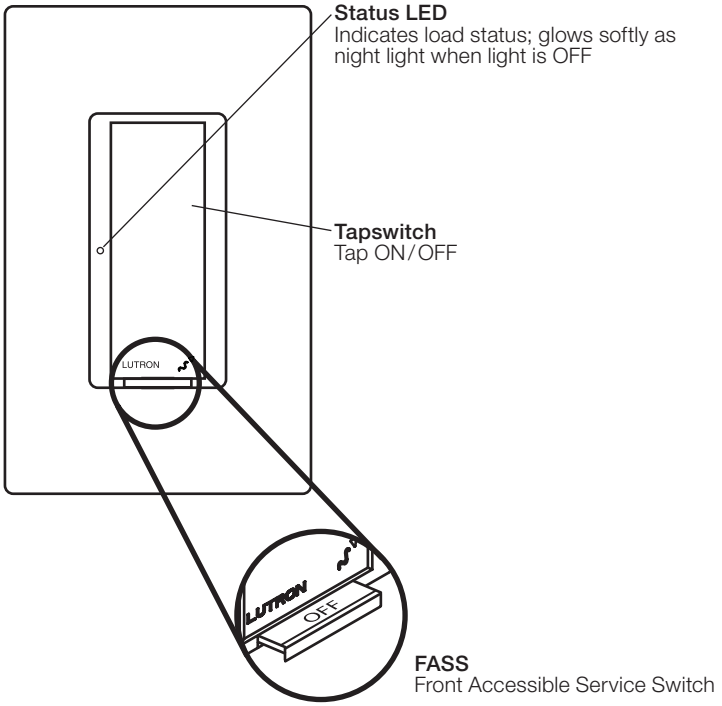
Job Name:	Model Numbers:	
Job Number:		

Operation

Dimmer



Switch



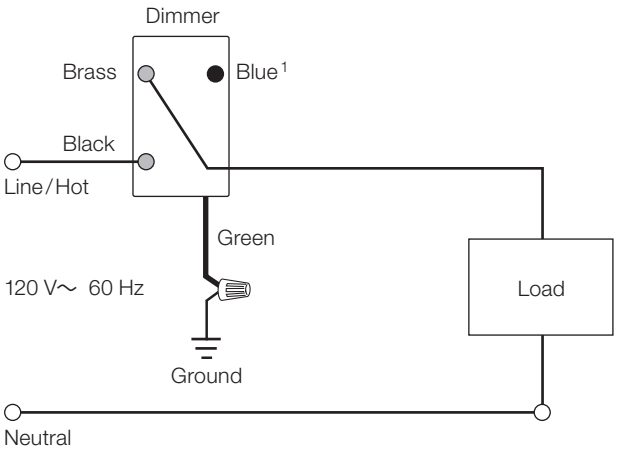
FASS Front Accessible Service Switch

Important Notice: To service load, remove power by pulling the FASS out completely on either the Dimmer/Switch or Companion Dimmer/Switch. After servicing load, push the FASS back in fully to restore power to the control.

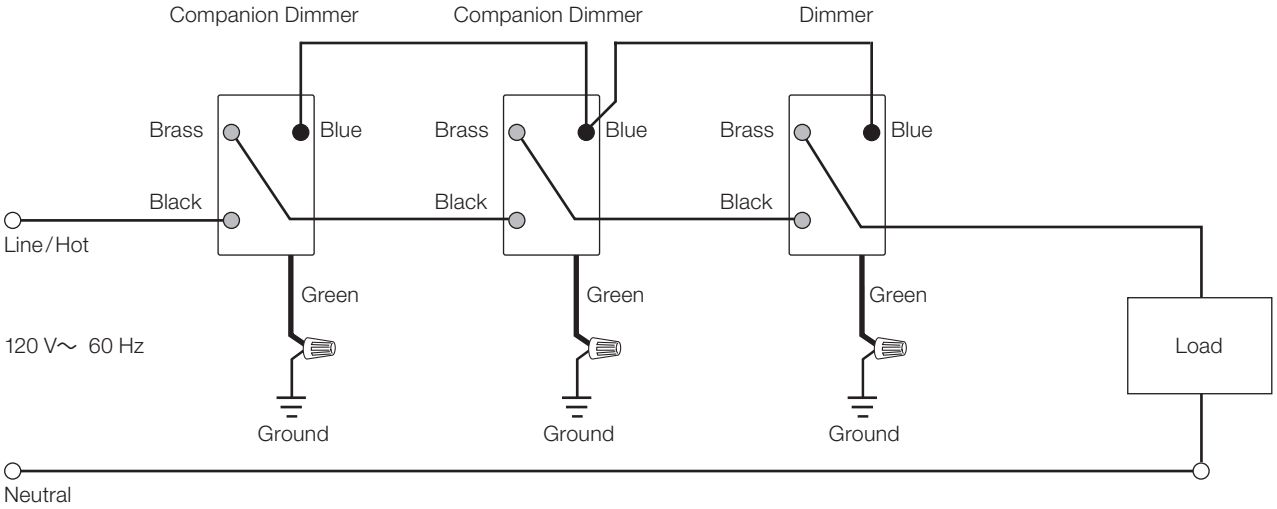
Job Name:	Model Numbers:	
Job Number:		

Wiring Diagrams

Single-Location Dimmer Installation without Neutral
MRF2S-6CL



Multi-Location Dimmer Installation without Neutral[2]
MRF2S-6CL with MA-R/MSC-AD



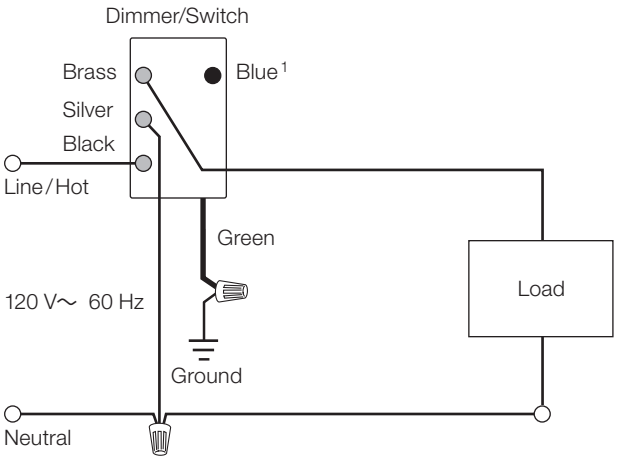
1 When using controls in single location installations, tighten the blue terminal without any wires attached. Do not connect the blue terminal to any other wiring or to ground.

2 Up to nine Maestro Companion Dimmers may be connected to the Maestro Wireless Dimmer. Total blue terminal wire length may be up to 250 ft (76 m).

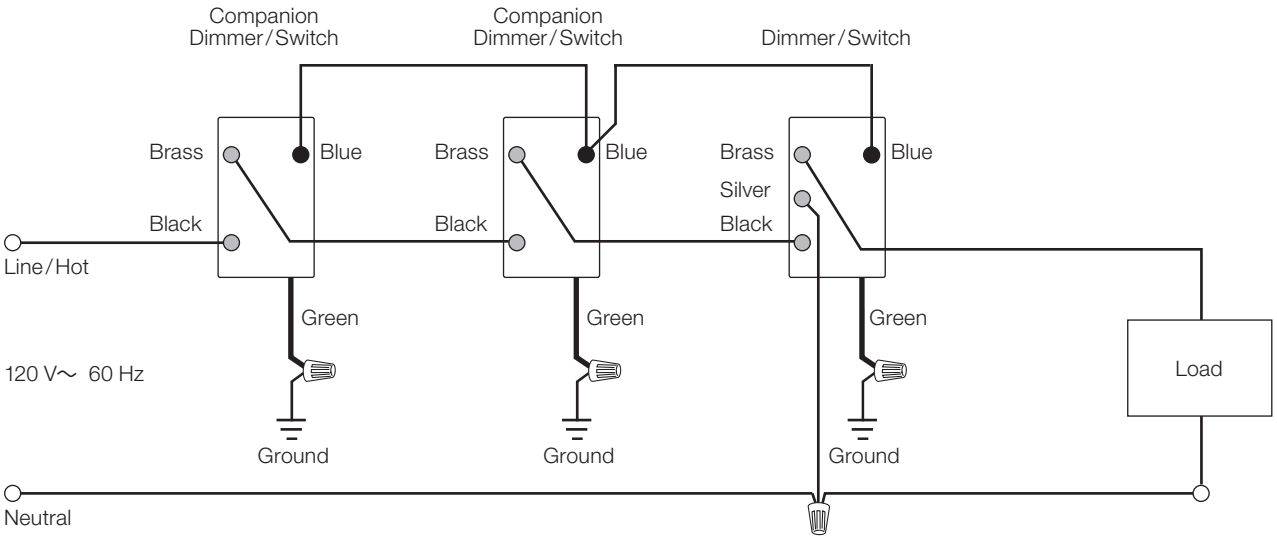
Job Name:	Model Numbers:	
Job Number:		

Wiring Diagrams (continued)

Single-Location Dimmer/Switch Installation with Neutral
MRF2S-6ND-120, -6ELV120, -8ANS120, and -6ANS



Multi-Location Dimmer/Switch Installation with Neutral[2,3]
MRF2S-6ND-120 and -6ELV120 with MA-R/MSC-AD or MRF2S-8ANS120 and -6ANS with MA-AS/MSC-AS



1 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.

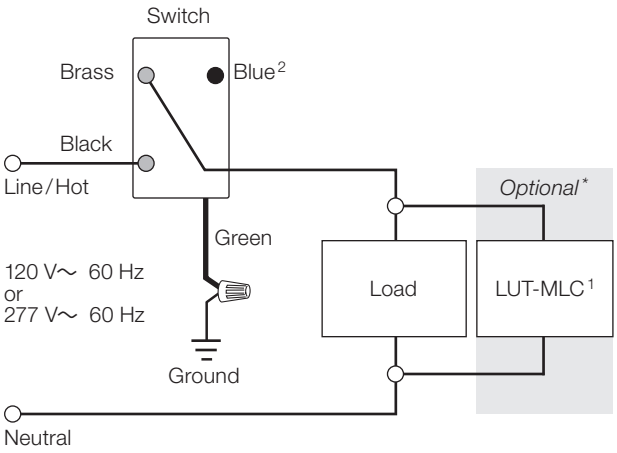
2 Up to nine Maestro Companion Dimmers/Switches may be connected to the Maestro Wireless Dimmer/Switch. Total blue terminal wire length may be up to 250 ft (76 m).

3 Neutral-wire Dimmers/Switches must be connected on the Load side of a multi-location installation.

Job Name:	Model Numbers:	
Job Number:		

Wiring Diagrams (continued)

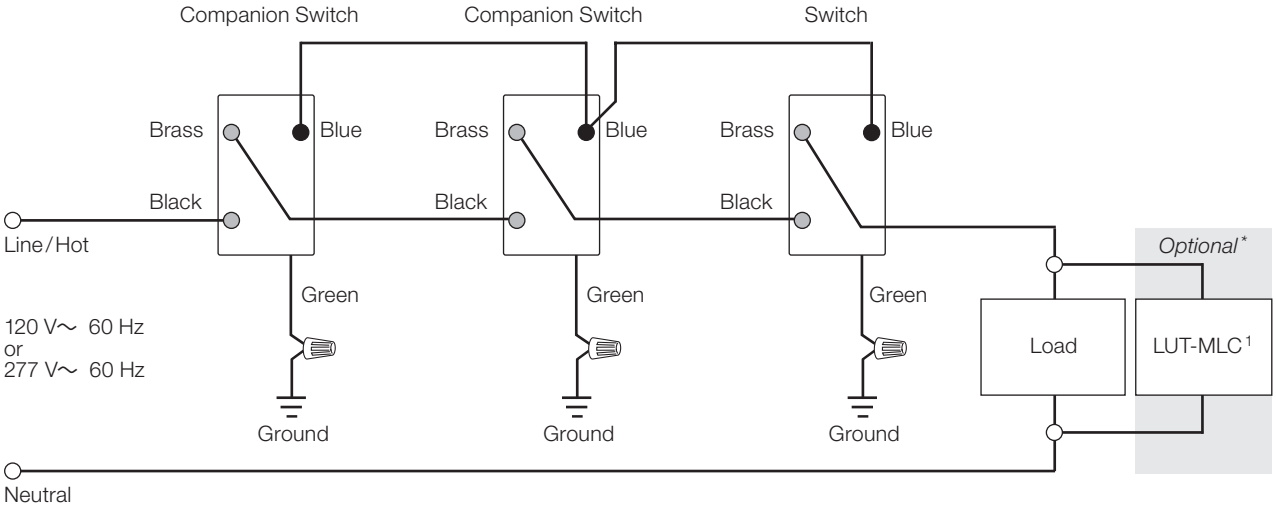
Single-Location Switch Installation with LUT-MLC[1]
MRF2S-8S-DV



*** Optional Procedure:**
Using LUT-MLC with MRF2S-8S-DV-XX

- Install MRF2S-8S-DV-XX first without LUT-MLC to see if required. Check for problems with load.
- Problems can occur when low-wattage loads are used (< 40 W).
- Watch for flickering loads when dimmer is in electronic OFF state.
- If required, LUT-MLC can be installed between switched hot and neutral in wallbox if neutral is present, or in any fixture on the switched circuit.

Multi-Location Switch Installation with LUT-MLC[1,2,3]
MRF2S-8S-DV with MA-AS/MA-AS-277 or MSC-AS/MSC-AS-277[4]

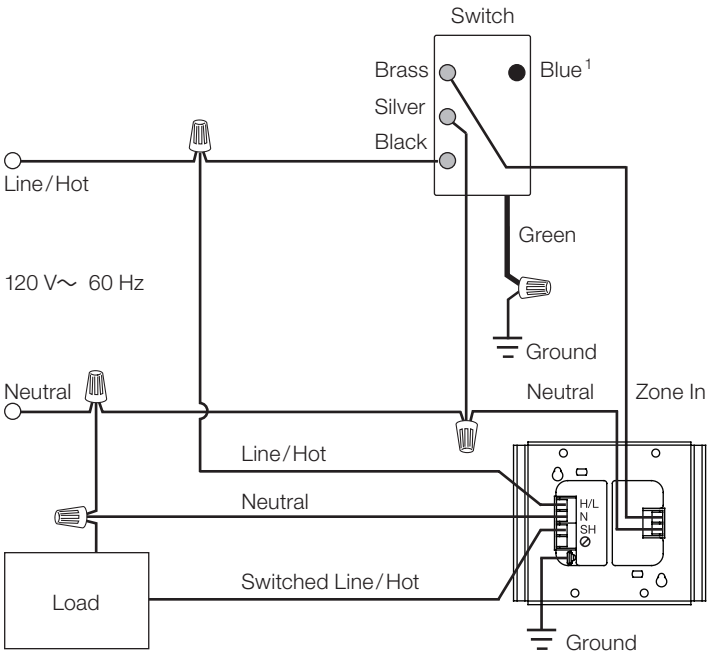


1 A LUT-MLC ensures proper function when fluorescent, CFL, or LED loads are used. Install the LUT-MLC inside a load fixture or in a separate J-box within the circuit.
2 When using controls in single-location installations, tighten the blue terminal without any wires attached. Do not connect the blue terminal to any other wiring or to ground.
3 Up to nine Maestro Companion Switches may be connected to the Maestro Wireless Switch. Total blue terminal wire length may be up to 250 ft (76 m).
4 Requires MA-AS/MSC-AS for 120 V~ applications, and MA-AS-277/MSC-AS-277 for 277 V~ applications.

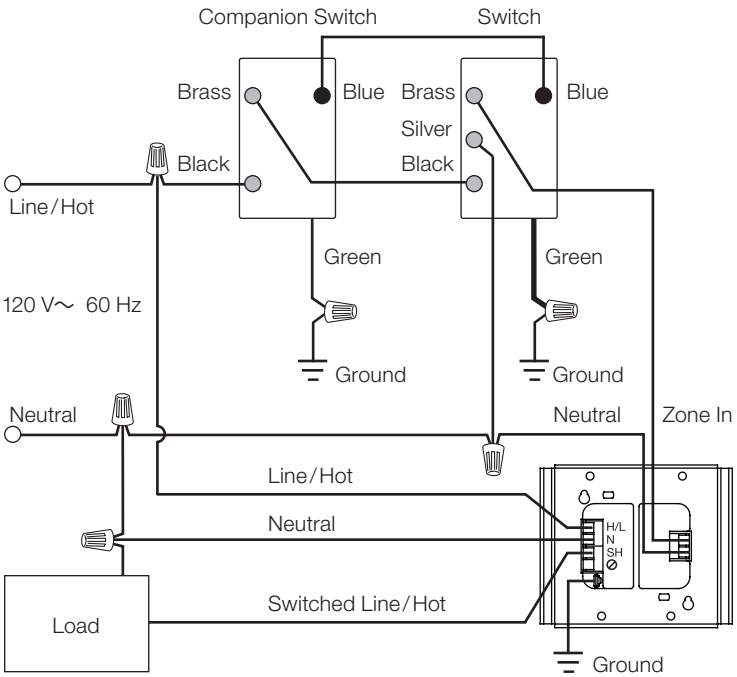
Job Name:	Model Numbers:	
Job Number:		

Wiring Diagrams (continued)

Single-Location Switch Installation with Power Booster Single Feed
MRF2S-8ANS120 and -6ANS with PHPM-SW-DV-WH



Multi-Location Switch Installation with Power Booster Single Feed [2,3]
MRF2S-8ANS120 and -6ANS with MA-AS/MSC-AS and PHPM-SW-DV-WH

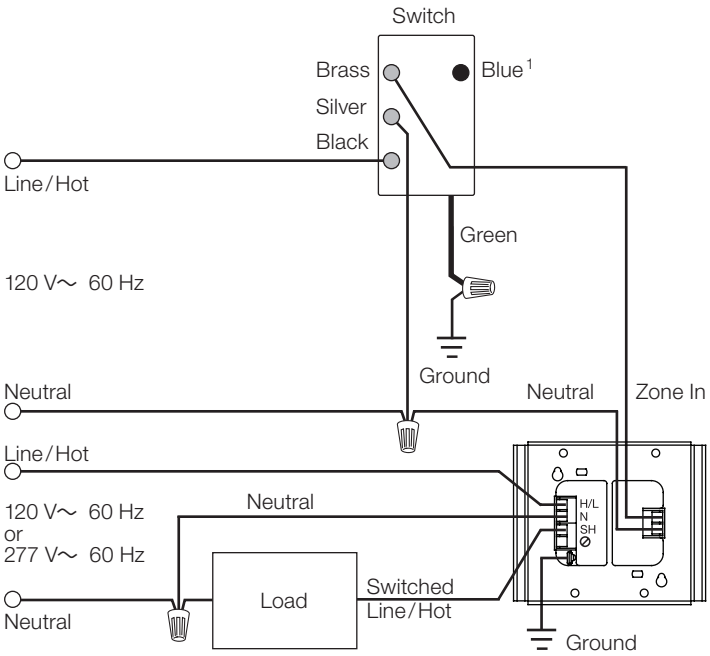


1 When using controls in single-location installations, tighten the blue terminal. Do not connect the blue terminal to any other wiring or to ground.
2 Up to nine Maestro Companion Switches may be connected to the Maestro Wireless Switch. Total blue terminal wire length may be up to 250 ft (76 m).
3 Neutral-wire Switches must be connected on the Load side of a multi-location installation.

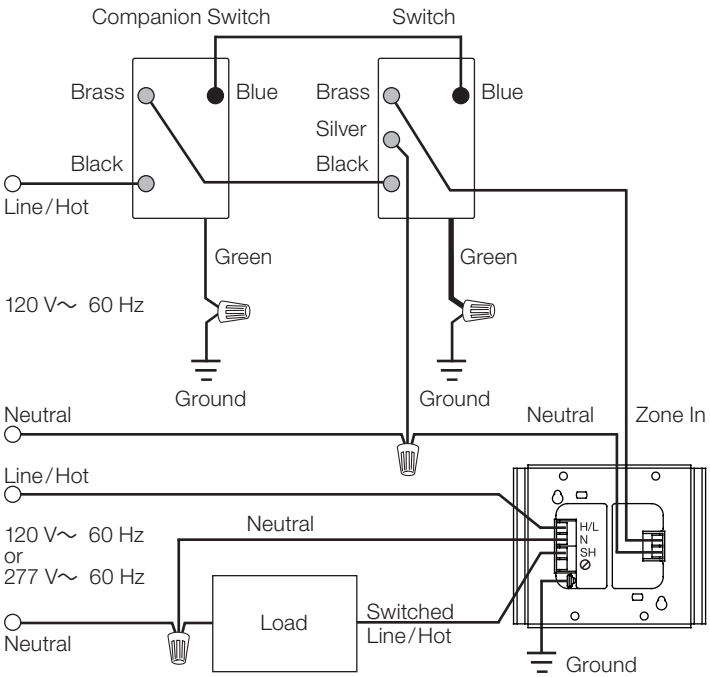
Job Name:	Model Numbers:	
Job Number:		

Wiring Diagrams (continued)

Single-Location Switch Installation with Power Booster Dual Feed
MRF2S-8ANS120 and -6ANS with PHPM-SW-DV-WH



Multi-Location Switch Installation with Power Booster Dual Feed[1,2]
MRF2S-8ANS120 and -6ANS with MA-AS/MSC-AS and PHPM-SW-DV-WH

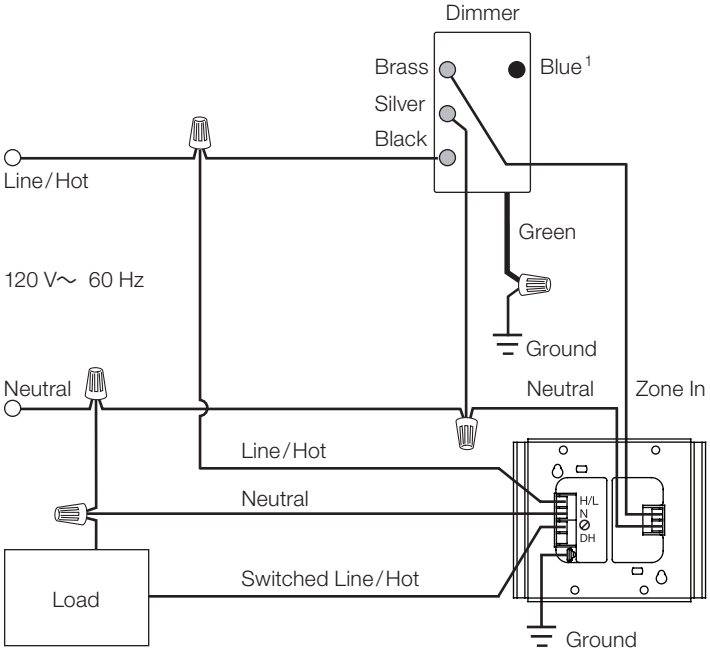


1 When using controls in single-location installations, tighten the blue terminal. Do not connect the blue terminal to any other wiring or to ground.
2 Up to nine Maestro Companion Switches may be connected to the Maestro Wireless Switch. Total blue terminal wire length may be up to 250 ft (76 m).
3 Neutral-wire Switches must be connected on the Load side of a multi-location installation.

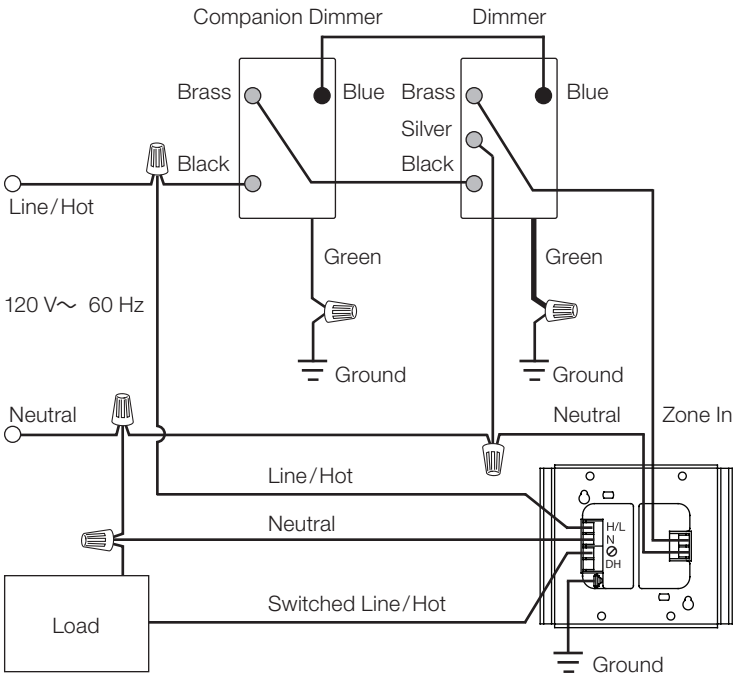
Job Name:	Model Numbers:	
Job Number:		

Wiring Diagrams (continued)

Single-Location Switch Installation with Power Booster Single Feed
MRF2S-6ND-120 with PHPM-PA-DV-WH



Multi-Location Switch Installation with Power Booster Single Feed [2,3]
MRF2S-6ND-120 with MA-R/MSC-AD and PHPM-PA-DV-WH

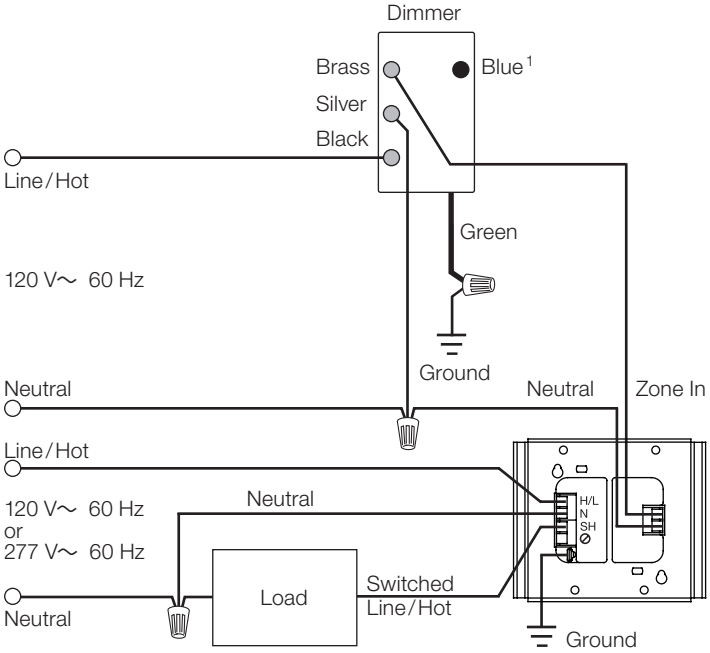


1 When using controls in single-location installations, tighten the blue terminal. Do not connect the blue terminal to any other wiring or to ground.
2 Up to nine Maestro Companion Dimmers may be connected to the Maestro Wireless Dimmer. Total blue terminal wire length may be up to 250 ft (76 m).
3 Neutral-wire Dimmers must be connected on the Load side of a multi-location installation.

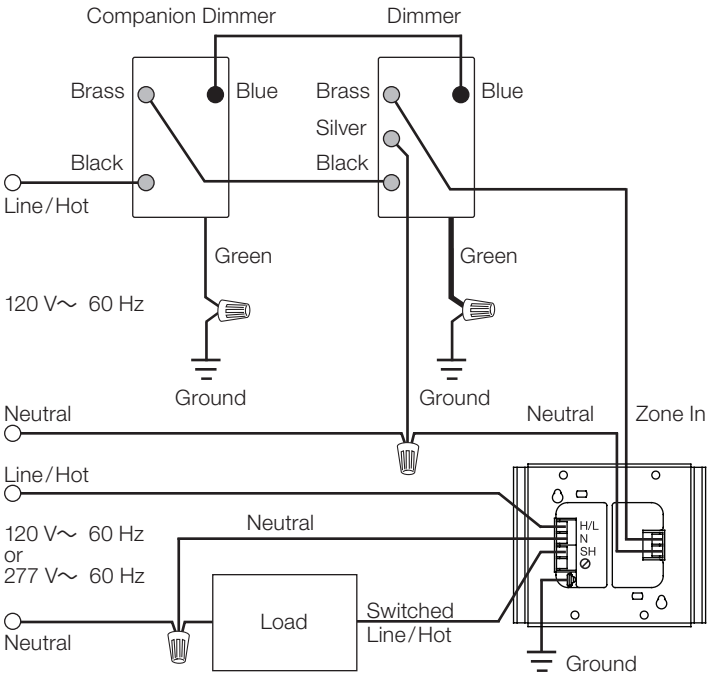
Job Name:	Model Numbers:	
Job Number:		

Wiring Diagrams (continued)

Single-Location Switch Installation with Power Booster Single Feed
MRF2S-6ND-120 with PHPM-PA-DV-WH



Multi-Location Switch Installation with Power Booster Single Feed[2,3]
MRF2S-6ND-120 with MA-R/MSC-AD and PHPM-PA-DV-WH

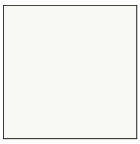


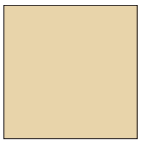
1 When using controls in single-location installations, tighten the blue terminal. Do not connect the blue terminal to any other wiring or to ground.
2 Up to nine Maestro Companion Dimmers may be connected to the Maestro Wireless Dimmer. Total blue terminal wire length may be up to 250 ft (76 m).
3 Neutral-wire Dimmers must be connected on the Load side of a multi-location installation.

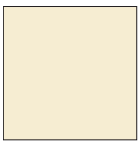
Job Name:	Model Numbers:	
Job Number:		

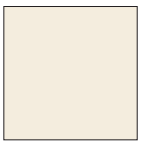
Colors and Finishes

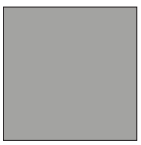
Gloss Finishes


White
WH


Ivory
IV


Almond
AL


Light Almond
LA


Gray
GR

Brown
BR

Black
BL

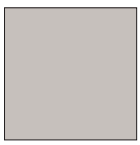
Satin Finishes

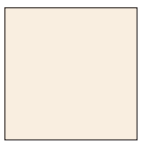
Hot
HT

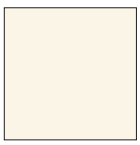
Merlot
MR

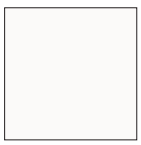
Plum
PL

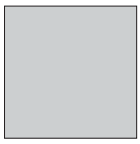
Turquoise
TQ


Taupe
TP


Eggshell
ES


Biscuit
BI


Snow
SW

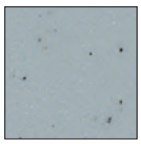

Palladium
PD

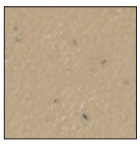
Midnight
MN

Sienna
SI

Terracotta
TC

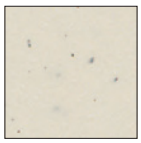
Greenbriar
GB

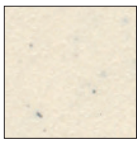

Bluestone
BG


Mocha Stone
MS

Goldstone
GS

Desert Stone
DS


Stone
ST


Limestone
LS

- 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: SC-CK-1

Metal Finish (wallplate only)

Stainless Steel
SS

When using Stainless Steel wallplates, it is recommended that you order the dimmer/switch in Midnight (MN).

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Job Name:	Model Numbers:	
Job Number:		