

# Maestro Wireless® Dimmers and Switches

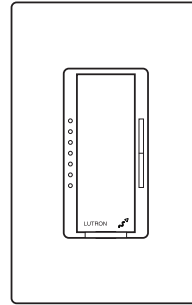
The Maestro Wireless® solution incorporates Maestro Wireless® load controls, wireless sensors, and wireless remote controls, which provide a system that delivers energy savings, convenience, and ease of installation.

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

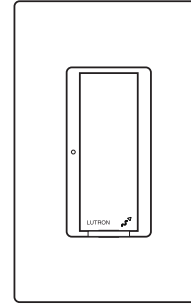
## Features

- The Maestro Wireless® 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.

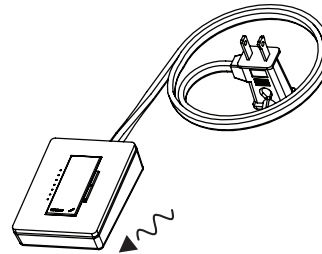
## Receiving Devices Maestro Wireless® Controls



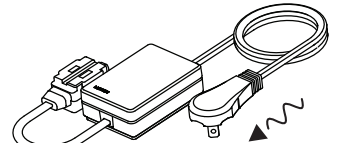
Neutral and Non-Neutral Dimmers



Neutral and Non-Neutral Switches

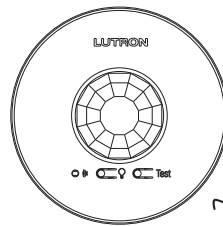


Lamp Dimmers

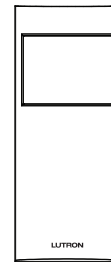


Plug-In Modules

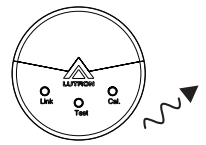
## Transmitting Devices Radio Powr Savr™ Sensors



Ceiling-Mounted Occupancy and Vacancy Sensors

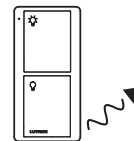
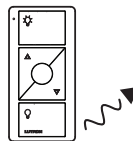


Wall-Mounted Occupancy and Vacancy Sensors



Daylight Sensors

## Pico® Wireless Controls



Job Name:	Model Numbers:
Job Number:	

## Maestro Wireless® Dimmers

### Models Available

#### Dimmers

#### CFL/LED/Halogen/Incandescent/Magnetic Low-Voltage

MRF2-6CL-XX	150 W CFL/LED Dimmer; 600 W/600 VA Incandescent/MLV 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~
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#### Electronic Low-Voltage Dimmer

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

### Companion Dimmers

#### Claro® Gloss Finishes

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

#### Satin Colors® 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.

Dimmer



Companion Dimmer



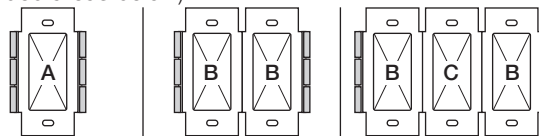
<b>Job Name:</b>	<b>Model Numbers:</b>
<b>Job Number:</b>	

## Ganging and Derating

When combining controls in the same wallbox, derating is required (see Load Type and Capacity tables). 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.

## Dimmer Load Type and Capacity

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



### Neutral Required

Control	Voltage	Load Type	Minimum Load	Maximum Load		
				A: Not Ganged	B: End of Gang	C: Middle of Gang
MRF2-6ND-120 <sup>1,2,3</sup>	120 V~	Incandescent	25 W	600 W	500 W	400 W
		MLV <sup>2</sup>	25 W/VA	450 W/600 VA	400 W/500 VA	300 W/400 VA
MRF2-6ELV <sup>1,2</sup>	120 V~	ELV <sup>2</sup>	5 W	600 W	500 W	400 W
MRF2-F6AN-DV <sup>1,4</sup>	120–277 V~	Lighting	1 ballast 0.05 A	6 A	5 A	3 A

### No Neutral Required

Control	Voltage	Load Type	Minimum Load	Maximum Load		
				A: Not Ganged	B: End of Gang	C: Middle of Gang
MRF2-6CL <sup>1,2</sup>	120 V~	CFL/LED, Incandescent	50 W (see lamp list)	See <i>Mixing Lamp Types</i> , page 4		
		MLV <sup>2</sup>	50 W/VA	450 W/600 VA	400 W/500 VA	300 W/400 VA
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
MRF2-10D-120 <sup>1,2,4</sup>	120 V~	Incandescent	50 W	1000 W	800 W	650 W
		MLV <sup>2</sup>	50 W/VA	800 W/1000 VA	600 W/800 VA	500 W/650 VA

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

- <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.
  - MRF2-6ELV is designed for use with permanently-installed electronic low-voltage only. Do not install dimmers to control receptacles or motor-operated appliances.
  - 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™, Eco-10®, and EcoSystem®).
  - MRF2-6CL is designed for use with permanently-installed incandescent, CFL, LED, or tungsten halogen only.
- <sup>2</sup> Low-Voltage Applications:
  - Use MRF2-6ND-120, MRF2-6MLV, MRF2-6CL, and MRF2-10D-120 with magnetic (core and coil) low-voltage transformers only. Not for use with electronic (solid-state) low-voltage transformers.
  - Use MRF2-6ELV 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.
- <sup>3</sup> Can control the following power booster/load interface: Hi-Power 2•4•6™ Boosters (HP-2, HP-4, HP-6) for control of most popular lighting sources including Lutron® 3-wire line-voltage control fluorescent dimming ballasts (Hi-lume®, Hi-lume Compact SE™, Eco-10®, and EcoSystem®).
- <sup>4</sup> 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-Wire® Fluorescent Power Modules (PHPM-PA-DV-WH), and 0–10 V (GRX-TV).

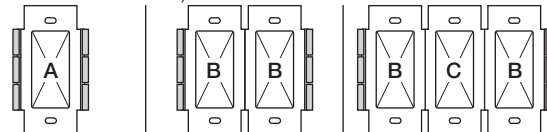
<b>Job Name:</b>	<b>Model Numbers:</b>
<b>Job Number:</b>	

## Dimmer Load Type and Capacity (continued)

### 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.

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	
MRF2-6CL					
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

Total MLV Wattage	Maximum Load		
		450 W / 600 VA	400 W / 500 VA

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.

Job Name:	Model Numbers:
Job Number:	

# Maestro Wireless® Switches

## Models Available

### 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 HP motor), Spec-Grade Electronic Switch 120 V~
MRF2-8S-DV-XX	8 A Lighting, 3 A Fan (1/10 HP motor, 120 V~ only), Spec-Grade Electronic Switch 120–277 V~, no neutral wire required

\* Neutral wire required

Switch



## Companion Switches

### Claro® Gloss Finishes

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

### Satin Colors® 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.

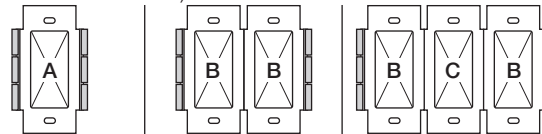
Companion Switch



Job Name:	Model Numbers:
Job Number:	

# Switch Load Type and Capacity

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



## Neutral Required

Control	Voltage	Load Type	Minimum Load	Maximum Load		
				A: Not Ganged	B: End of Gang	C: Middle of Gang
MRF2-8ANS-120 <sup>1,2</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)
MRF2-6ANS <sup>1</sup>	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
MRF2-8S-DV <sup>1</sup>	120-277 V~	Incandescent/Halogen	25 W	8 A	8 A / 7 A <sup>4</sup>	7 A
	120-277 V~	Fluorescent/LED/CFL	40 W (LUT-MLC) <sup>3</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)

<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> For loads larger than 8 A (120 V~), the MRF2-8ANS-120 switch can be used with the PHPM-SW-DV-WH power booster.

<sup>3</sup> The LUT-MLC ensures proper function with certain fluorescent, CFL, and LED load types.

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

<b>Job Name:</b>	<b>Model Numbers:</b>
<b>Job Number:</b>	

## Specifications

### Regulatory Approvals

- UL Listed.
- cUL Listed (MRF2-6CL only).
- CSA Certified (except for MRF2-6CL).
- 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 (all models)
- 277 V~ 50/60 Hz (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.

#### 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® wireless controls and Radio Power Savr™ sensors through radio frequency (RF).
- 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.
- Maestro Wireless® local controls must be located within 100 ft (30 m) line-of-sight or 30 ft (9 m) through walls, of a Pico® wireless control.
- Up to ten Maestro Wireless® controls can be configured to work together.

### Environment

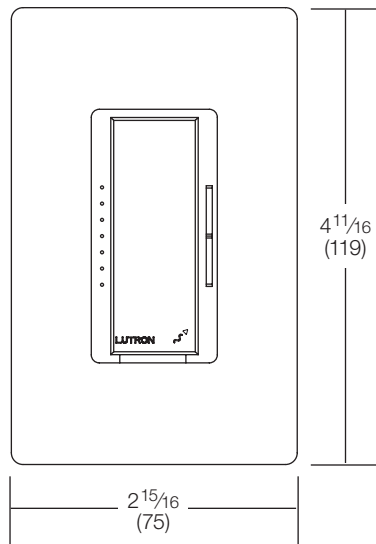
- Ambient operating temperature: 32 °F to 104 °F (0 °C to 40 °C), 0%–90% humidity, non-condensing. Indoor use only.

<p><b>Job Name:</b></p> <p><b>Job Number:</b></p>	<p><b>Model Numbers:</b></p>
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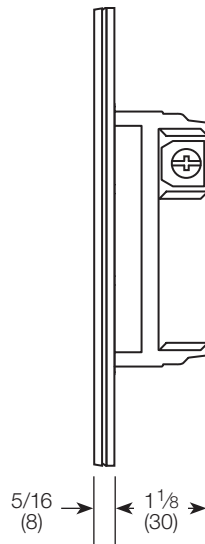
### Dimensions

All dimensions are shown as: in (mm)

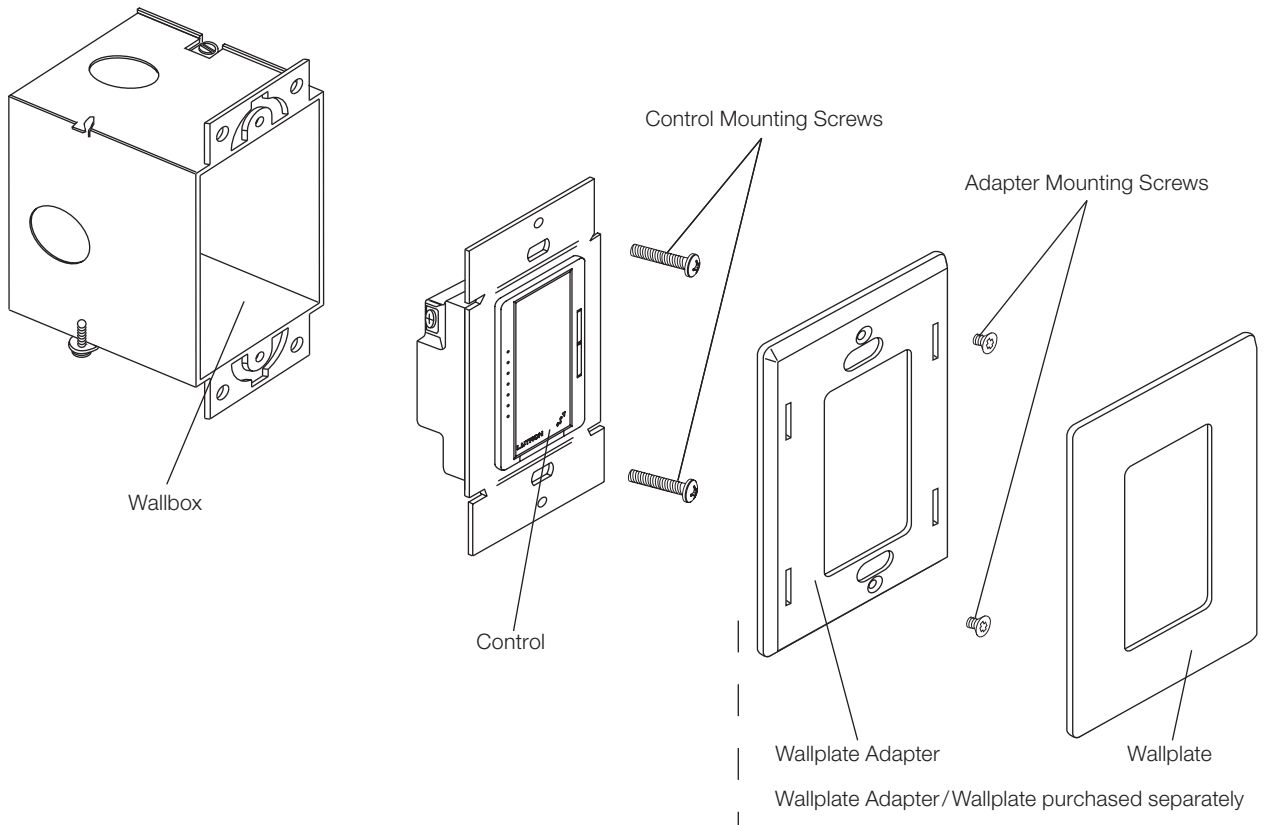
Front View



Side View



### Mounting



<b>Job Name:</b>	<b>Model Numbers:</b>
<b>Job Number:</b>	