# Maestro® Local Lighting Controls

## LOCAL LIGHTING CONTROLS

*Maestro* local lighting controls, function like standard dimmers and switches, but can be controlled as part of the whole-house lighting control system. Local lighting controls are useful in locations where single circuits of lighting need to be dimmed or switched. *Maestro* dimmers have advanced features such as fade on/fade off, long fade to off, and rapid full on. In addition, the local control may be programmed similar to a keypad button press with single and double tap functions, turning on or off multiple lights. HomeWorks® *Maestro* local lighting controls install in single-pole, 2-way, or 3-way applications.

## ACCESSORY CONTROLS

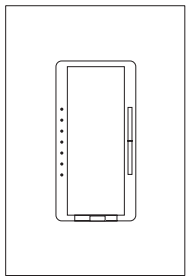
Remote dimmers (HA-RD) and remote switches (HA-RS) are used in combination with a *Maestro* local lighting control to provide 2-way and 3-way control. As many as nine (9) HA-RD or HA-RS can be used with a single *Maestro* dimmer or switch.

## FINISHES AND COLOURS

*Maestro* local lighting controls are available in black (BL) and white (WH) matt plastic finishes. *See section 13*.

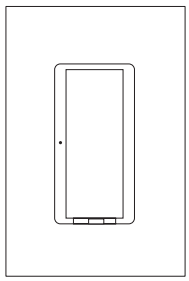
## GANGING MAESTRO CONTROLS

*Maestro* controls can be mounted together in a multi-gang wallbox. The load rating for each control must be derated when ganging with other controls. *See page 4.6*.



## DIMMING CONTROL LOAD RATINGS

***HWA-5E-CE and HNA-5E-CE*** dim a single incandescent or electronic low-voltage circuit up to 500W/VA.



## SWITCHING CONTROL LOAD RATINGS

***HWA-2ANS-CE and HNA-2ANS-CE*** switches a single circuit of any lighting load type up to 2A. A neutral wire connection is required.

## INSTALLATION NOTE

Use 89mm (3-1/2 inch) deep wallboxes for ease of installation. Lutron model 241218 may be used.

## CONNECTION TO H48 DIMMER INTERFACE

All *Maestro* local lighting controls must be connected to an H48 dimmer interface. A Dimmer Interface is available as a stand-alone component (model HWI-H48) or as an integral part of processors HWI-PM-***H48***-230, HWI-PO-***H48***-230, and H4P5-***H48***-CE, H4P5-***H48***-HRL-CE, H8P5-MI-***H48***-CE and H8P5-***H48***-CE. Each *Maestro* local lighting control communicates with a dimmer interface via a one pair twisted shielded 0.5mm² (#22 AWG) cable.

# Maestro® Local Lighting Controls

| ***All HomeWorks® Maestro local lighting controls*** | |
|---|---|
| Model | HWA-5E-CE: 500W dimming control.<br>HNA-5E-CE: 500W dimming control (non-system).<br>HWA-2ANS-CE: 2A switching control with neutral wire.<br>HNA-2ANS-CE: 2A switching control with neutral wire (non-system).<br>HA-RD: accessory control/remote dimmer.<br>HA-RS: accessory control/remote switch. |
| Input voltage | 220-240VAC, 50/60Hz |
| Regulatory approvals | CE, C-Tick |
| Environment | Ambient temperature: 0-40°C, 32-104°F<br>Ambient humidity: 0-90% humidity, non-condensing. Indoor use only. |
| Low-voltage wire type | One pair twisted shielded 0.5-1.0mm$^2$ (#18-22 AWG) Class 2/PELV wiring. |
| Low-voltage wiring configuration | Daisy-chain, star, T-tap, home run. Each Maestro bus may have a maximum 150m (500 feet) per wire run but may not exceed 305m (1000 feet) total per bus. Maximum of eight devices per dimmer interface bus. |
| Addressing | Via the *HomeWorks* utility using unique device serial numbers. Units must be installed prior to addressing. Counts as 1 of 8 addresses on a *Maestro* bus. The device may be addressed without removing it from the wall. |
| ESD protection | Meets or exceeds the IEC 61000-4-2 standard. |
| Surge protection | Meets or exceeds ANSI/IEEE standard c62.41. |
| Fail-safe operation | If communication with the processor is interrupted, all *Maestro* controls will still provide local control. |
| Dimensions | *See figure 1, page 4.5* |
| Mounting | Controls mount in standard US wallboxes. For easier installation, *Lutron* recommends using 89mm (3-1/2 inch) deep wallboxes. *Lutron* model 241218 may be used. |
| Ganging | When multiple *Maestro* controls are located in a single wallbox, the control must be derated. *See page 4.6*. If mounting one control above another, leave at least 11.4cm (4-1/2 inch) vertical spacing between them. |
| Accessory controls | Use only Lutron® *Maestro* remote dimmers or switches (HA-RD or HA-RS); mechanical 2- or 3-way switches will not work. Up to 9 *Maestro* remote dimmers or switches may be used with one *Maestro* dimmer or switch. |
| Shipping weight | .3kg (0.6 pound) |

# Maestro® Local Lighting Controls

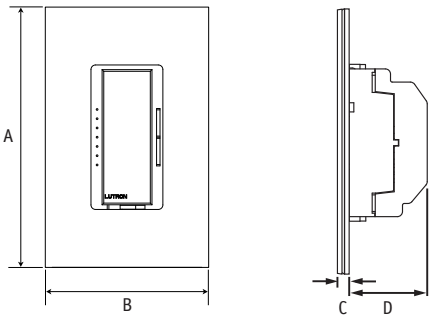
| | |
|---|---|
| ***HWA-5E and HNA-5E dimming control*** | |
| Load types[1] | Incandescent, electronic low voltage, tungsten halogen. |
| Maximum load | single-gang: 500W/VA<br>end gang: 450W/VA<br>middle gang: 400W/VA<br>Note: Mixed incandescent and electronic low-voltage loads reduces load capacity an additional 100 watts. |
| Minimum load | 50W/VA |
| Line-voltage wiring | *See figures 5 and 7, pages 4.6-4.7*. Standard single-pole, 2-way, and 3-way wiring. |
| ***HWA-2ANS-CE and HNA-2ANS-CE • 2A switching control with neutral wire*** | |
| Load types[1] | Incandescent, magnetic low voltage[2], electronic low voltage, fluorescent with magnetic ballasts. |
| Maximum load | 2A |
| Minimum load | 10W/VA |
| Line-voltage wiring | *See figures 6 and 8, page 4.7*. Single-pole, 2-way, and 3-way wiring. A neutral wire connection is required. |
| ***HA-RD • 2- or 3-way Remote Dimmer*** | |
| For use with | HWA-5E-CE, HNA-5E-CE |
| Maximum load | See local lighting control. |
| Minimum load | See local lighting control. |
| Line-voltage wiring | *See figure 7, page 4.7*. Standard single-pole, 2-way, and 3-way wiring. |
| ***HA-RS • 2- or 3-way Remote Switch*** | |
| For use with | HWA-2ANS-CE, HNA-2ANS-CE |
| Maximum load | See local lighting control. |
| Minimum load | See local lighting control. |
| Line-voltage wiring | *See figure 8, page 4.7*. Standard single-pole, 2-way, and 3-way wiring. |



*(1) To reduce the risk of overheating and possibly damaging other equipment, do not install HWA-5E-CE or HNA-5E-CE to control receptacles, motor-operated appliances, fluorescent lighting, or magnetic low-voltage transformer loads. Do not install HWA-2ANS-CE or HNA-2ANS-CE to control receptacles or motor-operated appliances.*

*(2) Because low-voltage transformers vary widely in efficiency, the input VA of each transformer should be measured directly. If this is not possible, use the maximum lamp wattage figures, which have a built-in safety margin.*

# Maestro® Local Lighting Controls




| | *mm* | *inches* |
|---|---|---|
| A | 119 | 4-11/16 |
| B | 75 | 2-15/16 |
| C | 7.6 | 5/16 |
| D | 34.8 | 1-3/8 |

***Figure 1 – dimensions***

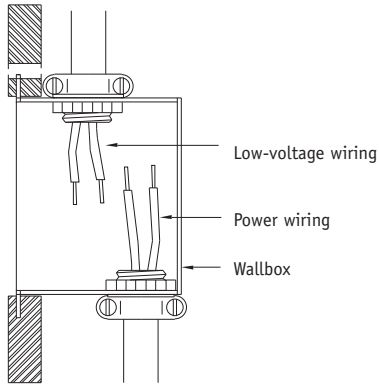



***Figure 2 – wire installation***

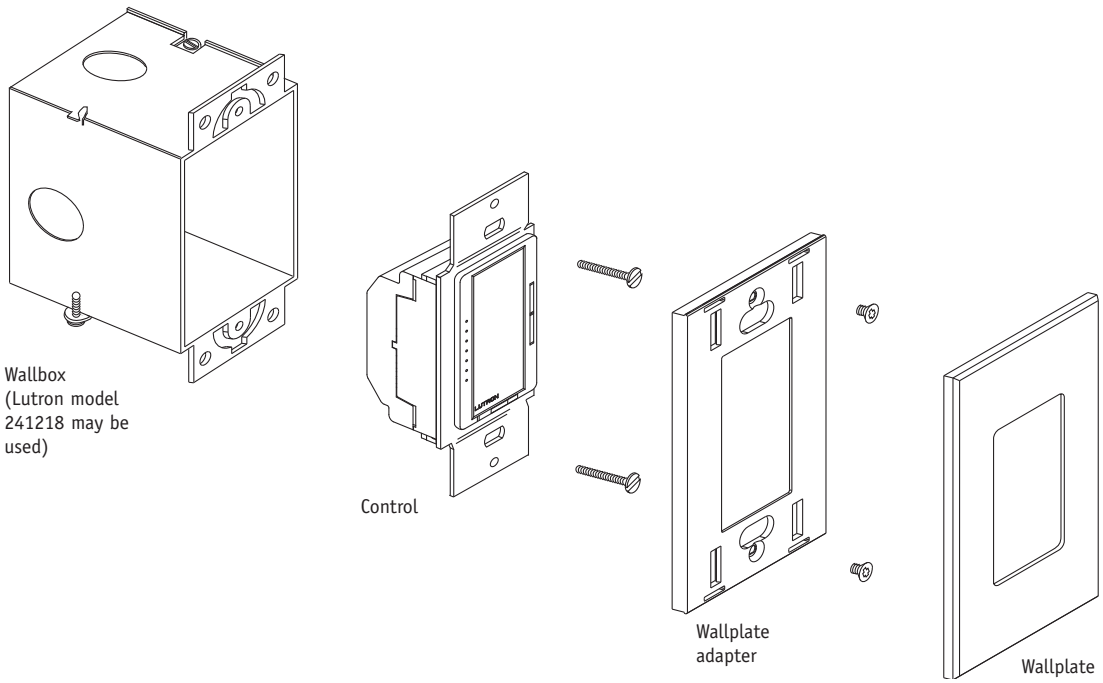



***Figure 3 – mounting and parts identification***

# Maestro® Local Lighting Controls

| | *Minimum load* | *Maximum load* | | |
|---|---|---|---|---|
| ***Control*** | ***all cases*** | ***single-gang*** | ***end gang*** | ***middle gang*** |
| HWA-5E-CE | 50W/VA | 500W/VA | 450W/VA | 400W/VA |
| HNA-5E-CE | 50W/VA | 500W/VA | 450W/VA | 400W/VA |
| HWA-2ANS-CE | 10W/VA | 2A | 2A | 2A |
| HNA-2ANS-CE | 10W/VA | 2A | 2A | 2A |
| HA-RD | n/a | n/a | n/a | n/a |
| HA-RS | n/a | n/a | n/a | n/a |

***Table 1 – minimum and maximum load ratings***

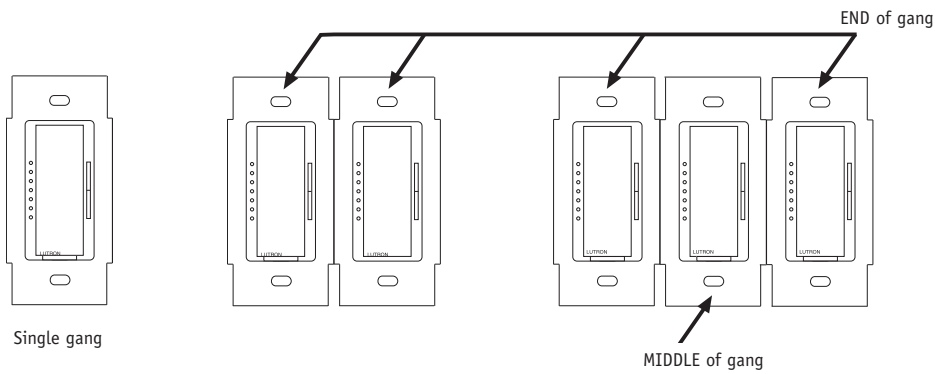



***Figure 4 – ganging configuration and derating information***

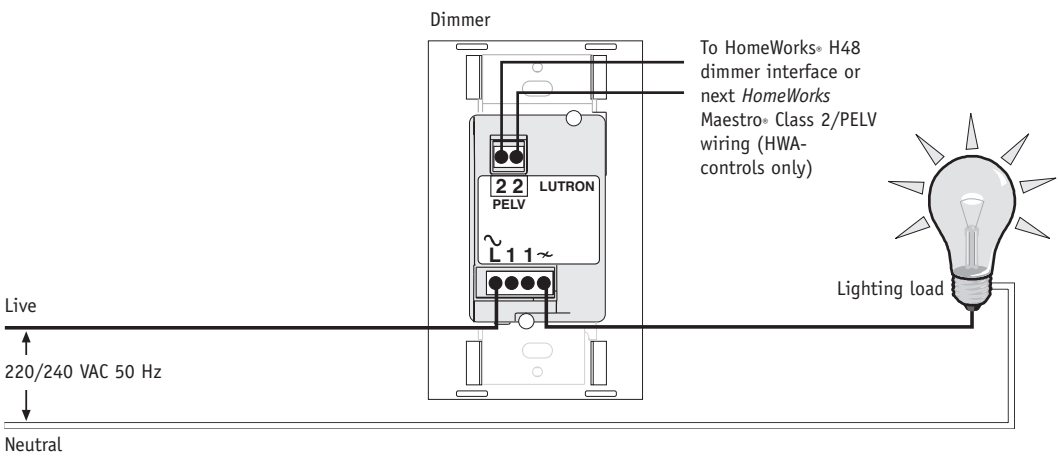



***Figure 5 – HWA-5E-CE and HNA-5E-CE single-location wiring diagram***

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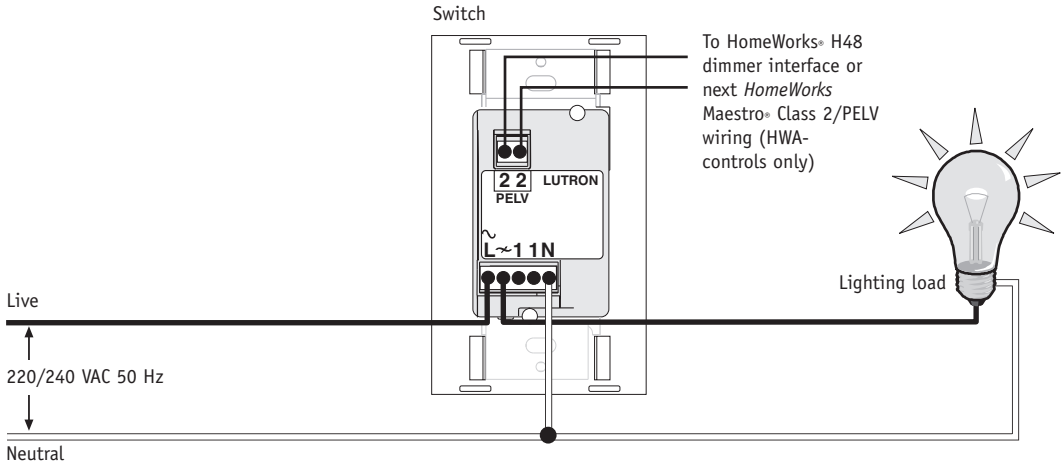


***Figure 6 – HWA-2ANS-CE and HNA-2ANS-CE single-location with neutral wiring diagram***

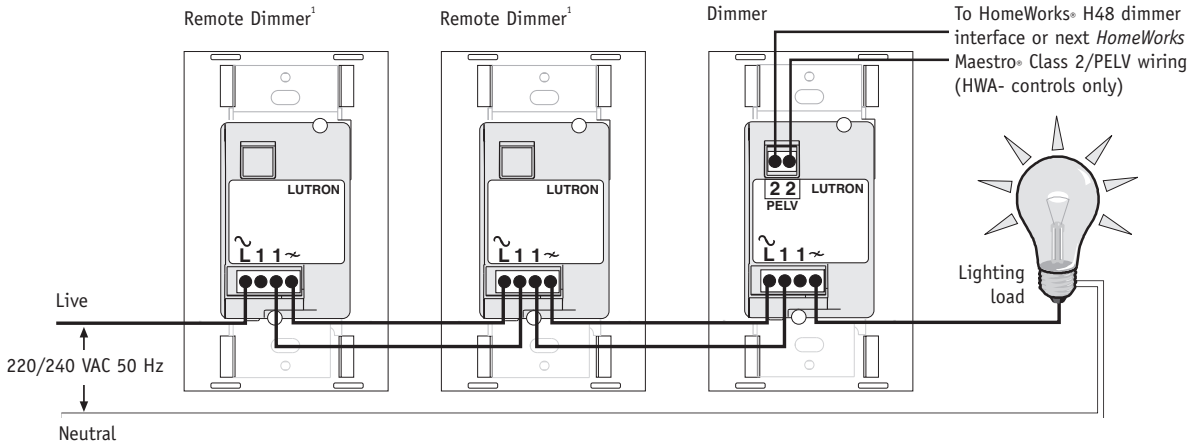


***Figure 7 – HWA-5E-CE and HNA-5E-CE multi-location wiring diagram***

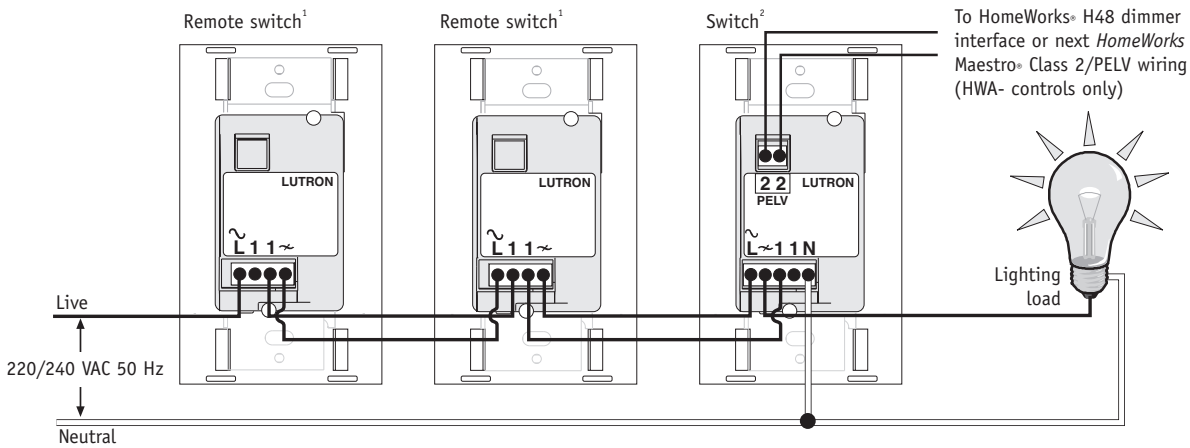


***Figure 8 – HWA-2ANS-CE and HNA-2ANS-CE multi-location with neutral wiring diagram***

[1] Up to nine *Maestro* remote dimmers or switches may be connected to the *Maestro* dimmer or switch. Total distance between all devices should not exceed 50m (165 feet).

[2] Switches must be connected on the lighting load side of a multi-location installation.