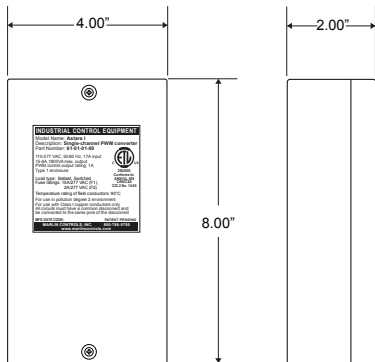


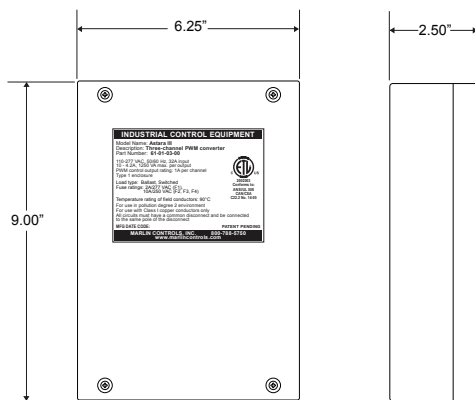


Astara I & Astara III Universal PWM Interface

**Dimensions**



Astara I dimensions



Astara III dimensions

**Astara I & Astara III Universal PWM Interface**

**Description**

The design of the Seamlessline® fluorescent lamp from Nippo® gives designers the tools to create pleasing lighting environments. Ambient lighting, cove lighting, and backlighting, from warm to cool, are just a few of the possibilities.

The Astara I and Astara III Universal PWM Interfaces enhance this tool by giving you the ability to dim Seamlessline lamps. The Astara uses pulse-width modulation, a digital method of controlling the Seamlessline’s light level with less loss in power than traditional control methods.

With different control options, users can control the Astara with an intelligent preset controller or a commercial-grade incandescent wallbox dimmer, ensuring that the lighting environments that you create are managed by the users who live and work in them.

**Astara I**

The Astara I is a PWM interface with a single circuit, capable of controlling up to 25 dimmable Seamlessline fixtures.

**Astara III**

The Astara III is a PWM interface with three circuits. Each circuit is capable of controlling 20 Seamlessline fixtures, for a total of 60 fixtures.

**Control**

The Astara I and III interface with the following types of controllers:

- Commercial grade incandescent wall dimmers\*
- 0-10 VDC dimmers or controllers
- Architectural dimming systems
- Astara RC preset control stations

The Astara III has a DMX512 input, which allows control from theatrical lighting consoles. Using a DMX512 console or Astara RC zone controller allows users to adjust the light level of each of the three circuits independently, convenient for RGB color mixing.

**Electrical**

The Astara I and III PWM Interfaces have a universal 110 to 277 VAC power input. The Astara I has a maximum load rating of 15 amps (120 VAC), and the Astara III has a maximum load rating of 10 amps (120 VAC) per circuit.

\* Consult factory for a list of approved dimmers.



### Astara Controllers

The Astara I and Astara III's RS-485 port is designed for use with the RC and PC controllers.



RC I: single-zone controller with six presets



RC II: two-zone controller with six presets



RC 4: four-zone digital slider with 10 presets



RC 8: eight-zone digital slider with 10 presets

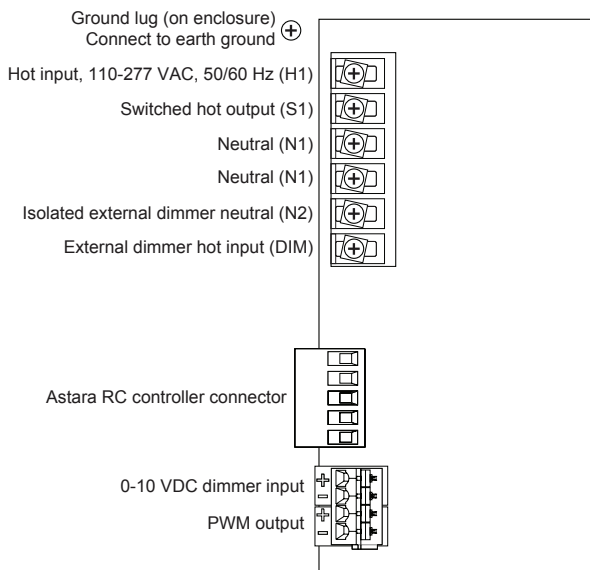


PC: programmable controller with astronomical time clock

### Sensor Integration

The Astara III may be used with 12-volt motion sensors and the Astara photocell for daylight harvesting.

### Astara I Inputs/Outputs



### Astara I & Astara III Universal PWM Interface

#### Installation

The Astara I and III are mounted in a surface-mount enclosure. The Astara also has conduit openings on the top and bottom and may be installed in-line with conduit. The Astara I has a din-rail mount option.

#### Wiring

Using paired 18-gauge shielded cable for the PWM outputs, the maximum distance between the Astara I and III and the last Seamlessline fixture in series is 330 feet.

#### Grounding

An earth ground is required for the Astara and all Seamlessline fixtures.

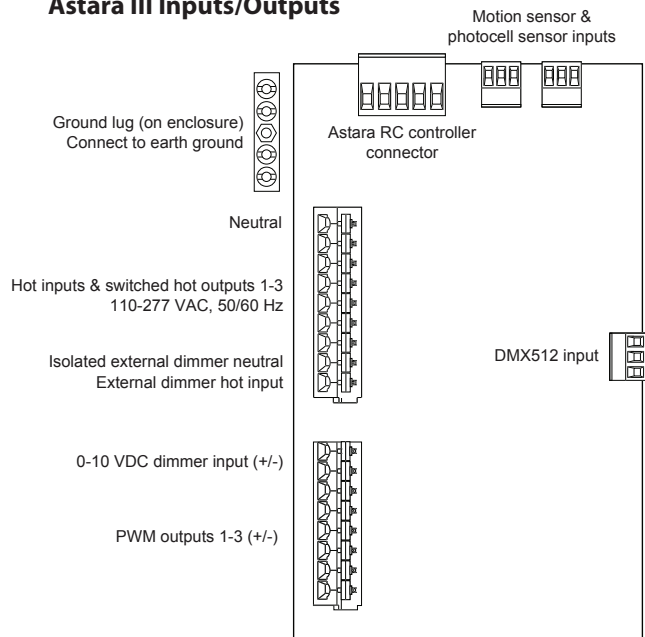
#### Compatibility

The Astara I and Astara III is designed for use with Nippo Seamlessline fixtures with the dimmable ballast option:

- SAL-UW850AM (120 VAC)
- SAL-UW1000AM (120 VAC)
- SAL-UW1250AM (120 VAC)
- SAL-UW1500AM (120 VAC)
- SAL-UW850CM (277 VAC)
- SAL-UW1000CM (277 VAC)
- SAL-UW1250CM (277 VAC)
- SAL-UW1500CM (277 VAC)

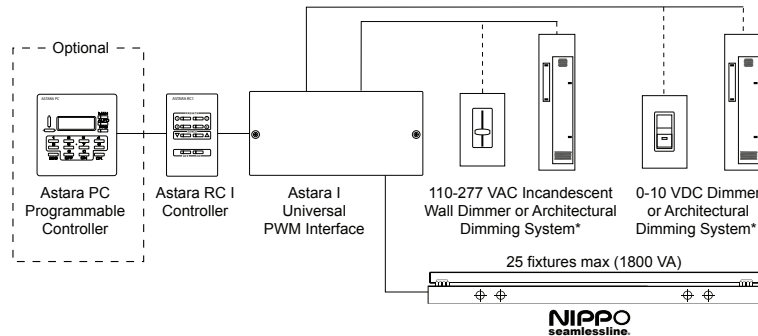
The Astara I and Astara III may be used with any lamp color, and will dim Seamlessline lamps to a minimum of 10% before shutting off.

### Astara III Inputs/Outputs



## Astara I & Astara III Universal PWM Interface

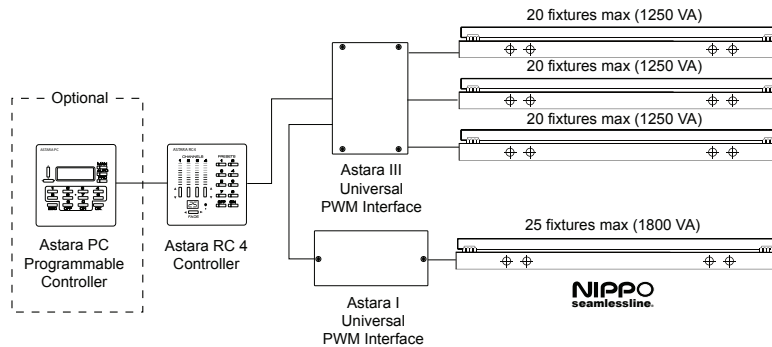
### Typical Control Configurations



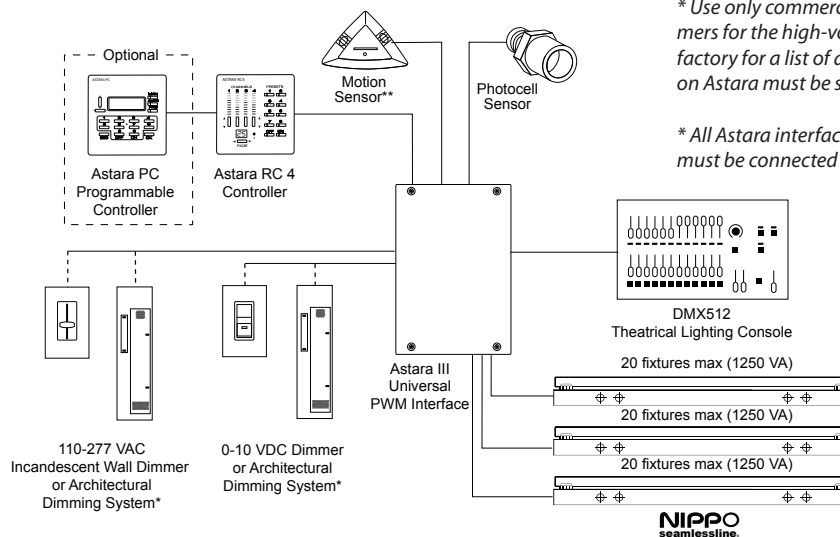
\* Use only commercial or specification-grade dimmers for the high-voltage dimmed input. Consult factory for a list of approved dimmers. Dip switches on Astara must be set accordingly.

\* All Astara interfaces and Seamlessline fixtures must be connected to earth ground.

Sample setup of an Astara I with different control interfaces, including the RC I preset station and PC astronomical time clock



Example of Astara I and Astara III network with an RC 4 preset station and PC astronomical time clock



\* Use only commercial or specification-grade dimmers for the high-voltage dimmed input. Consult factory for a list of approved dimmers. Dip switches on Astara must be set accordingly.

\* All Astara interfaces and Seamlessline fixtures must be connected to earth ground.

Example of Astara III with all controllers and sensors, including a DMX512 console, motion sensor, and day-light harvesting photocell sensor

\*\* Frequent turning on and off of the lamps using the motion sensor may shorten lamp life.



## Astara I & Astara III Universal PWM Interface

### Specifications

Input voltage	110-277 VAC, 50/60 Hz
Maximum number of ballasts	Astara I: 25 Astara III: 60 (20 per circuit)
Dimmed hot input voltage	110-277 VAC, 50/60 Hz
Internal power supply rating	1 A
Maximum total input	Astara I: 17 A Astara III: 32 A
Fuse protection	One fuse per output, plus one for internal power supply
Dimming range	Dims from 0% to 100% in 1% increments Dip-switch adjustable low-end cutoff from 0% to 30% in 2% increments
Switched hot output rating	Astara I: 15 A/120 VAC, 6.5A/277 VAC (1800 VA) Astara III: 10 A/120 VAC, 4.2 A/277 VAC (1250 VA) per circuit
PWM control output rating	1 A
Relay rating	Astara I: 15 A/120 VAC, 6.5 A/277 VAC Astara III: 10 A/120 VAC, 4.2 A/277 VAC
Digital communication protocol	RS-485 (Astara I & III), DMX512 (Astara III only)
Maximum network size	Up to 256 total zones/PWM outputs per RS-485 or DMX512 digital control network
Wiring requirements	High voltage wiring: 12-16 AWG stranded or solid wire PWM output wiring: two-conductor 18 AWG shielded cable per PWM output (330 feet maximum, per output) RS-485 & DMX512 wiring: Belden #9402 (two-twisted pair, shielded cable) Motion sensor: three-conductor, 22 AWG shielded cable Photocell sensor: three-conductor, 22 AWG shielded cable Ground: 12 AWG stranded or solid wire (also required for Seamlessline fixtures)
Photocell sensor (Astara III only)	For use with Astara PHC photocell sensor only
Occupancy sensor (Astara III only)	For use with +12 VDC occupancy sensors only
Dimmed hot input compatibility	For use with commercial-grade incandescent wall dimmers or architectural dimming systems (consult factory for a list of approved dimmers)
Certification	ETL listed; conforms to ANSI/UL 508, CAN/CSA C22.2 No. 14-05
Ambient temperature	-30°F to 120°F
Enclosure dimensions	Astara I: 4" W x 8" H x 2" D Astara III: 6" W x 9" H x 2.5" D
Weight	Astara I: 1 lb. (1.4 lbs. shipping) Astara III: 1.5 lbs. (1.8 lbs. shipping)
Operating environment	For use in a dry, indoor environment only
Warranty	Three-year warranty on materials and workmanship

### Part Numbers/Ordering Information

- 61-01-01-00  
Astara I (single-circuit PWM interface)  
Specify "DIN" for din-rail mounting option
- 61-01-03-00  
Astara III (three-circuit PWM interface)
- RC I  
Astara RC I (single-zone controller with six presets)
- RC II  
Astara RC II (two-zone controller with six presets)
- RC 4  
Astara RC 4 (four-zone digital slider with 10 presets)
- RC 8  
Astara RC 8 (eight-zone digital slider with 10 pre-sets)
- PC  
Astara PC (programmable controller with astronomical time clock)
- PHC  
Daylight harvesting photocell sensor