

**AE4020  
DIMMER EXPANSION MODULE**

Version 1.1

Date: 06/13/2023

## PRODUCT DESCRIPTION

The AE4020 is a four channel add on product for the AR1202 Architectural dimmer. It provides control for forward phase line dimmed fixtures and lamps. The AE4020 provides four 2400 watt channels of dimmed 120VAC. It is controlled by an interface with the AR1202 control circuitry. The AR1202 uses its four auxiliary channels (13 – 16) to control the AE4020. See the diagram "BASIC SYSTEM DIAGRAM".

## INSTALLATION



**WARNING**  
**MAKE CERTAIN POWER IS REMOVED  
FROM THE FEED CIRCUITS  
BEFORE YOU BEGIN INSTALLATION.**

The unit should be wall mounted close to an AR1202 dimmer. The unit may be "stood off" from the wall (approximately 1") to assure clear airflow across the rear heat sink surface. A 120VAC, 20 amp power feed must be provided for each dimming channel. A Neutral and a Safety Ground must also be provided. Each channel may control multiple lighting circuits as long as the channel load does not exceed 2400 watts. A neutral and ground connection should be included for each channel load.

### REQUIREMENTS FOR THREE PHASE OPERATION:

In order to provide zero crossing switching, the AR1202 uses a specific phase sequence when operated with three phase power. The sequence convention must also be adhered to when connecting the AE4020.

The phase connected to the AR1202 H1 power input terminal must also be used for channels 13 and 16 of the AE4020. The AR1202 H2 phase must be used for AE4020 channel 14. The AR1202 H3 phase must be used for AE4020 channel 15. The following table summarizes this requirement.

POWER PHASE	AR1202 CHANNEL	AE4020 CHANNEL
H1	13	13
H2	14	14
H3	15	15
H1	16	16

## POWER AND LOAD CONNECTIONS

**Note: Power for the AE4020 dimming channels is NOT to be fed from the power block of the AR1202.**

The diagram "AE4020 CONNECTIONS" shows the power connection terminal details.

## CONTROL SIGNAL CONNECTIONS

The diagram "AE4020 CONNECTIONS" shows the control signal connection terminal details for each channel at the AE4020. They are labeled PWM CONTROL FROM AR1202.

These connections are normally prewired to the 12 ft. control signal cable which is supplied with the unit.

The eight conductor control signal cable supplying the control inputs to the AE4020 is provided with a connector at the AR1202 end. This cable connects directly to J7 on the circuit board which is located on the AR1202 door. See the diagram "EXPANSION CHANNEL CONNECTIONS"

## OPERATION

Each channel of an AE4020 is protected by a 20 amp, fast acting, magnetic circuit breaker. The breakers must be in the closed position to run the unit (RED end of rocker switch NOT visible). The breakers are not intended as ON/OFF switches and should not be used when the channels are on.

There are no operator controls or indicators in the unit. The AE4020 operates directly as four channels (13 - 16) when connected to an AR1202 or AR1202-6.

## OWNER MAINTENANCE

There are no user serviceable parts in the AE4020.

The best way to prolong the life of your unit is to keep it cool, clean, and dry. It is important the cooling intake and exit vent holes are clean and unobstructed.

Service by other than Lightronics authorized agents may void your warranty.

## OPERATING AND MAINTENANCE ASSISTANCE

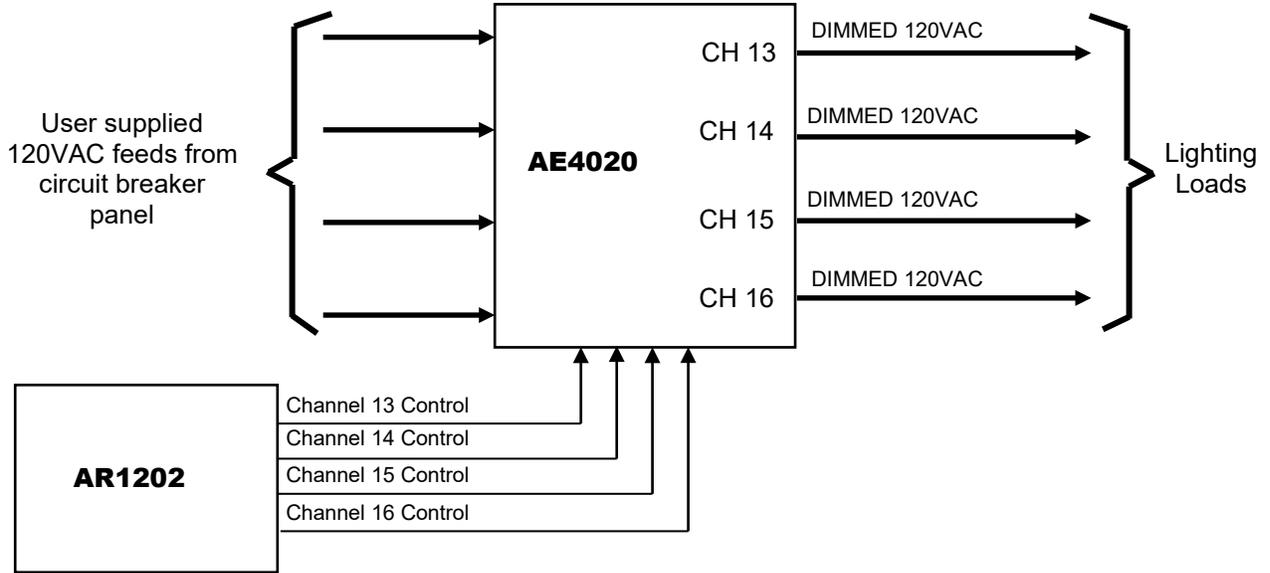
If service is required, contact the dealer from whom you purchased the equipment or contact Lightronics, Service Department, 509 Central Drive, Virginia Beach, VA 23454 TEL 757 486 3588

## WARRANTY INFORMATION AND REGISTRATION – CLICK LINK BELOW

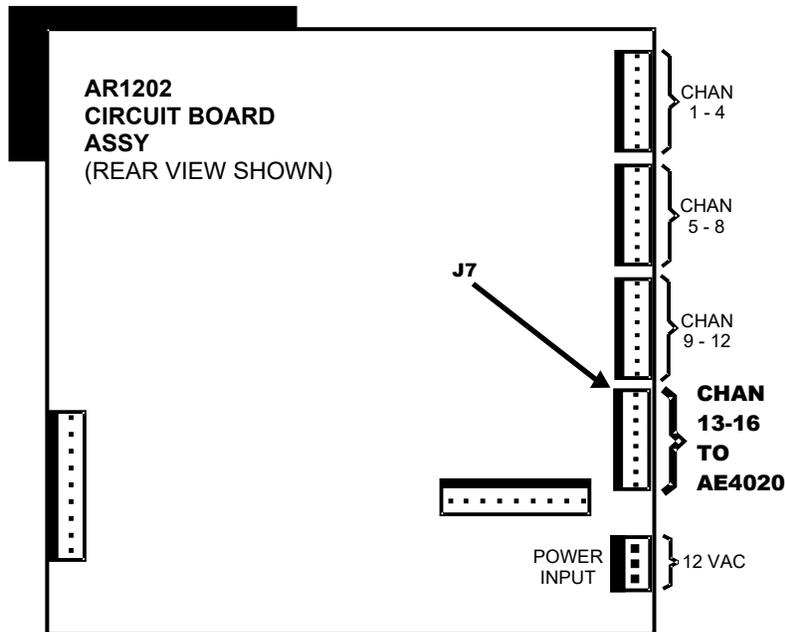
[www.lightronics.com/warranty.html](http://www.lightronics.com/warranty.html)

**AE4020 DIMMER EXPANSION MODULE  
OWNER'S MANUAL**

**BASIC SYSTEM DIAGRAM**



**EXPANSION CHANNEL CONNECTIONS**

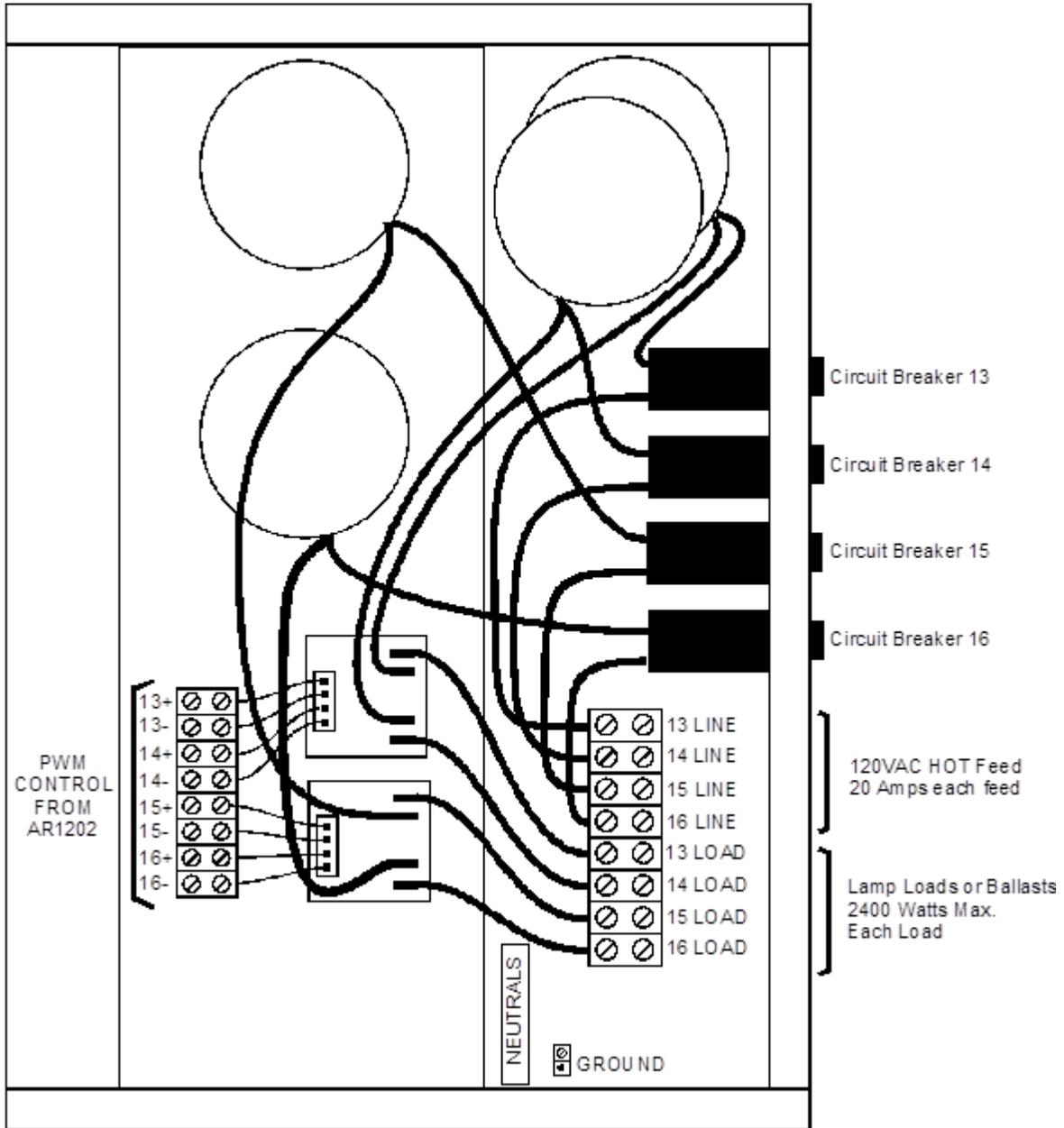


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**AE4020 CONNECTIONS**



DIMENSIONS: 18.5"h x 15"w x 4"d  
WEIGHT: 28 Pounds