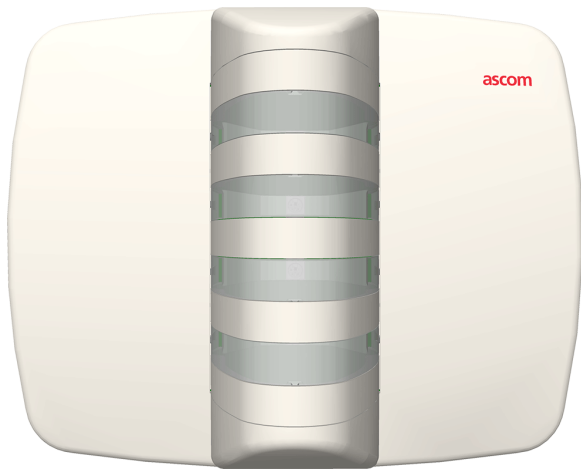


# Passive Light Installation Sheet

## Model NUCL4P-H



### Description

The NUCL4P-H Light module is a four-section light used to signal call events in a passive system.

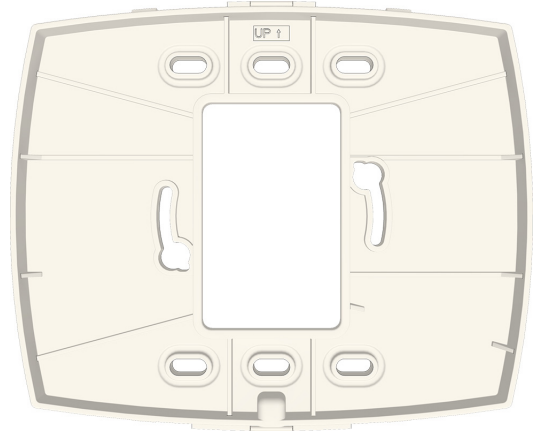
The light includes two passive room bus connectors for primary and secondary passive room buses. The primary bus connector attaches to a Passive Bus Concentrator (NUPBC), which supplies power, input, and output lines to the light. The primary bus connector controls the light's first, second, and third light sections. The light's secondary bus connector attaches to a second bus on the NUPBC. It controls the module's first, second, and fourth light sections.

### Installation

**Note:** Before beginning the installation, ensure all the necessary cables are available and are properly terminated.

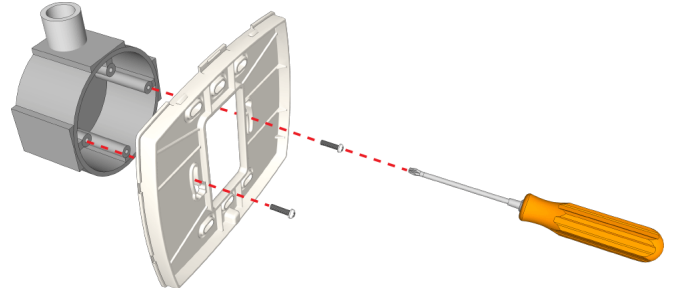
The passive light mounts to a backbox using a backplate (included) that supports the device. The backplate has holes for mounting on EU-style backboxes. In areas where no backbox is available, a backplate spacer can be used to mount the device directly to a flat wall surface. Backplate spacers are sold separately.

Figure 1: Backplate



### To mount the backplate on a backbox:

1. Loosen the screws so that approximately 5mm (.20in.) extend from the backbox.
2. Pull the cables from the backbox through the backplate hole.



3. Place the backplate over the backbox (with the arrow facing up) so that the heads of the screws can pass through the keyhole slot.
4. Turn the backplate until its top is level.
5. Tighten the screws until they are snug. Do not over-tighten.

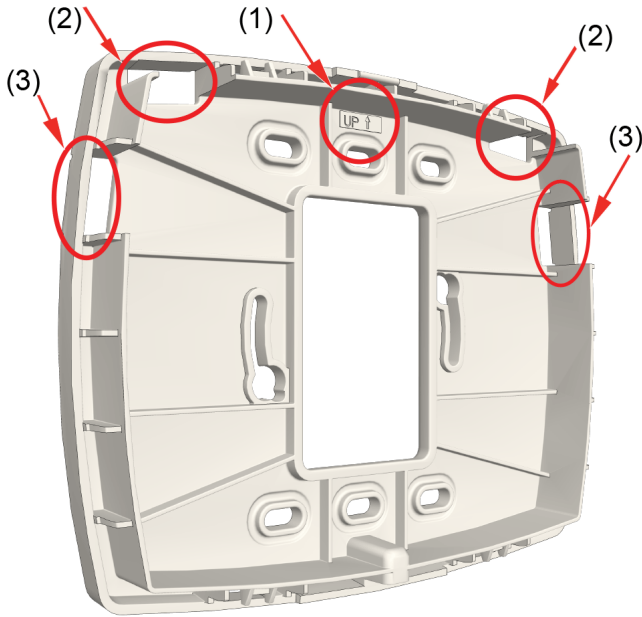
### Mounting the Backplate Spacer Without a Backbox

When no backbox is available, mount the light directly to a flat wall surface using a backplate spacer fitted with four screws suitable for the wall type. Cable wires should enter and leave the light's housing through the hole in the center of the backplate spacer, or through the knockouts at the top and sides of the backplate spacer.

Consider where the connecting cables are located. If the cables run inside the wall, locate the spacer over the hole where the cables extend from the wall. If the connecting cables are run in a channel outside the wall, locate the spacer below and to the right or left of the channel, where the cables exit the channel. The cables should enter through the knockout holes in the backplate spacer.

Do not distort or twist the backplate spacer when mounting it to a wall. If the backplate is distorted, the light will not fit properly and may fall off. To prevent distortion, only mount the spacer on a smooth and level surface. Do not over-tighten the screws.

Figure 2: Backplate spacer with directional arrow and knockouts



**Legend**

- (1) Directional arrow indicator
- (2) Top knockouts
- (3) Side knockouts

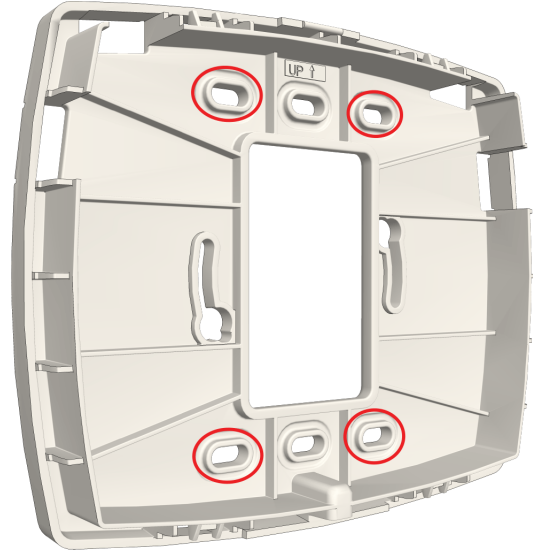
**To remove the knockouts:**

1. Determine how much space will be needed to accommodate the cables entering the light's housing, and then choose which knockouts to remove from the spacer.
2. Locate the knockouts to be removed from the top or sides of the backplate. See Figure 2, items 2 and 3.
3. Using a cutter or pliers, carefully remove the excess plastic from the knockouts.

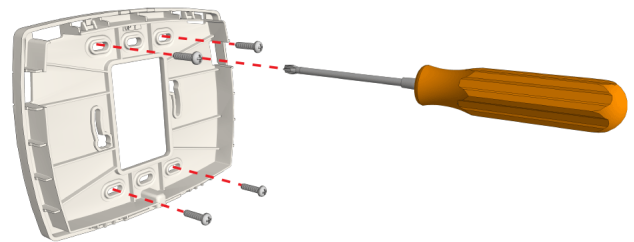
**To mount a backplate spacer on a wall:**

1. Place the backplate spacer against a flat wall and orient it so that arrow is pointing up and that the backplate is level. (See Figure 2, item 1.) Use a leveling device to check, if necessary.

2. Using the backplate spacer as a template, mark four holes for the screws using the fitting holes located in the backplate spacer.



3. Remove the backplate spacer and drill holes for the screws that will be used, such as wood, concrete, or drywall screws, or screws with anchors.
4. Place the backplate spacer (with the knockouts removed) over the holes, insert the screws, and then tighten.



5. If the cables come through the wall, pull the cables through the hole in the center of the spacer.

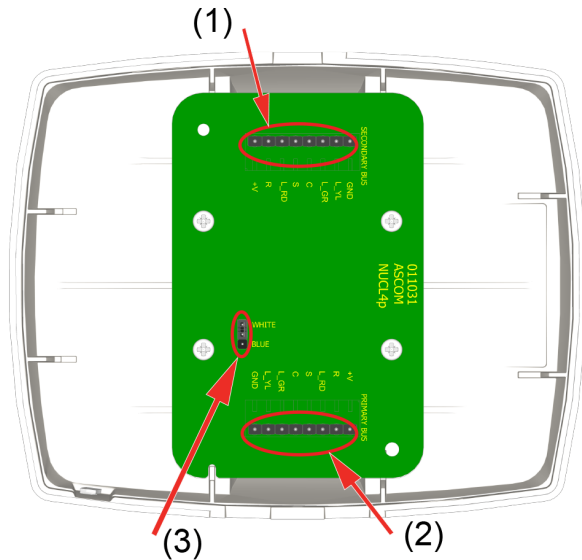
-or-

If the cables come through a channel attached to the outside of the wall, use the knockouts at the top and sides of the spacer.

**Connectors and Jumpers**

The light module uses two 8-pole connector terminals to connect to the passive room buses. Each connector (not included) is a screwless, spring-cage terminal with two connection points. The terminals connect to the primary and secondary room buses. The light module also includes a jumper for selecting either a white or a blue LED in the fourth section.

Figure 3: NUCL4P-H connectors and jumpers



**Legend**

- (1) Secondary 8-pole connection to passive bus
- (2) Primary 8-pole connection to passive bus
- (3) Jumper for selecting a white or blue LED in the fourth section (controlled by secondary bus)

**Terminating an 8-Pole Room Bus Connector**

The NUCL4P-H uses two 8-pole connector blocks (not included) to connect to the passive room buses. Each connector is a screwless, spring-cage terminal with two connection points for daisy-chaining the passive room bus to the next module.

The preferred color coding for the cable is shown in the following figure and table. We highly recommend that you follow this color scheme in your installation.

Figure 4: 8-pole passive bus connector pinouts

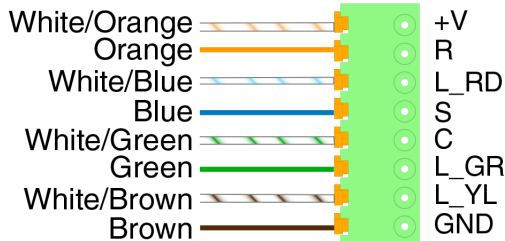


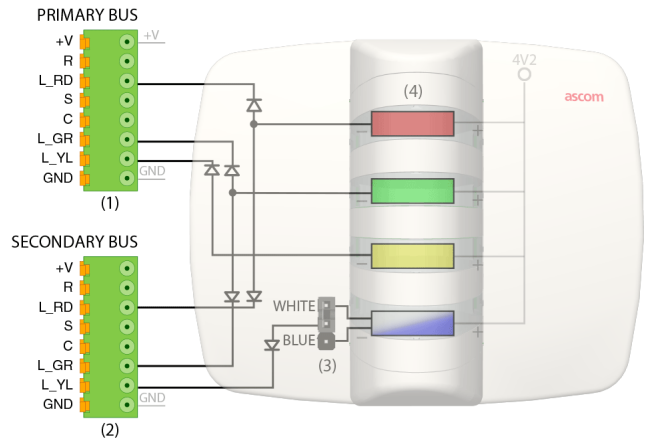
Table 1. 8-pole passive bus pinout description

Pin #	Pin	Description	Color
1	+V	Positive power	Orange/White
2	R	Reset	Orange
3	L_RD	LED Red	Blue/White
4	S	Set	Blue
5	C	C-line	Green/White
6	L_GR	LED Green	Green
7	L_YL	LED Yellow	Brown/White
8	GND	Ground	Brown

The terminals connect to the primary and secondary room buses. When using the secondary connector, ensure the primary connector is also attached.

**Note:** The diodes shown in the figure below are built into the light's circuit board.

Figure 5: NUCL4P-H bus connections

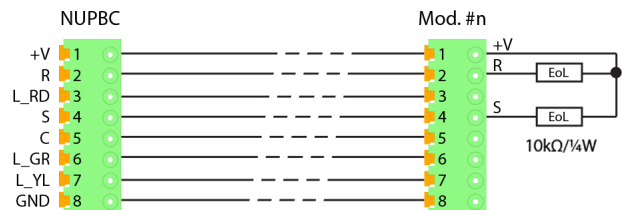


**Terminating an End of Line (EoL)**

If the light is the last module on the room bus, it must be terminated with 10kΩ EoL resistors (not included) when used with 5VDC system, or with 22kΩ EoL resistors (not included) when used with 24VDC system. Terminate the light as shown in the figures below.

**Note:** The NUCL4P light can only be terminated EoL on a primary bus. Ensure that the wires used to terminate do not touch anything on the circuit board that may cause a short circuit. Wrap the wires if necessary to protect them from short circuiting.

Figure 6: Terminating the EoL on a passive room bus for 5VDC system



**Legend**

- (1) 2x 10kΩ EoL

Figure 7: Terminating EoL with 10kΩ resistors for 5VDC

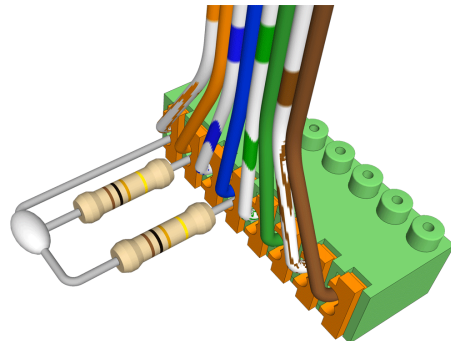
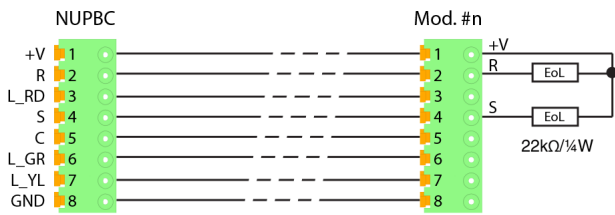


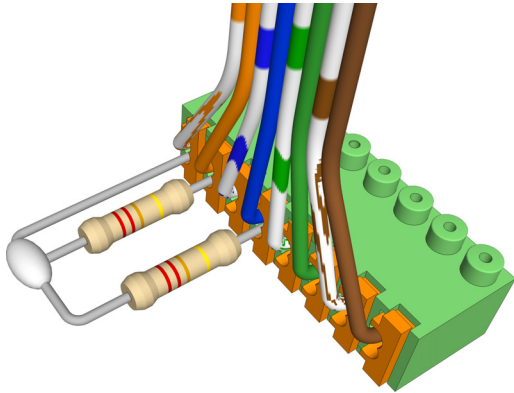
Figure 8: Terminating the EoL on a passive room Bus for 24VDC system



**Legend**

(1) 2x 22kΩ EoL

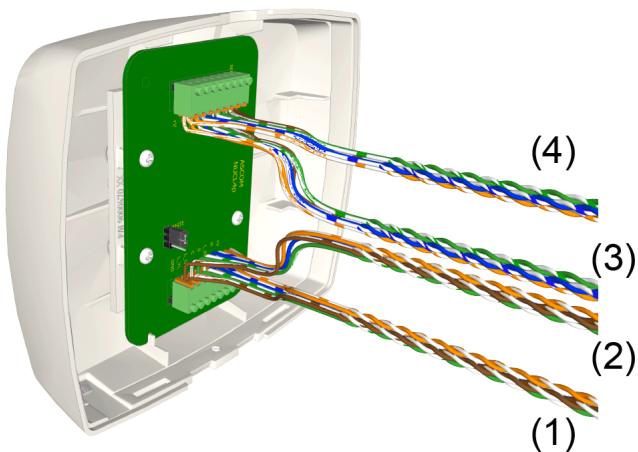
Figure 9: Terminating EoL with 22kΩ resistors for 24VDC



**To connect a NUCL4P-H light module:**

1. Attach the primary 8-pole room bus connector cable to the 8-pin primary terminal. See Figure 3, item 2. Ensure that the connector is seated properly.
2. If connecting to another module on the room bus, attach the 8-pole secondary room bus connector cable to the 8-pin secondary terminal. See figure Figure 3, item 1.
3. If the fourth section of the light is to illuminate blue, set the jumper on the two pins marked BLUE. If the fourth section is to illuminate white, set the jumper on the pins marked White. See figure Figure 3, item 3.

Figure 10: NUCL4P-H room bus connections

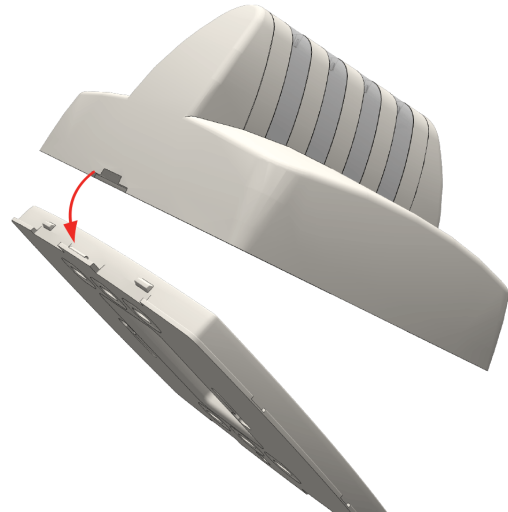


**Legend**

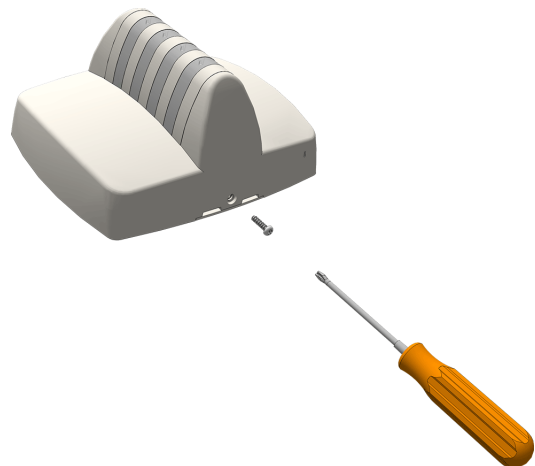
- (1) From the previous device on the primary bus
- (2) To the next device on the primary bus
- (3) From the previous device on the secondary bus
- (4) To the next device on the secondary bus

**To mount the dome light to the backplate:**

1. Ensure that all cable connections are properly secured to the jacks and terminals on the back of the light.
2. Place the light onto the two top fasteners of the backplate.



3. Press the light firmly against the backplate so that the light's bottom fasteners snap closed on the backplate.
4. Insert the locking screw into the bottom of the light, and then tighten the screw until it is snug, as shown below. Do not over tighten.

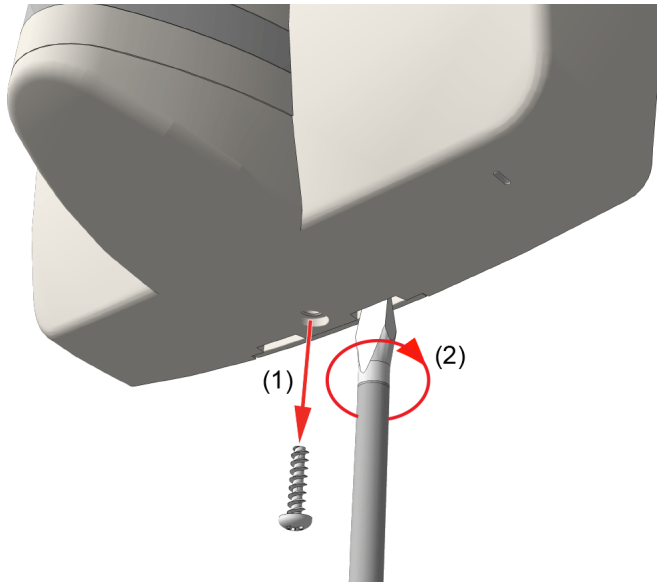


## Removal

Follow the steps below to remove the NUCL4-H light from the backplate.

**Note:** Failure to follow the proper removal procedure may result in damage to the light.

1. Remove the locking screw from the bottom of the light.



2. Insert a 6mm flat-blade screwdriver into the notch at the bottom of the light, and then apply light upward pressure.
3. Gently twist the screwdriver to disengage the light from the backplate. Do not use excessive force while twisting.
4. Remove the light from backplate.

## Specifications

<b>Wire/terminations</b>	Cat 5/5e/6/7, U/UTP terminated with 8-pole block connectors (not included)
<b>Compatible electrical boxes</b> (metal or plastic)	
European Union	<b>EU box</b> (or equivalent) Single backbox with mounting holes 60mm (2.36in.)
United Kingdom	<b>MK Honeywell models</b> (or equivalent) 1-gang: 861ZIC, 866ZIC, 877ZIC