Keilton +autani



PPA109S
Emergency Lighting Controller
User Guide

2026

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Product Introduction



PPA109S is an Emergency Lighting Control Device that complies with UL924. PPA109S needs to work together with Keilton smart lighting controllers and supporting products.

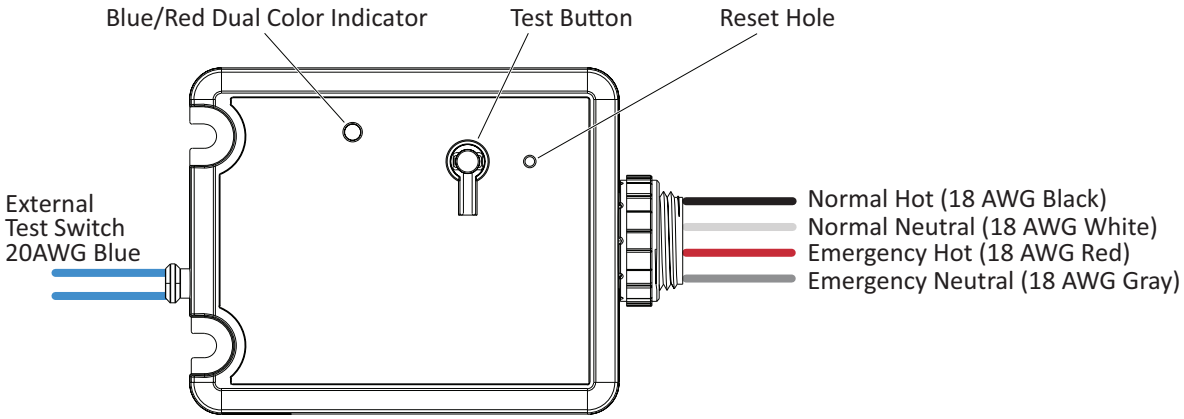
Features

- Supports remote test button or fire alarm interface
- Dual color function LED indicator
- Suitable for use in return air plenum rated UL2043
- Complies with UL924, RoHS
- Only one PPA109S is needed per zone

This guide includes various applications and suggested configurations for the PPA109S. Users should familiarize themselves with the Keilton+autani app and products by reviewing the app instructions and the specification and installation guidance documents beforehand.

Normal power supply is AC only for both models. For emergency power: the PPA109S.B1 accepts 120-277VAC only. The PPA109S.C1 accepts 120-277VAC or 170-390VDC.

Polarity Requirements (PPA109S.C1 with DC input only):
Gray wire: Must connect to DC+ (positive terminal).
Red wire: Must connect to DC− (negative terminal).
Polarity does not matter for AC input.



Blue/Red Dual Color Indicator:

- Blue ON: Power ON
- Red ON: Emergency Mode
- Red Blink: Emergency Power is Disrupted
- Blue and Red ON Together (Looks Purple): Emergency Mode

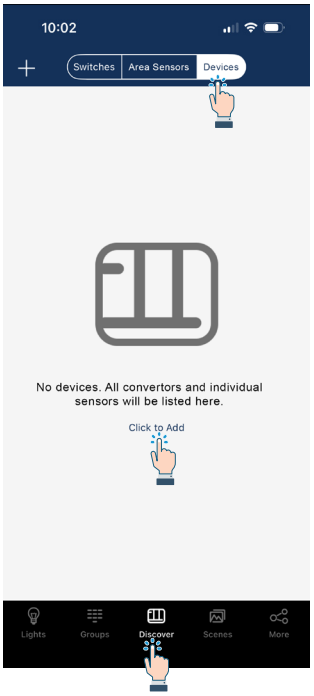
Installation and Commissioning

Install the PPA109S in an appropriate location according to the specification and installation guidance documents. Do not place it in places where wireless signal transmission might be blocked, such as places close to metal plate or concrete wall, or places that are very far away from other Keilton smart lighting controllers.

One PPA109S is typically sufficient for one zone. Please place the PPA109S in a position where its wireless signal can reach all emergency lights and devices. You may also install two or more PPA109S units in one zone if wireless coverage is a concern.

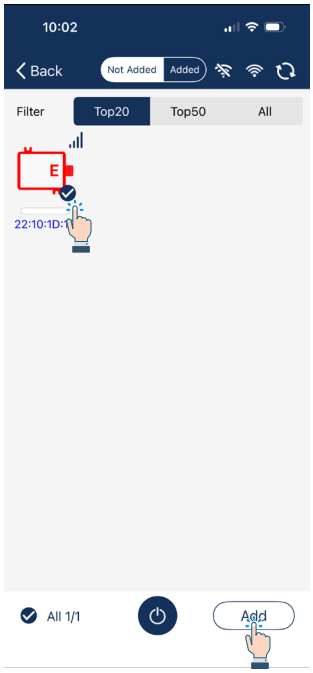
Add PPA109S to Mesh Network

Add the PPA109S to the mesh network using the app after installing and powering it on. The PPA109S is added to the mesh network as a device. Refer to the app instructions for details.

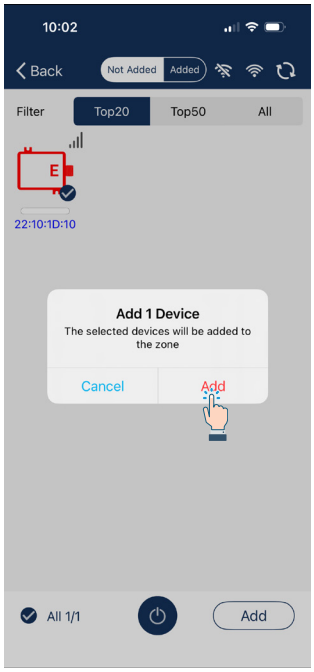


To add a PPA109S Emergency Lighting Controller

1. From the Discover page, select the "**Devices**" button.
2. Select "**Click to Add**" to have the app search for the new device.



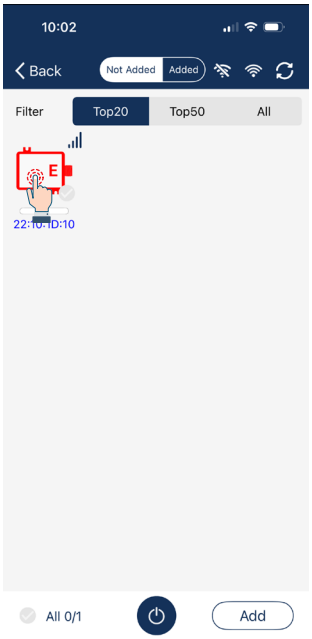
3. Select the PPA109S device to create the check mark.
4. Select "**Add**" at the bottom of the page.



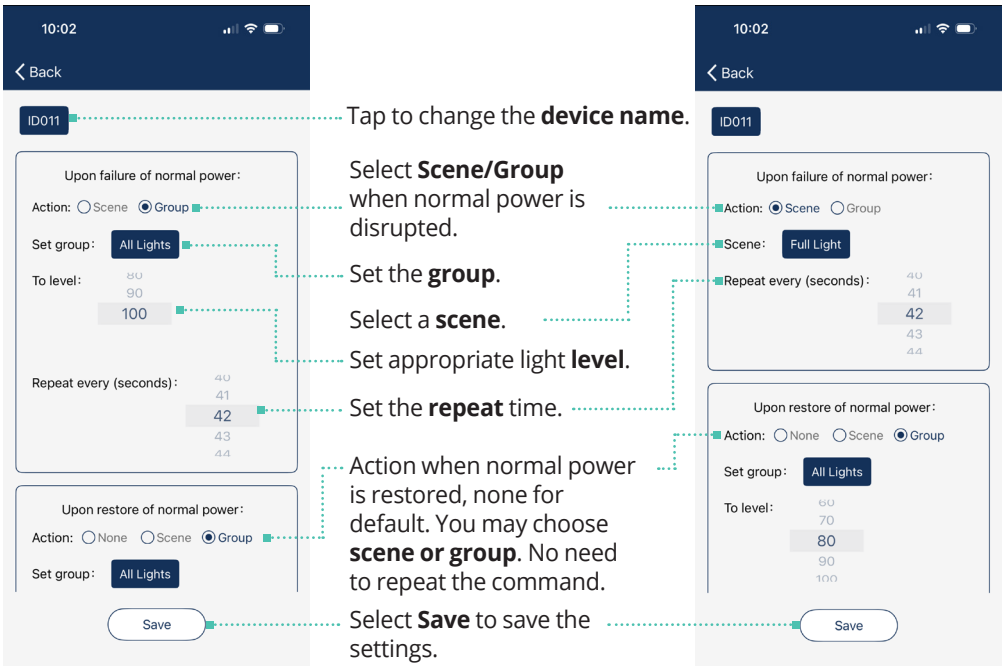
5. Select "**Add**" in the dialog box to confirm.

Parameter Configuration

You may check the PPA109S in the device page of the app after adding it to network. Long-press the icon to open the parameter configuration page.



1. Long press the PPA109S device icon to get to the configuration page.



Parameters

Parameters when Normal Power is Disrupted

The PPA109S enters emergency lighting mode when normal power is disrupted. Parameters include:

- **Action**: The action for emergency lighting mode. Options include a pre-defined lighting scene or a lights group.
- **Group** and light level: You may choose a lights group and appropriate light level for emergency lighting when you selected group for action. Decide group and light level according to the actual lights and facility to meet the UL924 requirements for emergency lighting.
- **Scene**: You may select a scene when you selected scene for action. Scene shall be decided according to the actual lights and facility to meet the UL924 requirements for emergency lighting.
- **Repeat interval**: Keilton smart lighting products use wireless communication technologies. To prevent users from accidentally turning off or dimming luminaires with the app or switches in case of emergency lighting conditions, PPA109S will send emergency lighting commands repeatedly.

Parameters when Normal Power is Restored

Luminaires need to be returned to normal lighting status when normal power is restored. Usually, Keilton smart lighting products have sensors. When normal power is restored, the PPA109S stops sending emergency lighting commands, and the luminaires return to normal lighting automatically. So there is no need to send a command explicitly.

The PPA109S may need to send a command to restore lights to normal status depending on the actual lights and facility configuration. You need to configure it in the app in this case. Parameters include:

- **Action**: The action when normal power is restored. It could be a pre-defined lighting scene, or a lights group.
- **Group and light level**: You may choose a lights group and appropriate light level for normal lighting when you selected group for action. Group and light level shall be decided according to the actual lights and facility to meet the requirements for lighting.
- **Scene**: You may select a scene when you selected scene for action. Scene shall be decided according to the actual lights and facility to meet the requirements for lighting.

Default Parameter Configuration

Default factory parameter configuration: Turn "**All lights**" group to 100% level and repeat every 5 seconds when normal power is interrupted. No action when normal power resumes.

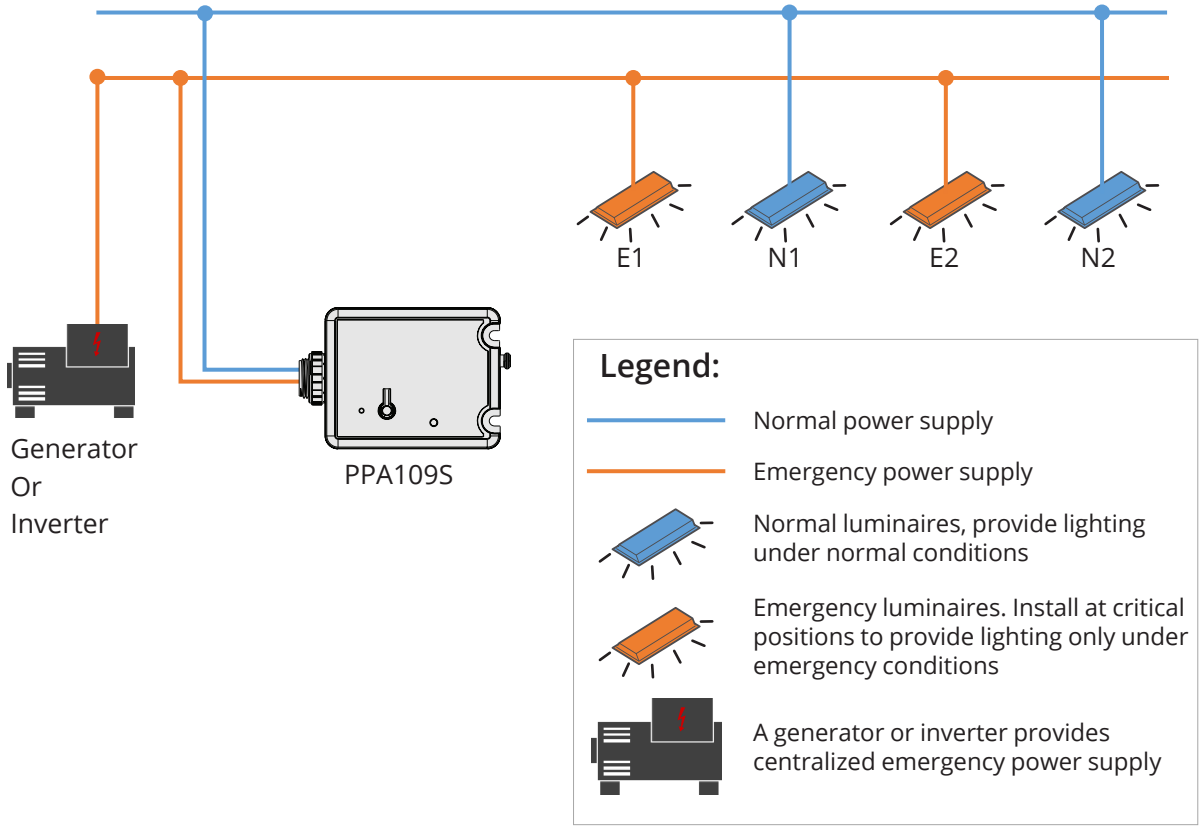
Emergency Function Test

There is an emergency function test button on PPA109S. Pressing the button simulates the emergency lighting function during normal power disruption, so users may test it.

The test button is on the housing of the PPA109S. Press the button to simulate the emergency lighting function when normal power is disrupted. Release the button to go back to normal lighting status.

There is also a pair of connectors for connecting an external push button. You may connect an external push button to the connector for remote testing.
Note: Do not connect the test button connector to any load or input voltage.

Typical Applications (Normal)



Emergency and normal power supply are separate. All luminaires are controlled by Keilton smart lighting controllers. Emergency luminaires are installed at critical positions and powered by emergency power supply. They only provide lighting under emergency conditions. Other luminaires are powered by normal power supply and only provide lighting under normal conditions.

Suggested Configuration

Create a group named “Emergency lights” and add E1/E2 as the group members.

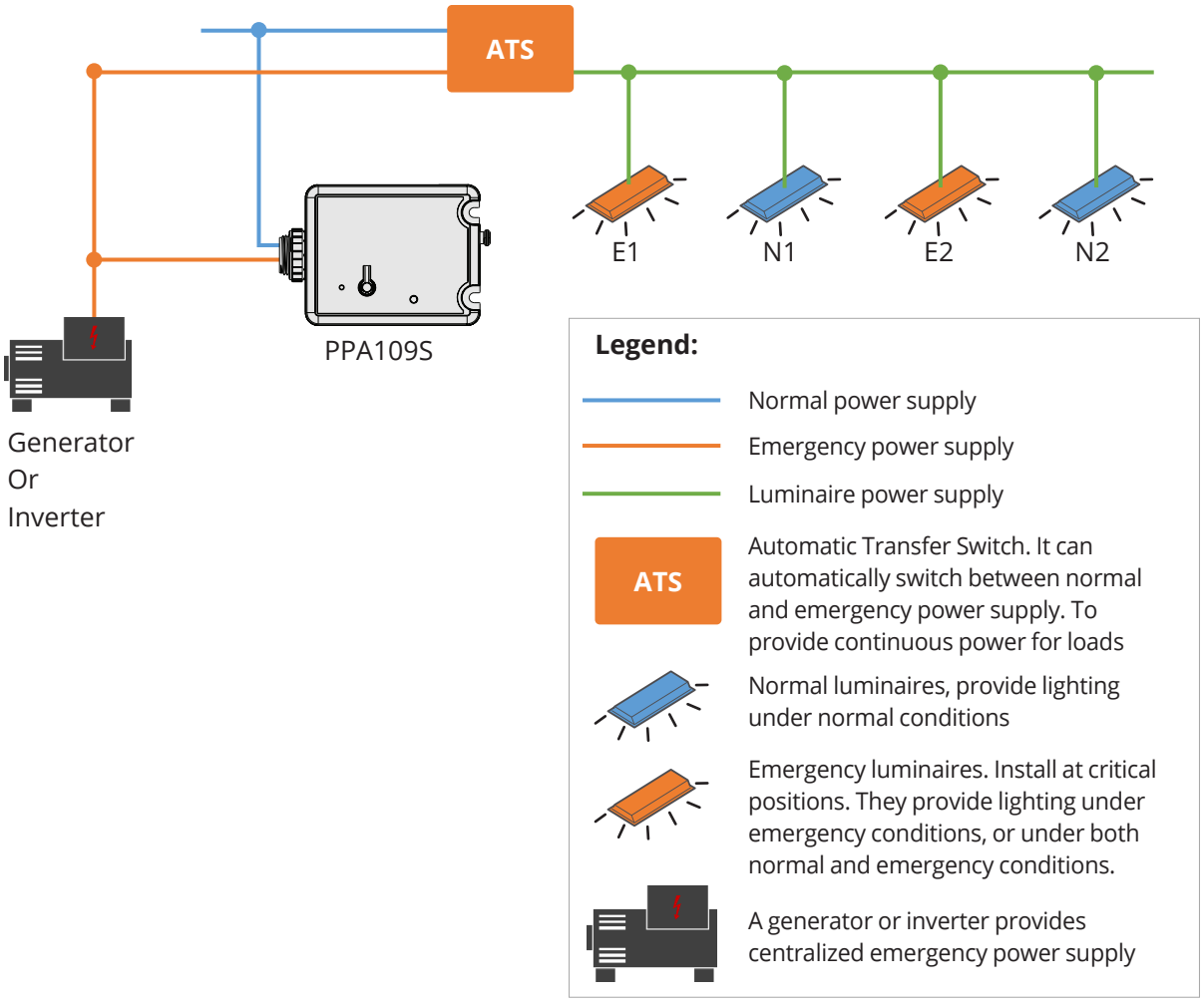
When Normal Power is Disrupted

Set the action to “group” and set the “Emergency lights” group to “50” light level. (If level 50 does not meet the emergency lighting requirement, set the group to the level you need.) Repeat every 5 seconds.

When Normal Power is Restored

Set the action to “group” and set the “Emergency lights” group to “0” light level.

Typical Applications (ATS)



There is an ATS that provides power to all luminaires. When normal power is disrupted, the ATS switches to emergency power automatically. All luminaires are controlled by Keilton smart lighting controllers. Luminaires installed at critical positions are emergency luminaires. They provide lighting under both normal and emergency conditions. Other luminaires are powered by normal power supply and only provide lighting under normal conditions.

Suggested Configuration

Create a scene named “Emergency lighting”. In this scene, set E1/E2 to level 50 and set N1/N2 to level 0. (If level 50 does not meet the emergency lighting requirement, set E1/E2 in this scene to the level you need.)

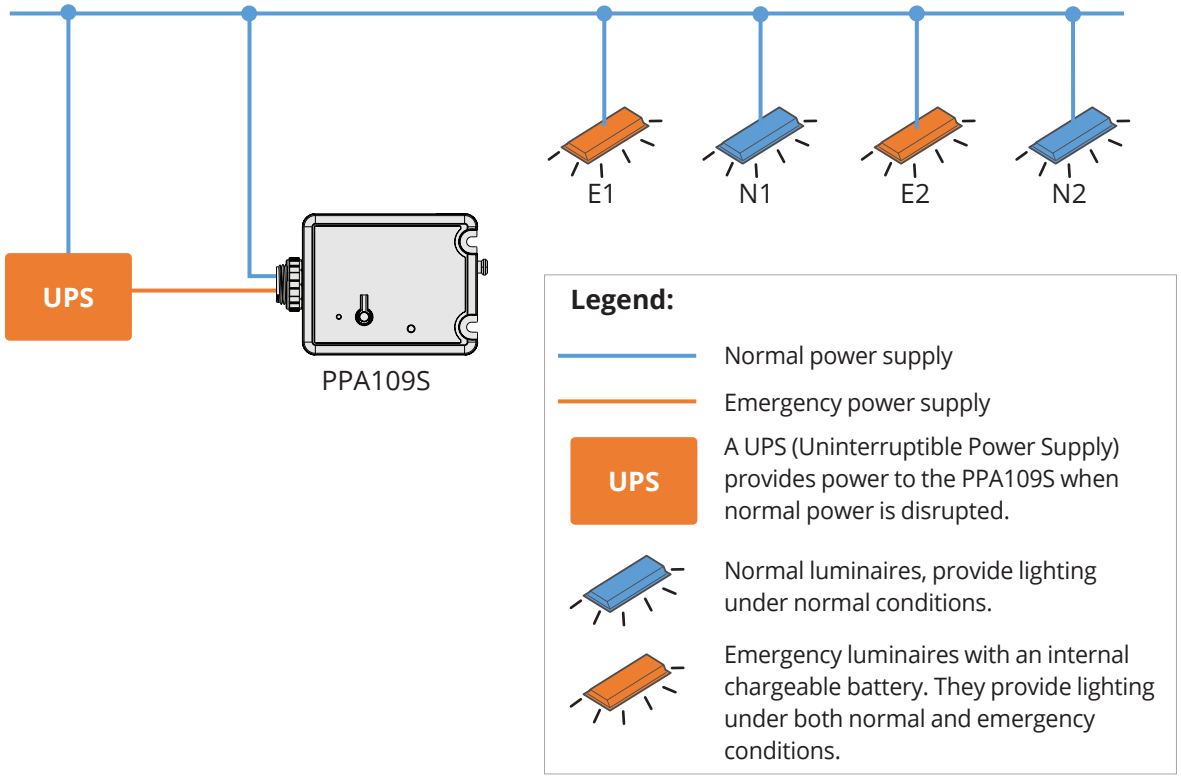
When Normal Power is Disrupted

Set the action to “Scene” and select “Emergency lighting”. Repeat every 5 seconds.

When Normal Power is Restored

Set the action to “group” and set the “All lights” group to “Auto” light level.

Typical Applications (UPS)



There is only a normal power supply. All luminaires are controlled by Keilton smart lighting controllers. Emergency luminaires are installed with emergency driver and provide lighting under both normal and emergency conditions. Other luminaires are powered by normal power supply and only provide lighting under normal conditions.

Emergency driver has internal chargeable battery and can provide high voltage power supply to luminaires when normal power is interrupted.

A UPS provides emergency power to the PPA109S.

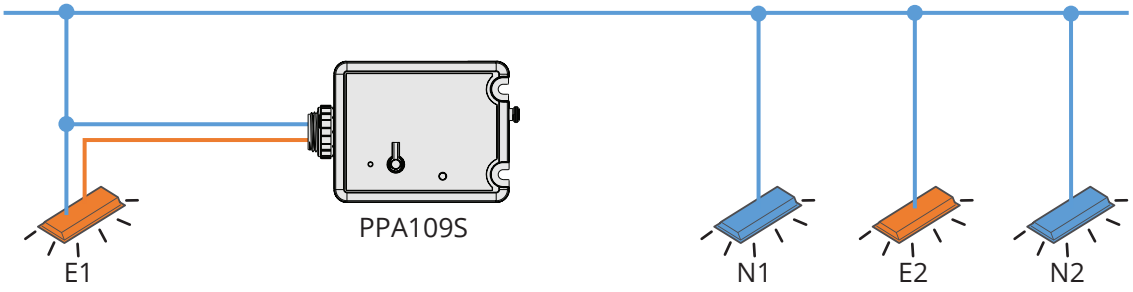
When Normal Power is Disrupted

Set action to “group” and set the “All lights” group to “50” light level. (If level 50 does not meet the emergency lighting requirement, set the group to the level you need.) Repeat every 5 seconds.

When Normal Power is Restored

Set action to “group” and set the “All lights” group to “Auto” light level.

Typical Applications (Internal Chargeable Battery)



Legend:

- Normal power supply
- Emergency power supply
- Normal luminaires, provide lighting under normal conditions.
- Emergency luminaires with an internal chargeable battery. They provide lighting under both normal and emergency conditions.

There is only a normal power supply. All luminaires are controlled by Keilton smart lighting controllers. Emergency luminaires are installed with emergency driver and provide lighting under both normal and emergency conditions. Other luminaires are powered by normal power supply and only provide lighting under normal conditions.

Emergency driver has internal chargeable battery and can provide high voltage power supply to luminaires and PPA109S when normal power is interrupted.

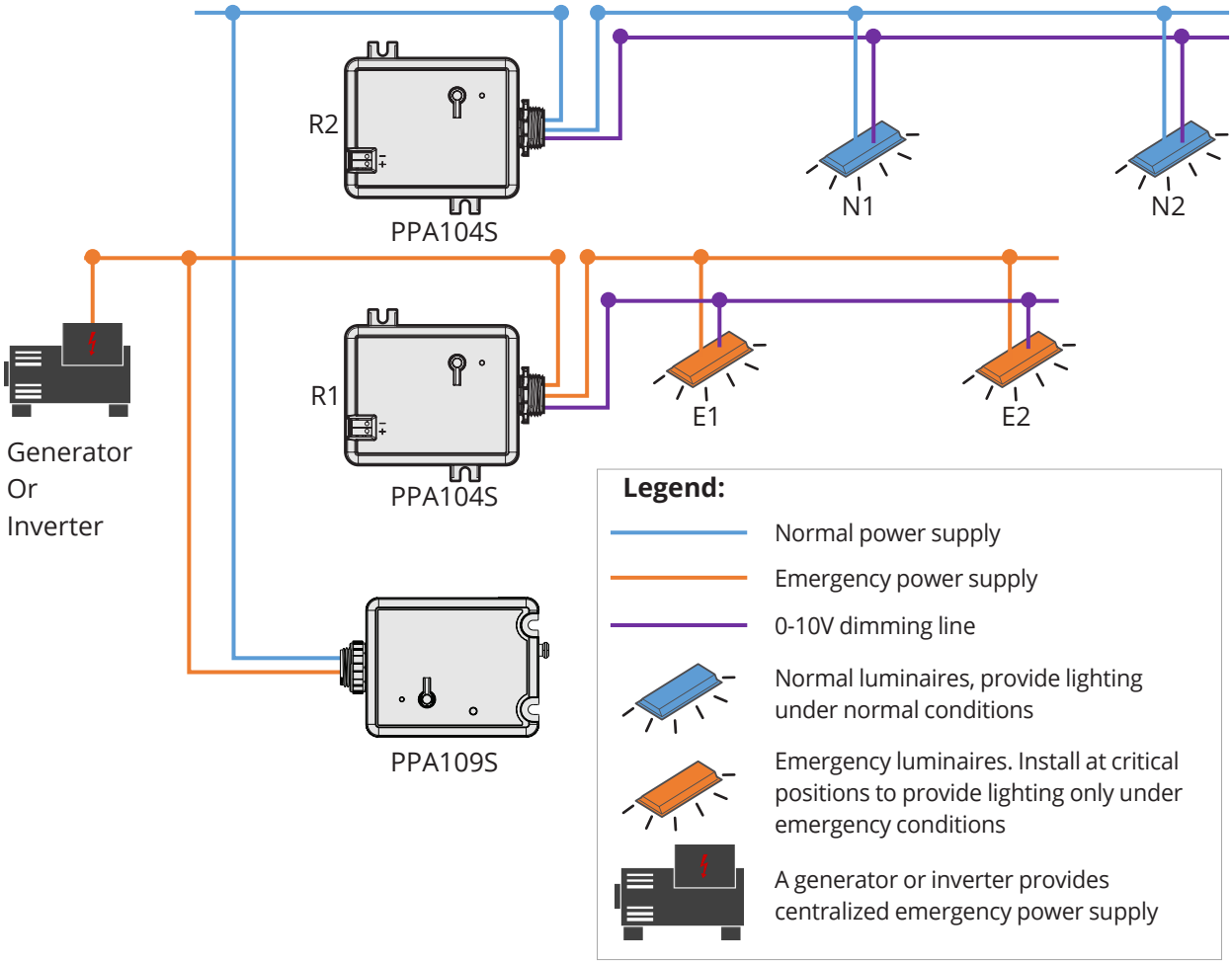
When Normal Power is Disrupted

Set action to “group” and set the “All lights” group to “50” light level. (If level 50 does not meet the emergency lighting requirement, set the group to the level you need.) Repeat every 5 seconds.

When Normal Power is Restored

Set action to “group” and set the “All lights” group to “Auto” light level.

Typical Applications (++PPA)



Emergency and normal power supply are separate. All luminaires are ordinary (dimmable or non-dimmable) without Keilton smart lighting controllers. Emergency luminaires are installed at critical positions and powered by emergency power supply. They only provide lighting under emergency conditions. Other luminaires are powered by normal power supply and only provide lighting under normal conditions.

Suggested Configuration

There are Keilton Zone Controllers (PPA104S) to manage the normal power circuit, emergency power circuit and all luminaires. Create a group named “Emergency lights” and add R1 as the group member. Create a scene named “Normal lighting” and set R1 to TURN OFF and R2 to TURN ON with 100 output level.

When Normal Power is Disrupted

Set the action to “group” and set the “Emergency lights” group to “50” light level. (If level 50 does not meet the emergency lighting requirement, set the group to the level you need.) Repeat every 5 seconds.

When Normal Power is Restored

Set action to “Scene” and select “Normal lighting”.



Need Help?

Technical Support For installation, configuration, and troubleshooting assistance
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