



## **Application Guide: Emergency lighting applications with the Area Lighting Controller (TAC-001)**

### **Overview:**

Installations involving emergency lighting require careful planning and consideration to ensure all applicable codes and regulations are satisfied. Adequate egress lighting must be provided in the event of a power loss.

For emergency lighting applications, we recommend using a UL listed UL924 automatic bypass type device in combination with the TAC-001. Below, we provide one example utilizing the Functional Devices ESRN.

The basic operation of UL924 automatic bypass type devices (including the Functional Devices ESRN) is typically as follows:

- Normally closed contacts are responsible for switching the emergency power.
- Normally open contacts are responsible for bypassing the 0-10V dimming control.

### **In the presence of normal power:**

The UL924 device controls the emergency lighting load, turning it on or off to correspond with the status of the TAC-001 switched AC output. Additionally, it connects the 0-10V dimming output from the TAC-001 to the dimming input on the emergency load, allowing for dimming control from the Toggled iQ system.

### **In the absence of normal power (emergency operation):**

The UL924 bypass device activates the emergency lighting load and opens the contacts for the 0-10V dimming.

### **Required devices:**

- Area Lighting Controller (model: TAC-001)
- UL924 automatic emergency bypass device (model: Functional Devices ESRN)

### **Limitations:**

- Only for applications with un-switched emergency circuits. A different approach must be used battery backup applications.
- Energy for the load is switched by the ESRN. For this application, the TAC-001 is only used as a switch signaling device. As a result, the load is limited to 120/277VAC and the relay ratings of the ESRN (10A to 20A depending on load type). Additionally, the energy monitoring capabilities of the TAC-001 cannot be leveraged.

### **Wiring Example:**

Before beginning the wiring process, refer to the comprehensive installation instructions provided with both the Toggled iQ Area Lighting Controller (TAC-001) and the Functional Devices ESRN.

