



Emergency Lighting Control Device  
 Supports lighting loads up to 10A  
 Operates directly from fire alarm panel 24VDC

Project: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Cat.No: \_\_\_\_\_  
 Type: \_\_\_\_\_  
 Qty: \_\_\_\_\_  
 Notes: \_\_\_\_\_

**Product order number:**  
 BFAI20

**12NC number:**  
 913702494501

### Specifications

**UL Listed for US and Canada**  
 UL 924 Emergency Lighting Compliant  
 Field Installation (Indoor and Damp)

**Full Warranty**  
 5 Years (NOT pro-rata)

**Sensing Input Voltage**  
 24 VDC or 120-277 VAC, 50/60 Hz

**Sensing Input Current**  
 38 mA at 24 VDC  
 40mA at 120-277 VAC

**Relay Contact Ratings**  
 10 Amps at 277 VAC (General Use)

**Temperature Rating (Ambient)**  
 -34 to +60°C (-30 to +140°F)

**Operating Time**  
 20 ms

**Housing**  
 NEMA 1

**Plenum Rating**  
 UL 2043 Plenum Rated

**Indicator Light**  
 LED ON means sensing signal present

**Dimensions**  
 2.80" x 1.70" x 1.50" with a 0.50" threaded nipple  
 (71 mm x 43 mm x 38 mm, 12.7 mm threaded nipple)

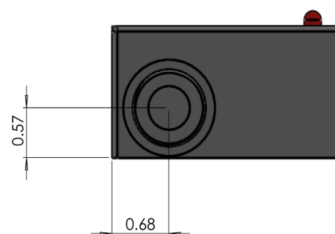
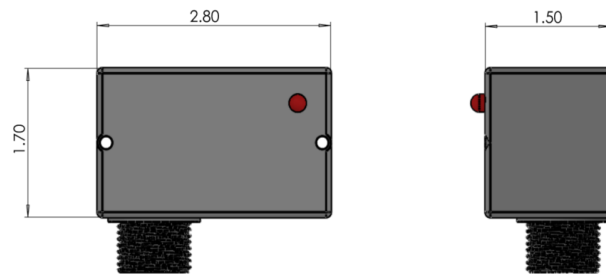
**Weight**  
 4.9 oz. (0.14 kg)

### Benefits

- Interfaces with 24 VDC fire alarm panel or security system to activate other emergency devices
- Allows illumination of generator supplied emergency lighting regardless of wall switch position
- Energy cost savings benefits by eliminating constant night lighting
- Compatible with lighting loads up to 10A
- Small size - can be mounted on standard junction box
- Plenum Rated (UL 2043)
- Extended temperature range up to 60°C

### Dimensions

2.80" x 1.70" x 1.50"



Nipple fitting for 1/2" trade size knockout (0.875" diameter hole)



# BFAI20

## Generator Product

### Application

The BFAI20 has two primary applications. The first is as a fire alarm (24 VDC) interface triggering other emergency devices without this feature into operating in emergency mode whenever the fire alarm system is activated. The second is as a switch bypass or shunt relay. Here it works in conjunction with an auxiliary generator or central inverter system. The unit is designed to control lighting in areas where emergency lighting fixtures are connected on dedicated emergency lighting circuits that are typically on 24 hours per day. The BFAI20 allows normal control of emergency lighting for energy savings and/or task related reasons while strictly adhering to National Electric Code (NEC) requirements. It is suitable for any application where enhanced energy saving of emergency lighting is desired.

### Operation

The BFAI20 senses the presence of 24 VDC from the fire alarm system and opens a contact controlling AC mains to a separate emergency device to trigger it into emergency operation. It also can be used to sense the loss of normal power and switch the lighting load, connecting it to a user-designated emergency circuit. No routine maintenance is required to keep the BFAI20 functional; however, like other life safety equipment, it should be checked periodically to ensure that it is working properly.

### Installation

The BFAI20 emergency lighting control device does not affect normal fixture operation and comes fully assembled to mount onto junction box or luminaire knockout. In addition to available wiring, the device requires a direct unswitched connection to either 24 VDC fire alarm signal wiring or AC mains. See product installation instructions for wiring details.

### Specification

Emergency egress lighting shall be provided by using existing lighting loads equipped with a Bodine BFAI20 emergency lighting relay control unit. The unit shall be capable of controlling dedicated emergency lighting fixtures and energizing them when normal utility power has been lost. The unit shall consist of relay switching circuitry, a test switch, a normal power indicator light and an alternate power indicator light contained in one 2.80"x 1.70"x 1.50" enclosure; shall sense either the 24 VDC fire alarm signal or normal power at 120 to 277 VAC, 50/60 Hz; and be rated for 120 to 277 VAC, 50/60 Hz at up to 10 amps of lighting load. The unit shall be UL Listed for field installation and shall be warranted for a full five years from date of purchase.

### Warranty

The BFAI20 emergency lighting control unit is warranted for five (5) full years from date of purchase. Please see detailed warranty information on our website.

### Example Schematic

