# FB SERIES

## Flasher & Incandescent Beacon Alarm Relay

## Description

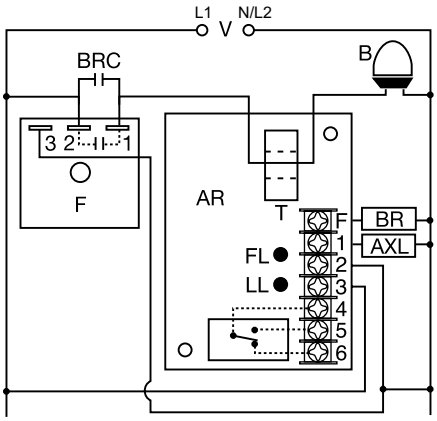
The FB Series is used to monitor the operation of one two-lamp incandescent beacon and one beacon flasher (or auxiliary module). The flasher and lamps are monitored by sensing the flow of current in the circuit. If the lamp(s) or the flasher fail to operate properly, a solid-state output and an isolated SPDT relay energize. When connected to a site monitoring system, this unit provides the remote beacon monitoring protection required by the FAA/FCC. On a multiple beacon structure, one unit is required for each two-lamp incandescent beacon (one unit per beacon for LED beacons).

### Operation

If one lamp in an incandescent beacon fails, the relay and solid-state lamp failure outputs energize after 10s. If the flasher fails in the ON or OFF condition, the relay and the solid-state flasher failure output energizes after 6s. If both failures occur, all three outputs energize after their trip delays.

**Note:** If both incandescent lamps fail, all three outputs will energize. The relay and solid-state flasher failure output energizes after 6s, and the solid-state lamp failure output energizes after 10s.

## Wiring Diagram




V = Voltage
B = Beacon
F = Flasher
T = Toroid
BRC = Flasher Bypass Relay Contacts
AR = FB Alarm Relay
BR = Bypass Relay Coil
FL = Flasher Failure LED
LL = Lamp Failure LED
AXL = Lamp Alarm Relay Coil

NOTE: Flasher module may be located on either the line or load side of the toroidal sensor.

## Features & Benefits

| FEATURES | BENEFITS |
|---|---|
| **Toroidal current sensing** | Reliable low cost monitoring of the flasher and lamps through built-in CT and provides isolation from the monitored circuit |
| **Failsafe beacon monitoring** | Alarm monitors for failed incandescent lamps in addition to flasher function |
| **One isolated, 5A, SPDT alarm output plus two, 1A, solid-state line voltage alarm outputs** | When connected to a site monitoring system, it provides the remote beacon monitoring protection required by the FAA / FCC. |
| **Fixed trip delays for flasher (6s) and lamp (10s) failures** | Prevents nuisance alarms |

## Ordering Information

| MODEL | LINE VOTAGE | LAMP TYPE |
|---|---|---|
| FB120A | 120VAC | Incandescent Beacon |
| FB230A | 230VAC | Incandescent Beacon |

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## Specifications

### Input Voltage

| | |
|---|---|
| **FB120A** | 120VAC ±15% |
| **FB230A** | 230VAC ±15% |
| **AC Line Frequency** | 50/60Hz |
| **Lamp Socket Voltage** | ±10%; 50/60Hz |

### Alarm Outputs

| | |
|---|---|
| **Type** | 3 total - 1 relay, 2 solid state;<br>One isolated SPDT relay rated 5A resistive<br>Two solid-state line voltage outputs rated 0.5A steady, 5A inrush |

### Lamp Failure Detection

| | |
|---|---|
| **FB120A** | For two 620W or 700W lamps |
| **FB230A** | For two 500W or 700W lamps |

### Trip Delays

| | |
|---|---|
| **Flasher Failure** | Fixed at 6s; -0/+40% |
| **Lamp Failure** | Fixed at 10s; -0/+40% |

### LEDs

| | |
|---|---|
| **Lamp Failure (Red)** | Glows when one or both lamps fail |
| **Flasher Failure (Red)** | Glows when the flasher fails |

### Protection

| | |
|---|---|
| **Circuitry** | Encapsulated |
| **Mounting** | Surface mount with two #6 (M3.5 x 0.6) screws |
| **Dimensions** | **H** 88.9 mm (3.5"); **W** 63.5 mm (2.5");<br>**D** 44.5 mm (1.75") |
| **Termination** | 7 position barrier block for 20 AWG (0.5 $mm^2$) to 14 AWG (2.5 $mm^2$) wire |

### Environmental

| | |
|---|---|
| **Operating/Storage Temperature** | -55° to 60°C / -55° to 85°C |
| **Weight** | ≅ 7 oz (198 g) |

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