

Flasher & Beacon Alarm Relay

FB120A/FB120AL/FB230A

Tower Lighting Control



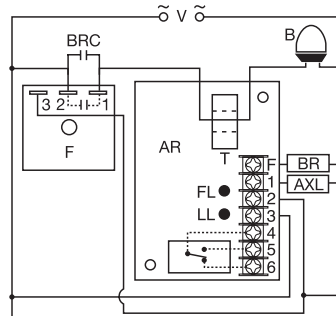
10 YEAR WARRANTY

- Senses Failed Flashing Beacon Lamps (FB120A/FB230A)
- Senses Failed Flashing LED Beacon Lamp (FB120AL)
- Senses Failed Beacon Flasher
- Toroidal Current Sensing
- One 5 A SPDT Isolated Alarm Output
- Two 1 A Solid State Line Voltage Alarm Outputs
- Trip Delays Prevent Nuisance Alarms

Description

The FB120A and FB230A are used to monitor the operation of one two-lamp incandescent beacon and one beacon flasher (or auxiliary module). The FB120AL is used to monitor one Dialight D864 Series LED based flashing red beacon (auxiliary modules cannot be used with the FB120AL). 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).

Connection



Note: Flasher module may be located on either the line or load side of the toroidal sensor. Auxiliary module cannot be used with FB120AL.

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

Operation

FB120A and FB230A

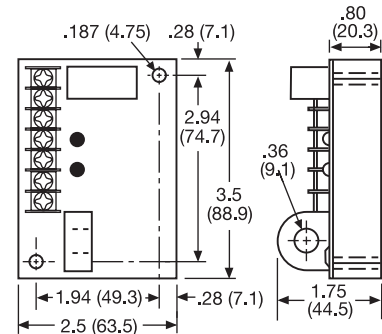
If one lamp in an incandescent beacon fails, the relay and solid state lamp failure outputs energize after 10 s. If the flasher fails in the ON or OFF condition, the relay and the solid state flasher failure output energizes after 6 s. If both failures occur, all three outputs energize after their trip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

FB120AL

If the LED beacon fails or the flasher fails in the OFF condition, the relay and the solid state flasher failure output energizes after 6 s; the solid state lamp failure energizes after 10 s. If the flasher fails in the ON condition, the relay and the solid state flasher failure output energizes after 6 s.

Note: If both incandescent lamps fail or if the beacon is an LED beacon, all three outputs will energize. The relay and solid state flasher failure output after 6 s, and the solid state lamp failure output after 10 s.

Mechanical View



Inches (Millimeters)

Ordering Table

Input	Lamp Type	Part Number
120 V AC	Incandescent Beacon	FB120A
120 V AC	LED Beacon	FB120AL
230 V AC	Incandescent Beacon	FB230A

Technical Data

Input Voltage

FB120A, FB120AL	120 V AC +/-15%; 50 ... 60 Hz
FB230A	230 V AC +/-15%; 50 ... 60 Hz
Lamp Socket Voltage	+/-10%; 50 ... 60 Hz

Alarm Outputs

Type	3 Total -- 1 relay, 2 solid state One isolated SPDT relay rated 5 A resistive Two solid state line voltage outputs rated 0.5 A steady, 5 A inrush
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Lamp Failure Detection

FB120A	For two 620 W or 700 W lamps
FB120AL	For 1 Dialight D864-A11-001 LED Beacon
FB230A	For two 500 W or 700 W lamps

Trip Delays

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

LEDs

Lamp Failure (Red)	Glow when one or both lamps fail
Flasher Failure (Red)	Glow when the flasher fails

Protection

Circuitry	Encapsulated
Mounting	Surface mount with two #6 (M3.5 x 0.6) screws
Package	3.5 x 2.5 x 1.75 in. (88.9 x 63.5 x 44.5 mm)
Termination	7 position barrier block for 20 AWG (0.5 mm ²) to 14 AWG (2.5 mm ²) wire

Environmental

Operating / Storage Temperature	-40°C ... +60°C / -40°C ... +85°C
Weight	≅ 7 oz (198 g)