

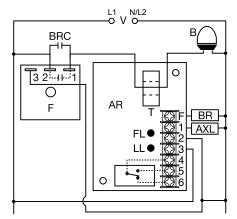
FB9L

Universal Lamp Alarm Relay





Wiring Diagram



V = Voltage

B = Beacon

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

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

Description

The FB9L is a universal lamp alarm relay designed to sense the failure of flashing LED beacon lamps. It will monitor the operation of one to eight beacons connected to a single flasher and/or auxiliary modules and the operation of the flasher. The FB9L output relay energizes when one or more lamps fail. All monitored lamps must be the same wattage and voltage. The 0.5A solid-state output energizes when a flasher failure is sensed.

Operation

When a LED beacon lamp fails, the FB9L senses a decrease in current flow. After a 10s lamp failure trip delay, the isolated SPDT (4-5-6) and non-isolated SPNO (3-1) relay contacts energize. These contacts are used to indicate a beacon failure has occurred. The "L" onboard LED indicator flashes green during the trip delay and glows red after the output relay energizes. Connected to a site monitoring system, it provides remote beacon monitoring required by FAA-AC No: 150/5345-43E.

The FB9L also monitors the operation of the flasher. If the flasher remains in the ON or OFF condition for more than 6s the solid-state output energizes and the "F" flasher failure, onboard LED glows red. This output is normally used to energize an external flasher bypass relay. The contacts of the bypass relay are used to route voltage around the failed flasher and to indicate an alarm condition.

Note: In a single flasher, single beacon system, if the beacon lamp fails, zero current flow is detected. This will cause the flasher failure output to energize after 6s and then the beacon failure outputs after 10s. This is normal operation and can be expected anytime zero current is flowing through the monitored conductor.

Features & Renefits

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FEATURES	BENEFITS	
Self calibrating	Saves time at installation. No fine adjustment required.	
Failsafe beacon monitoring	Alarm monitors for failed LED lamps in addition to flasher function	
Number of beacons monitored is switch selectable for up to 8	User selection allows quick set up and easy adaption to multiple applications	
Universal voltage 120 to 230VAC	Meets wide application requirements	
Isolated, 10A, SPDT alarm output contacts	Provides remote beacon monitoring when connected to a site monitoring system, which is required by the FAA	

Accessories



C103PM (AL) DIN Rail

35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



P1023-20 DIN Rail Adapter

Allows module to be mounted on a 35 mm DIN type rail with two #10 screws.

Flashers and Tower Lighting Controls

150mA - 8.0A

120 to 230VAC / ±15%

0.5A steady; 5A inrush

50/60Hz

15A max. (may not calibrate above 8A)

150mA - 8.0A (total all lamps $\leq 8.0A$)

To operate a spare lamp or alarm

5A @ 240VAC or 30VDC resistive; 1/4 hp @ 125VAC; 1/2 hp @ 250VAC

10A @ 240VAC or 30VDC resistive; 1/4 hp @ 125VAC; 1/2 hp @ 250VAC

Glows red when one or more lamps fail

Glows red when the flasher fails

Tower and Obstruction Lighting Controls



FB9L

Specifications

Sensors

Calibration Range (total all Lamps)

Absolute Max Current

(total all Lamps) Single Lamp Current

Trip Delay

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

Input

Input Voltage/Tolerance

AC Line Frequency

Output

Line Voltage Output (SPNO)

Isolated Alarm Output (SPDT)

Solid-State Line Voltage Output (F)

Mechanical

Mounting One #10 (M5 x 0.8) screw **Dimensions H** 76.7 mm (3"); **W** 50.8 mm (2");

D 41.7 mm (1.64")

Encapsulated

Termination IP20 screw terminals for up to 14 AWG (2.45 mm²) wire or two 16 AWG (1.3 mm²) wires

LEDs Power/Timing/Lamp Failure

(Bi-color)

Flasher Failure (Red)

Protection

Circuitry **Environmental**

Operating/Storage

Temperature

 -40° to 60° C / -40° to 85° C

Weight $\approx 3.9 \text{ oz } (111 \text{ g})$ FAA-AC No. 150/5345-43E

Indicator Table

Green	Input ON & Calibrated
Green Flashing	Trip Delay
Red	Lamp Failure
Red/Green Flashing	Calibrating
Red Flashing	Not Calibrated
Red	Flasher Failure
	Green Flashing Red Red/Green Flashing Red Flashing

ПОСТАВКА ЭЛЕКТРОННЫХ КОМПОНЕНТОВ

Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001 Адрес: 105318, г.Москва, ул.Щербаковская д.3, офис 1107

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