



The FB120A and FB230A are 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).

For more information see:
Appendix B, page 167, Figure 32 for dimensional drawing.
Appendix C, page 171, Figure 31 for connection diagram.

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.

Features:

- Senses failed flashing incandescent beacon lamps & beacon flashers
- Toroidal current sensing
- One isolated, 5A, SPDT alarm output
- Two 1A, solid-state line voltage alarm outputs
- Trip delays prevent nuisance alarms

Available Models:

FB120A
FB230A

Order Table:

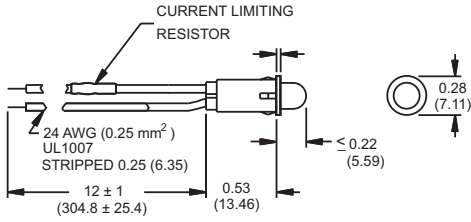
Input	Lamp Type	Part Number
120VAC	Incandescent Beacon	FB120A
230VAC	Incandescent Beacon	FB230A

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; One isolated SPDT relay rated 5A resistive 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	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° to 60°C / -40° to 85°C		
Weight	≅ 7 oz (198 g)		

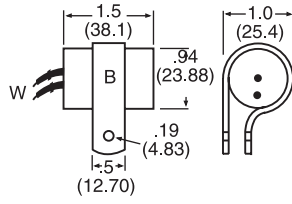
Appendix B - Dimensional Drawings

FIGURE 24



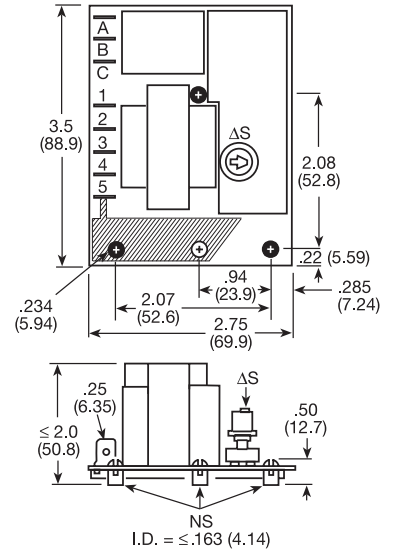
LPM

FIGURE 25



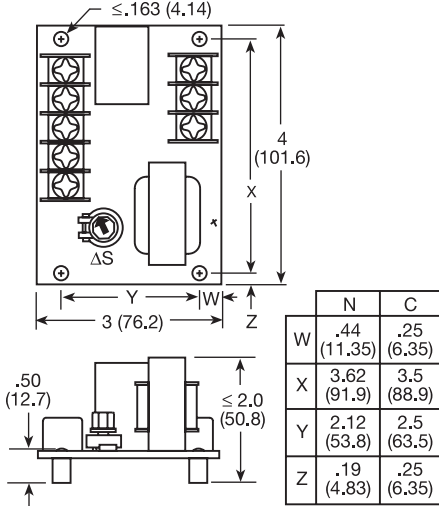
MSM

FIGURE 26



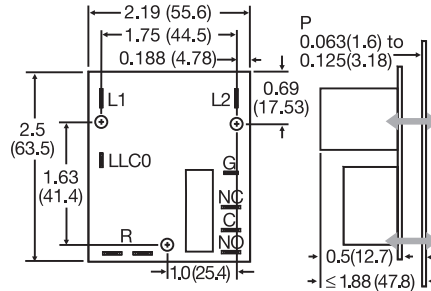
LLC1

FIGURE 27



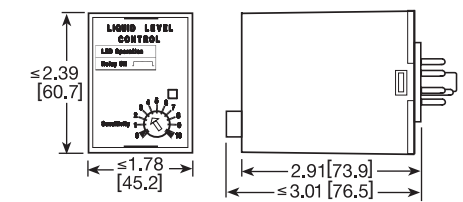
LLC2

FIGURE 28



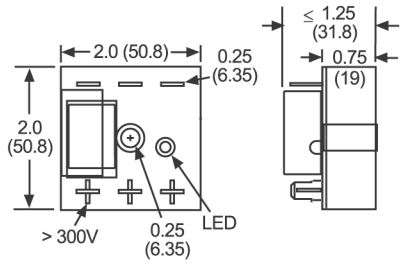
LLC8

FIGURE 29



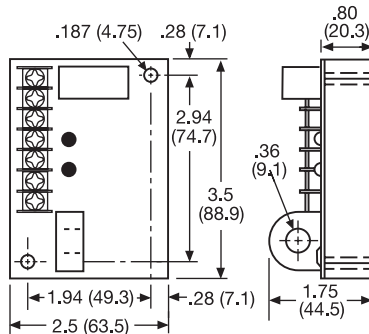
LLC5

FIGURE 30



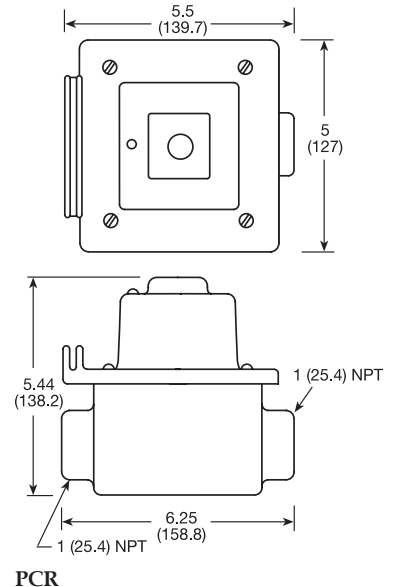
TVM; TVW

FIGURE 32



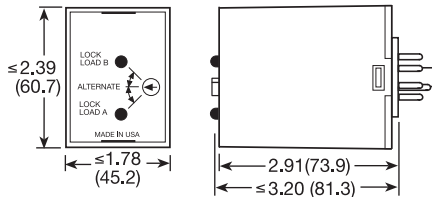
FB; SCR

FIGURE 33



PCR

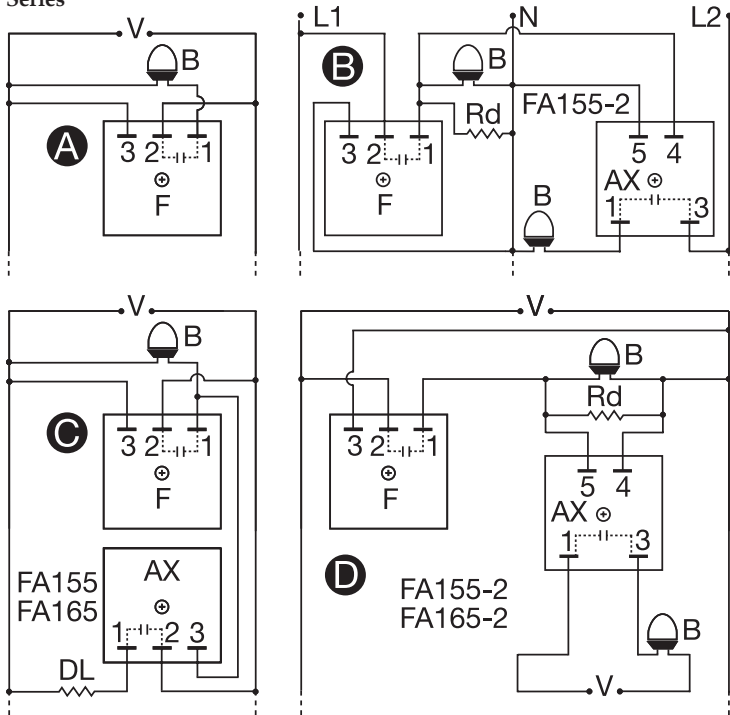
FIGURE 31



ARP

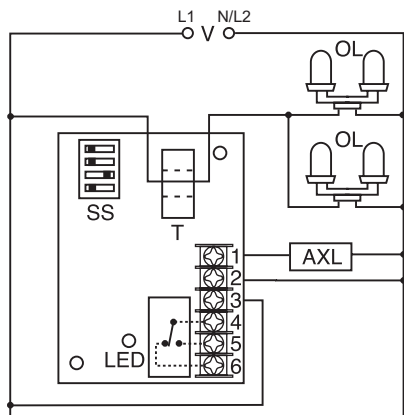
inches (millimeters)

FIGURE 30 - FS155 & FS165 & FA Series



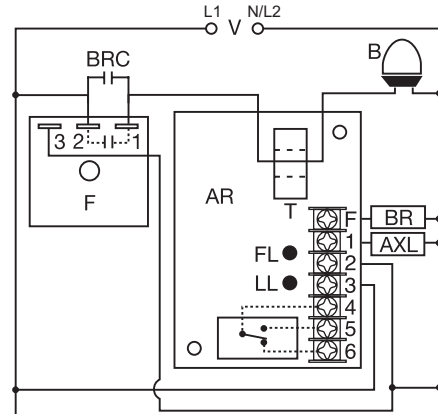
F = Flasher (FS155-30T, FS155-30RF, FS165-30T, FS165-30RF)
 AX = Auxiliary Unit
 B = Beacon
 DL = Dummy Load for Constant Line Loading
 DL = 3.3 KΩ @ 5W for 120VAC
 8.5 KΩ @ 5W for 230VAC

FIGURE 32 - SCR490D



V = Voltage
 OL = Obstruction Lamps
 T = Toroid
 SS = Selector Switch
 AXL = Auxiliary Load/Alarm
 Relay contacts are isolated.

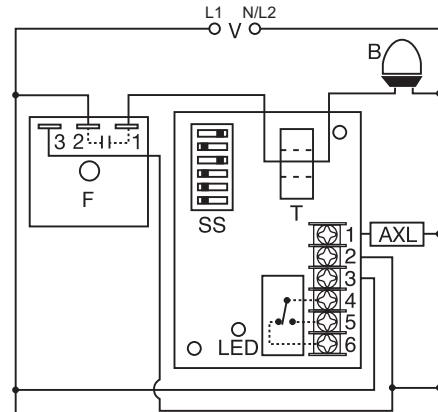
FIGURE 31 - FB Series



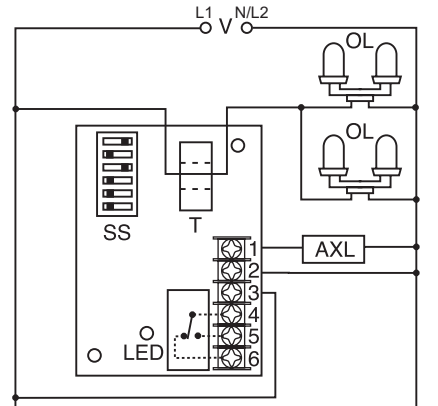
V = Voltage
 B = Beacon
 F = Flasher
 BRC = Flasher Bypass Relay Contacts
 T = Toroid
 AR = FB Alarm Relay
 BR = Bypass Relay Coil
 FL = Flasher Failure LED
 LL = Lamp Failure LED
 AXL = Lamp Alarm Relay Coil
 NOTE: Flasher module may be located on either the line or load side of the toroidal sensor.

FIGURE 33 - SCR Series

Beacon Connection Diagram



Obstruction Lamp Connection Diagram



V = Voltage
 B = Beacon Lamps
 SS = Selector Switch
 T = Toroid
 F = Flasher
 AXL = Auxiliary Load/Alarm
 OL = Obstruction Lamps
 Relay contacts are isolated.