Universal Lamp Alarm Relay

SCR Series

The SCR series is a universal lamp alarm relay designed to sense the failure of flashing or steady incandescent beacon lamps or steady side lights. The toroidal current sensor provides isolation and allows monitoring of more than one line at a time. The SCR Series energizes when one or more lamps fail. It will monitor the operation of one to four side lights and up to four beacon lamps.

For more information see:
Appendix B, page 167, Figure 32 for dimensional drawing.
Appendix C, page 171, Figure 33 for connection diagram.

Operation

When a lamp fails, the SCR Series senses a decrease in current flow. After a fixed time delay, the LED glows and the two alarm outputs energize. The outputs and the LED are reset when the failed lamps are replaced and the current returns to the nominal setting, or when the input voltage is removed. The SCR will sense an open flasher, it will not sense a continuously ON flasher (see FB Series).

Features:

- Monitors incandescent lamps for failure
- Senses failed flashing beacon or obstruction lamps
- Switch selectable number, voltage, & wattage of lamps
- Isolated, 10A, SPDT alarm output contacts
- 1A, solid-state line voltage alarm output
- Toroidal current sensing

Approvals: (SCR430T only)

Available Models:

SCR430T
SCR630T

Order Table:

Input	Lamp Type	Part Number
120VAC	Incandescent	SCR430T
230VAC	Incandescent	SCR630T

Specifications

Lamp Monitoring

Capacity (in lamps)	100W	116W	620W	700W
SCR430T 120VAC Lamps	4	4	4	n/a
SCR630T 230VAC Lamps	n/a	4	n/a	4

Time Delay

Trip Delay . . . . . Factory fixed ≅ 6s

Input

Input Voltage/Tolerance . . . . . SCR430T - 120VAC ±10%
SCR630T - 230VAC ±10%
AC Line Frequency 50/60Hz

Output

. . . . . To operate a spare lamp or alarm
Line Voltage Output (Solid-state Rated) . . . . . ≤ 125W @ 120VAC
≤ 250W @ 240VAC
Isolated Alarm Output (SPDT) . . . . . 10A @ 240VAC or 30VDC resistive;
1/4 hp @ 125VAC; 1/2 hp @ 250VAC

Mechanical

Mounting . . . . . 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 . . . . . Screws with captive clamps for up to 14 AWG (2.45 mm²) wire

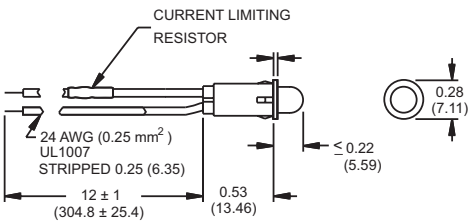
Protection

Circuitry . . . . . Encapsulated

Environmental

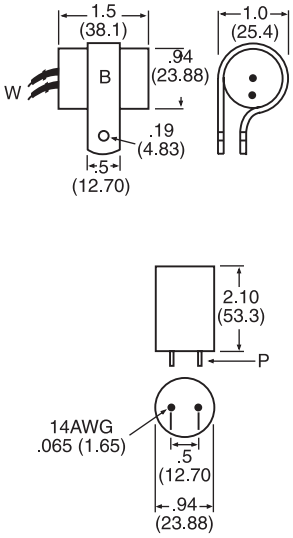
Operating Temperature . . . . . -40° to 65°C
Weight . . . . . ≅ 6.8 oz (193 g)

FIGURE 24



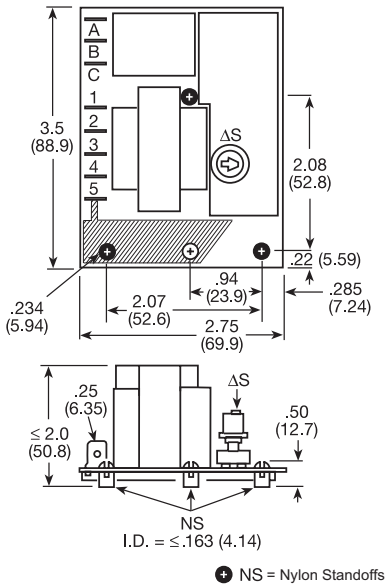
LPM

FIGURE 25



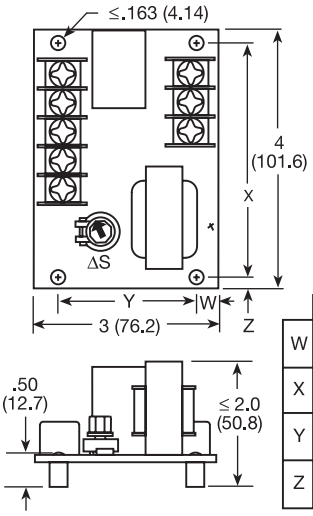
MSM

FIGURE 26



LLC1

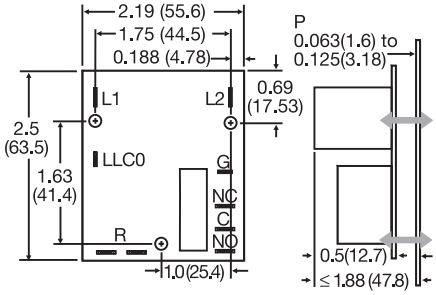
FIGURE 27



	N	C
W	.44 (11.35)	.25 (6.35)
X	3.62 (91.9)	3.5 (88.9)
Y	2.12 (53.8)	2.5 (63.5)
Z	.19 (4.83)	.25 (6.35)

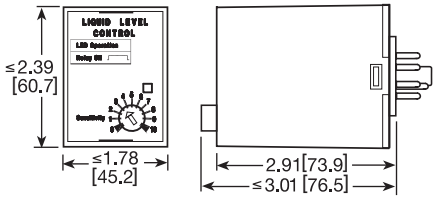
LLC2

FIGURE 28



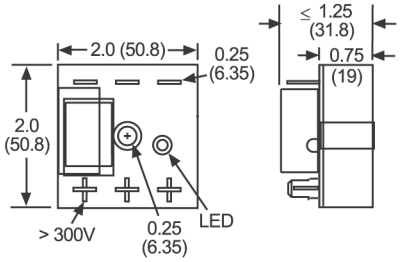
LLC8

FIGURE 29



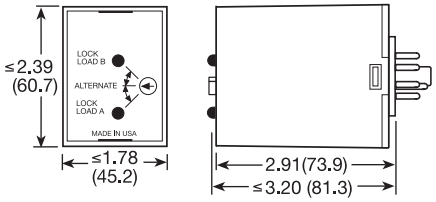
LLC5

FIGURE 30



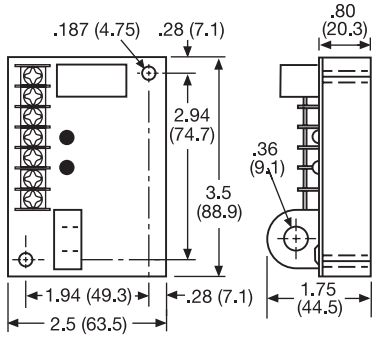
TVM; TVW

FIGURE 31



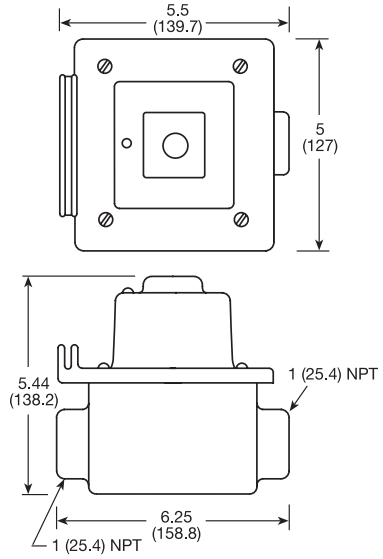
ARP

FIGURE 32



FB; SCR

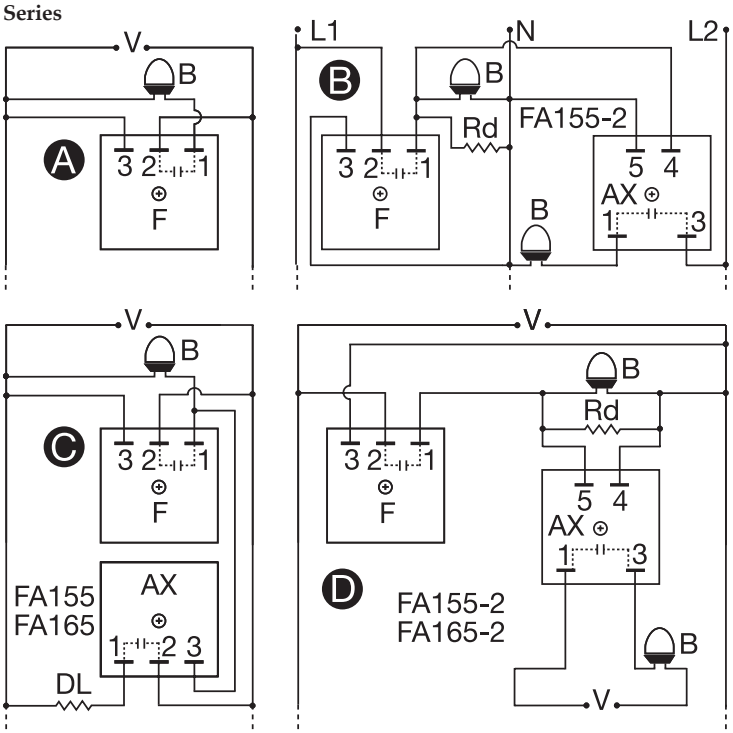
FIGURE 33



PCR

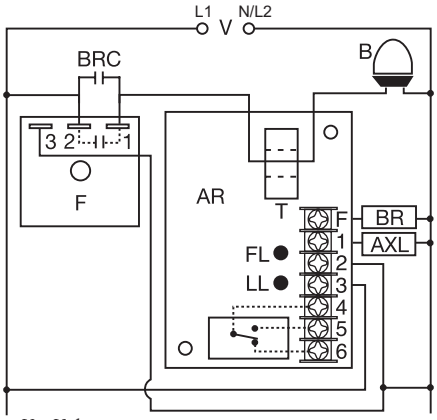
inches (millimeters)

FIGURE 30 - FS155 & FS165 & FA Series



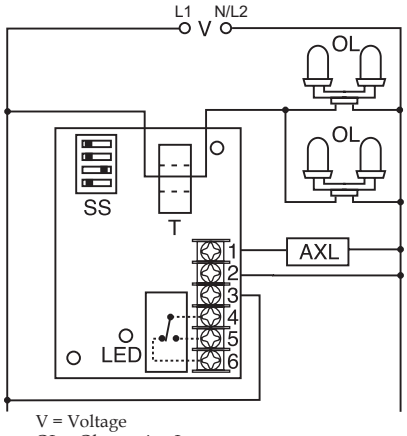
F = Flasher (FS155-30T, FS155-30RF, FS165-30T, FS165-30RF)
AX = Auxiliary Unit
B = Beacon
DL = Dummy Load for Constant Line Loading
Rd = 3.3 KΩ @ 5W for 120VAC
8.5 KΩ @ 5W for 230VAC

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.

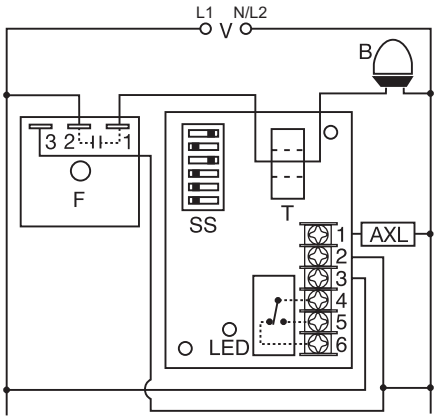
FIGURE 32 - SCR490D



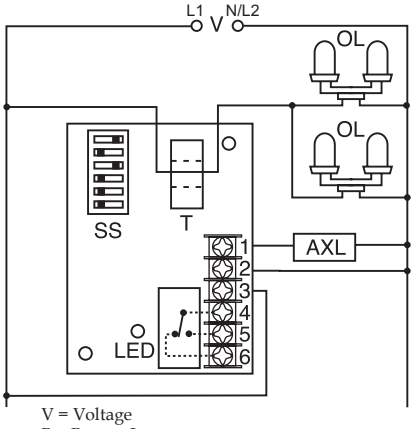
V = Voltage
OL = Obstruction Lamps
T = Toroid
SS = Selector Switch
AXL = Auxiliary Load/Alarm
Relay contacts are isolated.

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.