

# Obstruction Lamp Alarm Relay

## SCR490D

### Beacon & Obstruction

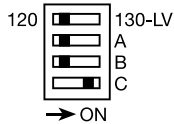
Tower & obstruction lighting



- Senses Failed Obstruction Lamps
- 2 ... 9 Steadily Burning Lamps can be Monitored
- Toroidal Current Sensing
- 10 A Isolated SPDT Alarm Output Contacts
- 1 A Solid State Line Voltage Alarm Output
- Six Second Trip Delay Prevents Nuisance Alarms

Approvals:

#### Switch Setting:

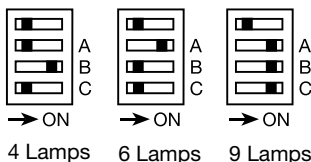


LV = Lamp Voltage

Example shown above is:  
3 Lamps are Monitored  
120 V AC rated lamps

Total Number of Lamps	Switches On
2	No Switches
3	C
4	B
5	B + C
6	A
7	A + C
8	A + B
9	A + B + C

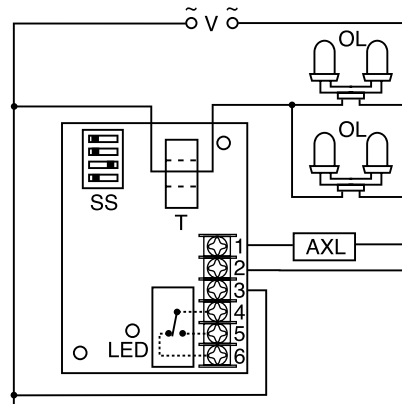
Other Examples:  
All 120 V AC rated lamps



#### Description

The SCR490D Series is used to provide remote monitoring of steady burning incandescent marker and obstruction lighting. Four onboard switches allow operator programming for lighting systems with two through nine lamps on a single AC circuit. The SCR490D uses a toroidal sensor and electronic circuitry to sense the failure of one or more lamps.

#### Connection



Relay contacts are isolated. Dashed lines are internal connections.

V = Voltage OL = Obstruction Lamps  
T = Toroid SS = Selector Switch  
AXL = Auxiliary Load/Alarm

#### Available Models-

- SCR490D

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Input	Part Number
120 V AC	SCR490D

#### Technical Data

##### Operation

Number of Lamps: 2 ... 9 (Selectable)  
Lamp Wattage: 116 W, incandescent lamps  
Rated Lamp Voltage: 120 or 130 V AC (Selectable)  
Monitored Voltage: 120 V AC +/- 3%  
Trip Delay:  $\approx$  6 s Fixed

##### Input

Voltage/Frequency: 120 V AC / 50 ... 60 Hz  
Tolerance: -20% ... +10%

##### Output

Line Voltage Output (Solid State Rated):  $\leq$  125 W to operate a spare lamp or alarm  
Isolated Alarm Output: 10 A at 120 V AC or 30 V DC resistive  
1/4 hp at 125 V AC; 1/2 hp at 250 V AC

##### Mechanical

Mounting: Surface mount w/ two #6 (M3.5 x 0.6) screws  
Termination: Screws with captive clamps for up to 14 AWG (2.45 mm<sup>2</sup>) wire

##### Protection

Circuitry: Encapsulated

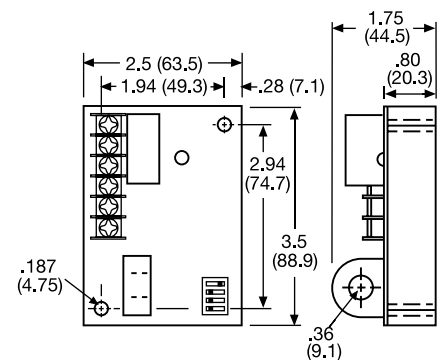
##### Environmental

Operating/Storage Temperature: -40°C ... +65°C / -40°C ... +85°C  
Package: 3.5 x 2.5 x 1.75 in. (88.9 x 63.5 x 44.5 mm)  
Humidity: 95% relative, non-condensing  
Weight:  $\approx$  6.8 oz (193 g)

#### Operation

When a lamp fails, the SCR490D senses a decrease in current flow. Then, after a fixed time delay, it transfers to its alarm mode. In alarm mode, the LED indicator, the output relay (SPDT isolated contacts), and a non-isolated solid state output are energized. Replacement of the failed lamps resets the alarm outputs and the LED indicator. To prevent false alarm signals, power must be applied to the SCR490D at the same time that lamps are energized.

#### Mechanical View



Inches (Millimeters)