

## Protection Relays

Pump Controls and Liquid Level Controls

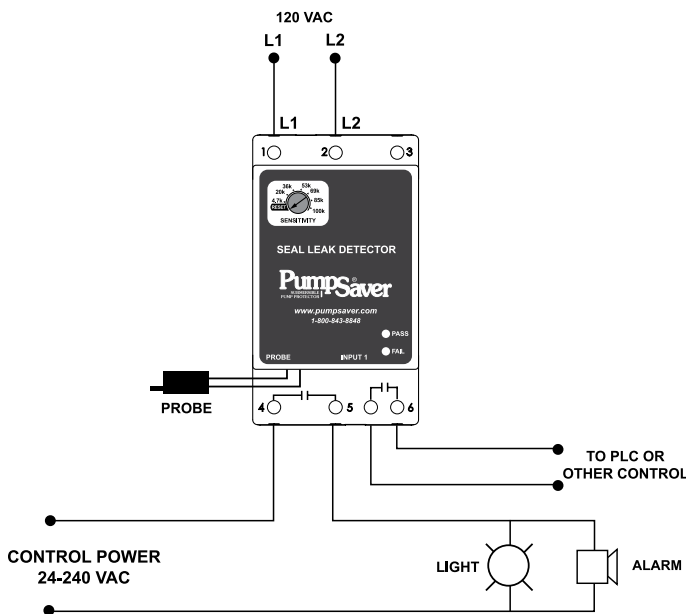


# 460-15-100-SLD

## Single-Channel Seal-Leak Detector



## Wiring Diagram



## Description

The 460-15-100-SLD is a seal-leak detector to sense seal failures on submersible pumps. A microcontroller-based relay monitors the shaft seal of a submersible pump motor. A resistive probe is installed in the seal cavity. If water leaks into the pump, the resistance measured by the probe decreases. When the resistance drops below the sensitivity setpoint, the unit will trip and the relay contacts will change state. Output relay logic can be reversed by removing an external jumper. The unit will automatically reset when a fault is cleared.

## Features & Benefits

FEATURES	BENEFITS
<b>Unique probe protection logic</b>	Probes are protected from scale build up through pulsed DC signal between the probes
<b>Invertible relay logic</b>	Allows flexibility to be used in pump-up and pump-down applications
<b>LED status indicators</b>	Provides visual indication of the relay status
<b>2 relay contacts</b>	Control independent loads on different circuits

## Specifications

### Input Characteristics

<b>Control Voltage</b>	110/120VAC nominal
<b>Frequency</b>	50/60Hz (Note: 50Hz will increase all delay timers by 20%)

### Functional Characteristics

<b>Sensitivity</b>	4.7k-100k $\Omega$
<b>Probe Sense Voltage</b>	5vdc pulsed

### Output Characteristics

<b>Output contact Rating – (Two Form A - SPST)</b>	
<b>Pilot Duty</b>	360VA @ 240VAC
<b>General Purpose</b>	8A @ 240VAC

### General Characteristics

<b>Ambient Temperature Range</b>	
<b>Operating</b>	-40° to 70°C (-40° to 158°F)
<b>Storage</b>	-40° to 80°C (-40° to 176°F)
<b>Maximum Input Power</b>	2 W
<b>Class of Protection</b>	IP20, NEMA 1 (finger safe)
<b>Relative Humidity</b>	10-95%, non-condensing per IEC 68-2-3
<b>Terminal Torque</b>	4.5 in.-lbs.
<b>Wire</b>	AWG 12-20 AWG

### Standards Passed

<b>Electrostatic Discharge (ESD)</b>	IEC 61000-4-2, Level 3, 6kV contact, 8kV air
<b>Radio Frequency Immunity, Radiated</b>	150MHz, 10 V/m
<b>Fast Transient Burst</b>	IEC 61000-4-4, Level 3, 3.5kV input power and controls

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Expertise Applied | Answers Delivered

**460-15-100-SLD****Surge****IEC**IEC 61000-4-5, Level 3, 4kV line-to-line;  
Level 4, 4kV line-to-ground**ANSI/IEEE**C62.41 Surge and Ring Wave Compliance  
to a level of 6kV line-to-line**Hi-Potential Test**

Meets UL508 (2 x rated V + 1000 V for 1 min.)

**Safety Marks****UL**

UL508 (File #E68520)

**CE**

IEC 60947

**Enclosure**

Polycarbonate

**Dimensions****H** 88.9 mm (3.5"); **W** 52.93 mm (2.08");**D** 59.69 mm (2.35")**Weight**

1 lb. (16 oz., 453.59 g)

**Mounting Method**35mm DIN rail or Surface Mount  
(#6 or #8 screws)