

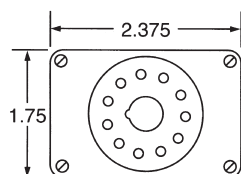
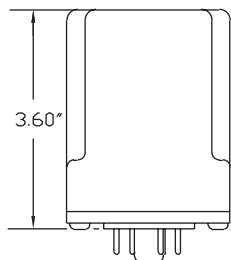
**OPERATION**

The ATC Diversified **SPM Series** Single Channel Seal Failure module is a specialized control for monitoring the **shaft seal** of a **submersible pump motor**. A leak is detected by sensing the position of a resistive float switch installed in the seal cavity. When the resistance drops below the sensitivity rating, the output relay energizes and the LED illuminates.



*Single Channel Seal Failure Alarm*

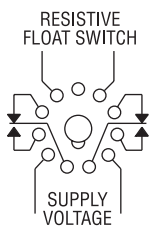
**DIMENSIONS (INCHES)**



**SPECIFICATIONS**

<b>CONTROL VOLTAGE</b>	120 VAC, 50/60 Hz
<b>SWITCH VOLTAGE</b>	9 VDC
<b>ISOLATION</b>	2500 Volts
<b>POWER REQUIRED</b>	2 VA
<b>DUTY CYCLE</b>	Continuous
<b>SENSITIVITY</b>	470 Ω ±10% Fixed 470 Ω to 10K Ω ±10% Adjustable 4.7K Ω to 100K Ω ±10% Adjustable
<b>CONTACT RATING</b>	DPDT, 10 A @ 250 VAC Resistive, 360 VA Inductive
<b>RESPONSE TIMES</b>	Operate 15 ms (approximately) Release 8 ms (approximately)
<b>LIFE EXPECTANCY</b>	Mechanical 10,000,000 Operations (Minimum) Electrical 50,000 Operations @ Rated Load
<b>INDICATORS</b>	Red LED illuminates when leak is detected
<b>TEMPERATURE RATING</b>	Operate -4° to 131°F (-20° to +55°C) Storage -40° to 185°F (-40° to +85°C)
<b>ENCLOSURE</b>	11-Pin plug-in "A" style enclosure
<b>WEIGHT</b>	8 oz.

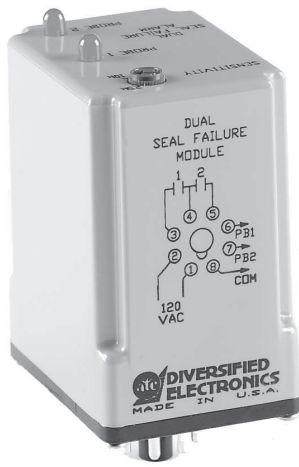
**WIRING**



RB-11/PF013A

**MODEL NUMBER**

<b>MODEL NUMBER</b>	SPM	120	AAA	
<b>SENSITIVITY</b>				
470 Ω ±10% Fixed				470
470 Ω to 10K Ω ±10% Adjustable				10K
4.7K Ω to 100K Ω ±10% Adjustable				100K



**CE** US  
E55826

## Dual Channel Seal Failure Alarm

### SPECIFICATIONS

<b>CONTROL VOLTAGE</b>	120 VAC, 50/60 Hz
<b>SWITCH VOLTAGE</b>	9 VDC
<b>ISOLATION</b>	2500 Volts
<b>POWER REQUIRED</b>	2 VA
<b>DUTY CYCLE</b>	Continuous
<b>SENSITIVITY</b>	10K $\Omega$ to 25K $\Omega$ $\pm$ 10% Adjustable 4.7K $\Omega$ to 100K $\Omega$ $\pm$ 10% Adjustable
<b>CONTACT RATING</b>	(2) SPST-N.O., 5 A @ 120 VAC Resistive, 345 VA Inductive
<b>LIFE EXPECTANCY</b>	Mechanical 20 Million Operations Electrical 50,000 Operations @ Rated Load
<b>INDICATORS</b>	Red LED illuminates when leak is detected
<b>TEMPERATURE RATING</b>	Operate -4° to 131°F (-20° to +55°C) Storage -40° to 185°F (-40° to +85°C)
<b>ENCLOSURE</b>	8-Pin plug-in "A" style enclosure
<b>WEIGHT</b>	8 oz.

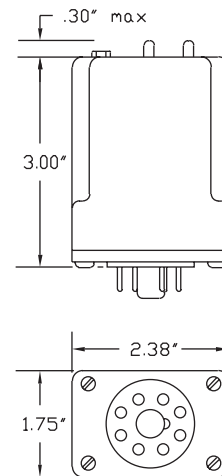
### MODEL NUMBER

<b>MODEL NUMBER</b>	SPM	120	ABA	
<b>SENSITIVITY</b>	10K $\Omega$ to 25K $\Omega$ $\pm$ 10% Adjustable			25K
	4.7K $\Omega$ to 100K $\Omega$ $\pm$ 10% Adjustable			100K

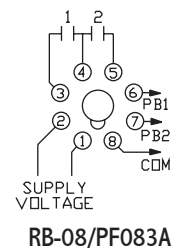
### OPERATION

The ATC Diversified Electronics **SPM Series dual Seal Failure** module is a specialized control for monitoring the shaft seals of *two submersible pump motors*. Leaks are detected by sensing the conductivity of the contaminating fluid through probes installed in the seal cavity. When a seal begins to leak, the seal failure module energizes one of its SPST output relays indicating that the seal needs to be replaced before the motor is damaged. The sensitivity of the probe inputs is field adjustable. When the resistance between one of the probe inputs and the common connection drops below the sensitivity setting, the corresponding output relay and LED are activated.

### DIMENSIONS (INCHES)



### WIRING



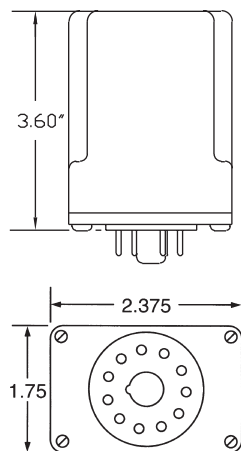
**OPERATION**

The non-volatile **Latching Temperature Switch** relay monitors a normally-closed-low temperature switch. It incorporates a bistable relay that retains its state during power failures. LEDs indicate the status of the relay, and connections for an external reset button are provided for manual control. The reset inputs of multiple units may be connected to a single push button as long as proper polarity is observed when making the connections. Under normal conditions the temperature switch is closed and the relay is de-energized. When the temperature switch opens, the relay energizes and latches on until the temperature switch re-closes and the reset button is pressed. The unit will function properly with zero to 2k  $\Omega$  of resistance in series with the temperature switch.



*Temperature Switch Relay*

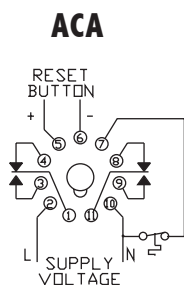
**DIMENSIONS (INCHES)**



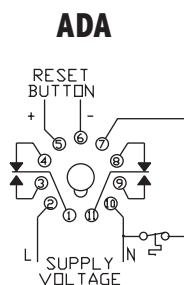
**SPECIFICATIONS**

<b>CONTROL VOLTAGE</b>	120 VAC, 50/60 Hz	
<b>POWER REQUIRED</b>	2 VA	
<b>DUTY CYCLE</b>	Continuous	
<b>CONTACT RATING</b>	SPM-120-ACA	SPDT, 10 A @ 250 VAC, Resistive, 360 VA Ind.
	SPM-120-ADA	DPDT, 10 A @ 250 VAC, Resistive, 360 VA Ind.
<b>RESPONSE TIMES</b>	Operate	10 ms (approximately)
	Release	1 SEC (approximately)
<b>LIFE EXPECTANCY</b>	Mechanical	30 Million Operations
	Electrical	50,000 Operations @ Rated Load
<b>INDICATORS</b>	SPM-120-ACA	Green LED illuminates under normal conditions Red LED illuminates under fault conditions
	SPM-120-ADA	None
<b>TEMPERATURE SWITCH</b>	Voltage	12 VDC
	Current	2 mA max.
<b>TEMPERATURE RATING</b>	Operate	-4° to 131°F (-20° to +55°C)
	Storage	-40° to 185°F (-40° to +85°C)
<b>ENCLOSURE</b>	11-Pin plug-in "A" style enclosure	
<b>WEIGHT</b>	8 oz.	

**WIRING**



RB-11/PF013A



RB-11/PF013A