SFP Series Pump Seal Failure Relays are designed to monitor the shaft seals of submersible pumps. A resistive-measuring probe is installed in the pump seal cavity. If the seal starts to leak, contaminating fluid enters the seal cavity. This lowers the resistance between the internal probe and the common connection. When the resistance drops below the user-adjustable sensitivity set-point of the relay, the output relay energizes and the LED turns Red ON. The relay output can be used to give an alarm indication of a leaking seal. These products will automatically reset when the fault condition clears.

Three output configurations are offered: an 8 pin SPDT single channel relay and an 11 pin DPDT single channel relay to monitor a single pump, and an 8 pin dual channel relay (with 2 SPNO contacts) to monitor two pumps. Probes are pulsed with a DC voltage to prevent electroplating issues.

<table>
<thead>
<tr>
<th>CONFIGURATION</th>
<th>INPUT VOLTAGE</th>
<th>SENSITIVITY RANGE</th>
<th>PRODUCT NUMBER</th>
<th>WIRING/ SOCKET</th>
</tr>
</thead>
<tbody>
<tr>
<td>SINGLE CHANNEL 8 Pin SPDT</td>
<td>24V AC</td>
<td>4.7K to 100KΩ 1K to 250KΩ</td>
<td>SFP024A100 SFP024A250</td>
<td>8 Pin Octal 70169-D</td>
</tr>
<tr>
<td></td>
<td>120V AC</td>
<td>4.7K to 100KΩ 1K to 250KΩ</td>
<td>SFP120A100 SFP120A250</td>
<td></td>
</tr>
<tr>
<td></td>
<td>240V AC</td>
<td>4.7K to 100KΩ 1K to 250KΩ</td>
<td>SFP240A100 SFP240A250</td>
<td></td>
</tr>
<tr>
<td>SINGLE CHANNEL 11 Pin DPDT</td>
<td>24V AC</td>
<td>4.7K to 100KΩ 1K to 250KΩ</td>
<td>SFP024B100 SFP024B250</td>
<td>11 Pin Octal 70170-D</td>
</tr>
<tr>
<td></td>
<td>120V AC</td>
<td>4.7K to 100KΩ 1K to 250KΩ</td>
<td>SFP120B100 SFP120B250</td>
<td></td>
</tr>
<tr>
<td></td>
<td>240V AC</td>
<td>4.7K to 100KΩ 1K to 250KΩ</td>
<td>SFP240B100 SFP240B250</td>
<td></td>
</tr>
<tr>
<td>DUAL CHANNEL 8 Pin (2) SPNO</td>
<td>24V AC</td>
<td>4.7K to 100KΩ 1K to 250KΩ</td>
<td>SFP024C100 SFP024C250</td>
<td>8 Pin Octal 70169-D</td>
</tr>
<tr>
<td></td>
<td>120V AC</td>
<td>4.7K to 100KΩ 1K to 250KΩ</td>
<td>SFP120C100 SFP120C250</td>
<td></td>
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<td>240V AC</td>
<td>4.7K to 100KΩ 1K to 250KΩ</td>
<td>SFP240C100 SFP240C250</td>
<td></td>
</tr>
</tbody>
</table>

Sockets & Accessories available
**Application Data**

Voltage Tolerance:
AC Operation: +10/-15% of nominal at 50/60 Hz.

Load (Burden):
3 VA

Probe Voltage:
5V DC Pulsed

Response Time:
Pick-up: 1 Second
Drop-out: 1 Second

LED Indicator:
Green ON with input voltage applied; Red ON when seal leak detected and relay energized

Temperature:
Operating: -28° to 65°C (-18° to 149°F)
Storage: -40° to 85°C (-40° to 185°F)

**Output Contacts:**
Single Channel Relays:
- 8 Pin SPDT: 10A @ 240V AC / 7A @ 28V DC, 1/4HP @ 120V AC (N.O.)
- 11 Pin DPDT: 7A @ 240V AC / 7A @ 28V DC, 1/4HP @ 120V AC (N.O.)

Dual Channel Relays:
- (2) 5A @ 240V AC / 5A @ 28V DC, 1/4HP @ 120V AC (N.O.)

**Life:**
Mechanical: 10,000,000 operations
Full Load: 100,000 operations

**Mounting:**
Requires Industry-Standard 8 Pin Octal Socket (Macromatic 70169-D or equivalent) or 11 Pin Octal Socket (Macromatic 70170-D or equivalent)

**Approvals:**

**Dimensions**

All Dimensions in Inches (Millimeters)