

SEAL LEAKAGE

SINGLE & DUAL CHANNEL | SFP SERIES



Single Channel

Dual Channel

- ◆ Monitors Submersible Pump Seals for Leakage
- ◆ Works with Pumps using Resistance Sensing Leakage Detection
- ◆ Single or Dual Channel for Monitoring 1 or 2 Pumps
- ◆ Two Adjustable Sensitivity Ranges
- ◆ Full Status Indication on Top of Unit for Easy Troubleshooting
- ◆ Low-Profile Adjustment Knob
- ◆ Uses Industry-Standard 8 & 11 Pin Octal Sockets



with appropriate socket



Better. By Design.

800.238.7474

WWW.MACROMATIC.COM

SALES@MACROMATIC.COM

SFP Series Seal Leakage Relays are designed to monitor the shaft seals of submersible pumps for leakage. LED status indication and low-profile sensitivity knob are on top for easy setup and troubleshooting. These products utilize a plug-in enclosure for panel or DIN-rail mounting with a socket.

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.

Operation: Two wires from the relay are connected to a resistance-sensing probe in the pump seal cavity and the grounded motor housing or across two probes to monitor for seal leakage using a low-voltage DC signal. 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.

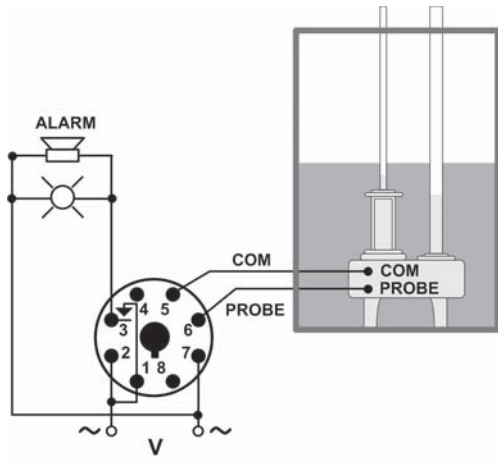
| CONFIGURATION | INPUT VOLTAGE | SENSITIVITY RANGE | CATALOG NUMBER | WIRING/SOCKET ■ |
|--------------------------------|---------------|------------------------------|--------------------------|--------------------|
| SINGLE CHANNEL 8 Pin SPDT | 24V AC | 4.7K to 100KΩ 1K to 250KΩ | SFP024A100 SFP024A250 | <p>DIAGRAM 163</p> |
| | 120V AC | 4.7K to 100KΩ 1K to 250KΩ | SFP120A100 SFP120A250 | |
| | 240V AC | 4.7K to 100KΩ 1K to 250KΩ | SFP240A100 SFP240A250 | |
| SINGLE CHANNEL 11 Pin DPDT | 24V AC | 4.7K to 100KΩ 1K to 250KΩ | SFP024B100 SFP024B250 | <p>DIAGRAM 162</p> |
| | 120V AC | 4.7K to 100KΩ 1K to 250KΩ | SFP120B100 SFP120B250 | |
| | 240V AC | 4.7K to 100KΩ 1K to 250KΩ | SFP240B100 SFP240B250 | |
| DUAL CHANNEL 8 Pin (2) SPNO | 24V AC | 4.7K to 100KΩ 1K to 250KΩ | SFP024C100 SFP024C250 | <p>DIAGRAM 164</p> |
| | 120V AC | 4.7K to 100KΩ 1K to 250KΩ | SFP120C100 SFP120C250 | |
| | 240V AC | 4.7K to 100KΩ 1K to 250KΩ | SFP240C100 SFP240C250 | |

Sockets & Accessories available

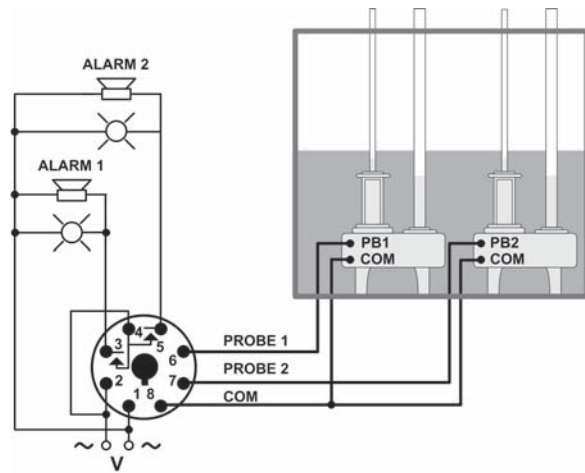
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APPLICATION DATA



Single Channel (8 Pin SPDT Shown)



Dual Channel

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:

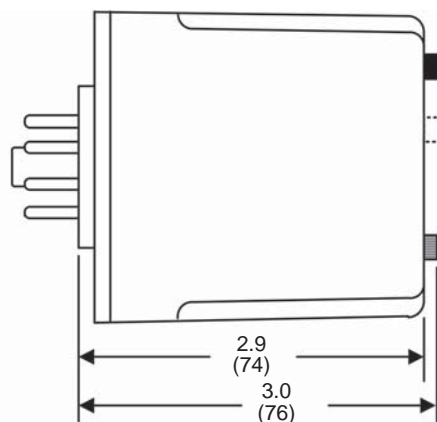
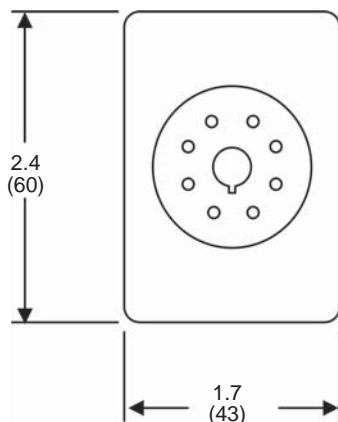
Requires industry-standard 8 Pin Octal Socket (Macromatic 70169-D or equivalent) or 11 Pin Octal Socket (Macromatic 70170-D or equivalent)

Approvals:



with appropriate socket
File #E109466

DIMENSIONS



All Dimensions in Inches (Millimeters)