

SEAL LEAKAGE

SINGLE & DUAL CHANNEL | SFF 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
- ◆ Flange-enclosure designed for deadfront door-mounting
- ◆ 8 Pin Back-Mounted Socket Provided with Relay



SFF Series Seal Leakage Relays are designed to monitor the shaft seals of submersible pumps for leakage. These products utilize a flange-enclosure designed to be deadfront-mounted on an inner door and used with back-mounted sockets. Everything needed for setup, use and troubleshooting is on the top of the unit: LED status indication and low-profile sensitivity adjustment knob.

Two output configurations are offered: an 8 pin SPDT single channel relay 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	SFF024A100 SFF024A250	8 Pin Octal OR08-PC DIAGRAM 163
	120V AC	4.7K to 100KΩ 1K to 250KΩ	SFF120A100 SFF120A250	
	240V AC	4.7K to 100KΩ 1K to 250KΩ	SFF240A100 SFF240A250	
DUAL CHANNEL 8 Pin (2) SPNO	24V AC	4.7K to 100KΩ 1K to 250KΩ	SFF024C100 SFF024C250	8 Pin Octal OR08-PC DIAGRAM 164
	120V AC	4.7K to 100KΩ 1K to 250KΩ	SFF120C100 SFF120C250	
	240V AC	4.7K to 100KΩ 1K to 250KΩ	SFF240C100 SFF240C250	

■ 8 Pin Back-Mounted Socket Provided with Relay

Sockets & Accessories available



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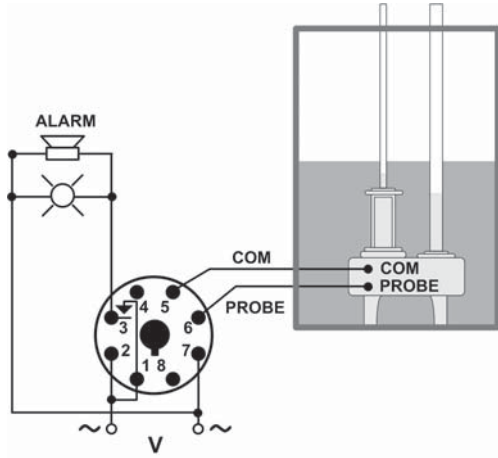
WWW.MACROMATIC.COM

SALES@MACROMATIC.COM

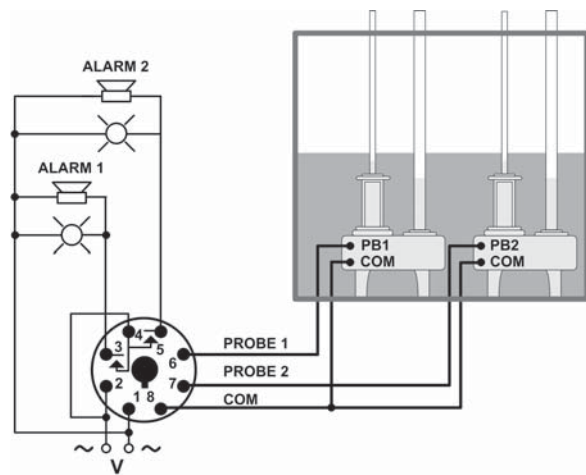
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APPLICATION DATA



Single Channel



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:

10A @ 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:

For deadfront-mounting on an inner door, use 8 Pin Back-Mounted Socket (Custom Connector OR08-PC which is provided with the relay). For panel-mounting, use industry-standard 8 Pin Octal socket (Macromatic 70169-D or equivalent).

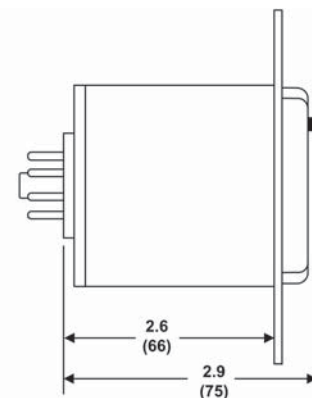
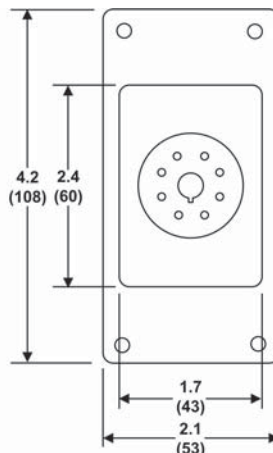
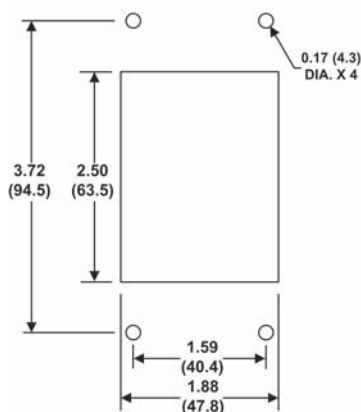
Approvals:



with appropriate socket

File #E109466

DIMENSIONS



All Dimensions in Inches (Millimeters)