prosense™

INSTALLATION INSTRUCTIONS
PSFR SERIES
SEAL LEAKAGE RELAYS

October 2019, REV A

901-0000-340AD

DANGER!

Potentially hazardous voltages are present. Electrical shock can cause death or serious injury.
Installation should be done by qualified personnel following all National, State & Local Codes.

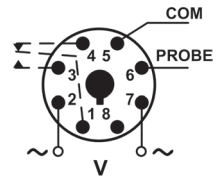
BE SURE TO REMOVE ALL POWER SUPPLYING THIS EQUIPMENT BEFORE CONNECTING OR DISCONNECTING WIRING.
READ INSTRUCTIONS BEFORE INSTALLING OR OPERATING THIS DEVICE. KEEP FOR FUTURE REFERENCE.

Installation & Setup

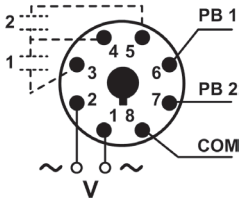
PSFR Series Plug-in: Mount the appropriate 8 pin octal socket (70169-D) in a suitable enclosure.

Wire the socket per the wiring diagram on the side of the relay or as shown at right. **Make sure to match the terminal numbers on the socket to the ones shown on the wiring diagram (the wiring diagram on the relay is the view looking towards the bottom of the relay vs. the top of the socket).**

Use one or two #12-22 solid or stranded copper or copper-clad aluminum conductors with terminals of the above socket--a terminal tightening torque of 12 in-lbs should be used. Plug the relay into the socket, making sure the key on the center post is in the proper orientation before insertion. **If the relay must be removed from the socket, do NOT rock the relay back & forth excessively—the center post could be damaged.**



PSFR-1C-120A
Single Channel
SPDT



PSFR-2C-120A
Dual Channel
(2) SPNO

Setting the Sensitivity

All PSFR Series products come with an adjustable sensitivity range as indicated on the nameplate and by the Catalog Number. Use the sensitivity setting specified by the pump manufacturer. For more accurate setting, isolate the leakage probe or probes from the appropriate terminals as shown on the wiring diagram. Connect a resistor or resistors with the desired trip value across these terminals. Slowly adjust the potentiometer to the point where the LEAKAGE LED turns from Green to Red. Then remove the resistors and reconnect the probe wires. **Note: The tick marks are for reference only.**

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.

Troubleshooting

If the unit fails to operate properly, check that all connections are correct per the appropriate wiring diagram above. If problems continue, contact Automation Direct for assistance.