



# INSTALLATION INSTRUCTIONS

## SFF & SFP SERIES

### SEAL LEAKAGE RELAYS

December 2020, Rev H

901-0000-275



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.



*Présence de tensions potentiellement dangereuses. Une décharge électrique peut causer la mort ou des blessures graves. L'installation devrait être effectuée par du personnel qualifié suivant tous les codes nationaux, provinciaux et locaux.*

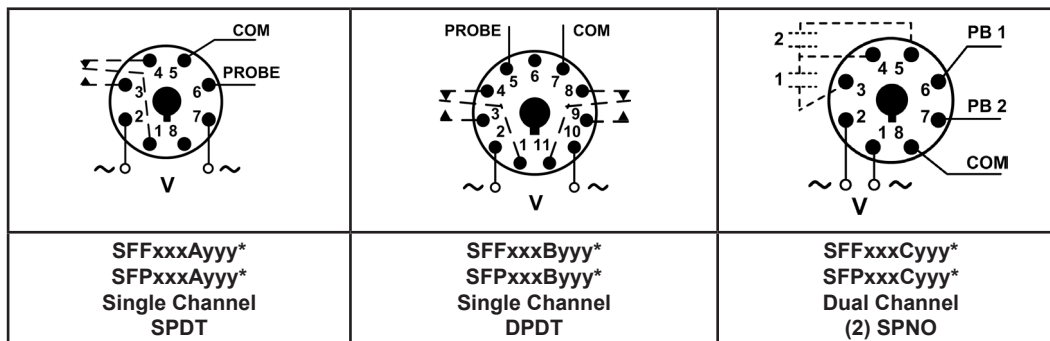
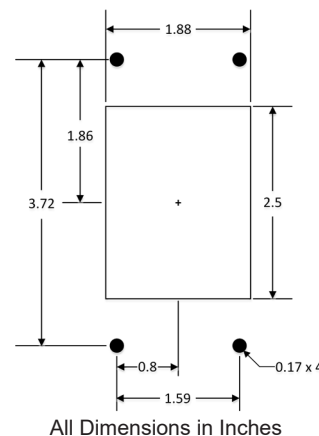
**BE SURE TO REMOVE ALL POWER SUPPLYING THIS EQUIPMENT BEFORE CONNECTING OR DISCONNECTING WIRING.**  
**READ INSTRUCTIONS BEFORE INSTALLING OR OPERATING THIS DEVICE. KEEP FOR FUTURE REFERENCE.**

#### Installation & Setup

(SFP Series Plug-in) Mount the appropriate 8 pin octal socket (Macromatic 70169-D) or 11 pin octal socket (Macromatic 70170-D) in a suitable enclosure.

(SFF Series Flange-Mounted) First, use the Cutout Drawing at right to cut the appropriate size hole in the door and drill the four mounting holes. After mounting the relay, use the appropriate 8 pin back-mounted socket (IDEC SR6P-M08G socket included with relay).

Wire the socket per the wiring diagram on the side of the relay or as shown below. **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 sockets--a terminal tightening torque of 10 in-lbs (IDEC SR6P-M08G) or 12 in-lbs (all others) 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.**



\*xxx=voltage and yyy=sensitivity range

#### Setting the Sensitivity

All SFF & SFP 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.

#### Warranty

All catalog-listed SFF & SFP Series products manufactured by Macromatic are warranted to be free from defects in workmanship or material under normal service and use for a period of five (5) years from date of manufacture.