

# proSense™ Pump Seal Failure Relays

by AUTOMATIONDIRECT



PSFR



PSFR-2C

## Pump Seal Failure Relays

### PSFR Series

PSFR series pump 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 provided by pump manufacturer, lowering the resistance between the internal probe and the common connection.

When the resistance drops below the user-adjustable sensitivity setpoint of the relay, the output relay energizes and the LED turns 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.

Two pump seal failure relays are available:

- 1.) 8-pin SPDT single channel relay
- 2.) 8-pin dual channel relay, with 2 SPNO contacts

## Features

- Monitors submersible pump seals for leakage
- Single or dual channel for monitoring one or two pumps
- Adjustable sensitivity ranges (4.7K, 20K, 47K, 100K)
- Uses industry-standard 8-pin octal sockets

### Agency Approvals

- cURus, File number E191059
- CE, EN60947-1, EN60947-5-1
- RoHS



ProSense Pump Seal Failure Relays						
Part Number	Description	Pcs/Pkg	Wt (lb)	Price	Use With	
PSFR-1C-120A	Pump seal failure relay, monitors shaft seals of submersible pumps. Single channel, adjustable sensitivity range from 4.7K, 20K, 47K, 100K, LED failure indication, one 10A single-pole double-throw output contacts, 8-pin octal base, 9 VDC probe voltage.	1	0.4	<--->	70169-D or 750-2C-SKT	
PSFR-2C-120A	Pump seal failure relay, monitors shaft seals of submersible pumps. Dual channel, adjustable sensitivity range from 4.7K, 20K, 47K, 100K, LED failure indication, two 5A single-pole N.O. output contacts, 8-pin octal base, 9 VDC probe voltage.	1	0.4	<--->	70169-D or 750-2C-SKT	
70169-D	Relay socket, 10A at 600 V rated, 8-pin octal configuration. Can be mounted on 35mm DIN rail or directly mounted to the panel.	1	0.1	<--->	-----	
750-2C-SKT	Relay socket, 5A at 600 V rated, 8-pin octal configuration. Can be mounted on 35mm DIN rail or directly mounted to the panel.	1	0.1	<--->	-----	

Technical Specifications		
	PSFR-1C-120A	PSFR-2C-120A
Voltage Tolerances	120 VAC 50/60Hz (+10%/-15%)	
Output Contacts	10A at 240 VAC/30 VDC Max	
Life*	Mechanical 10,000,000 operations; Electrical: 100,000 operations	
Probe Voltage	9 VDC	
Response Time	Pick-up: 10ms; Drop-out: 10ms	
Power Consumption	2 VA	
Temperature	-28 to 65°C (-18 to 149°F)	
Mounting	8-pin octal socket	
Indicator LED	Red ON when seal leak detected and relay energized	
Output Contacts	Single Channel Relays: 10A at 240 VAC/7A at 30 VDC Max Dual Channel Relays: (2) 5A at 240 VAC/5A at 30 VDC Max	
Insulation Voltage	2,000 volts	
Approvals	cURus (E191059), CE, RoHS, (cULus when used with socket 70169-D)	

\* Resistive load

# pr◊sense™ Pump Seal Failure Relays

AutomationDirect



Company Info.

PLCs

Field I/O

Software

C-more & other HMI

AC Drives

AC Motors

Power Transmiss.

Steppers/ Servos

Motor Controls

Proximity Sensors

Photo Sensors

Limit Switches

Encoders

Current Sensors

Pressure Sensors

Temp. Sensors

Pushbuttons/ Lights

Process

Relays/ Timers

Comm.

Terminal Blocks & Wiring

Power

Circuit Protection

Enclosures

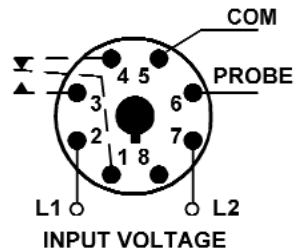
Tools

Appendix

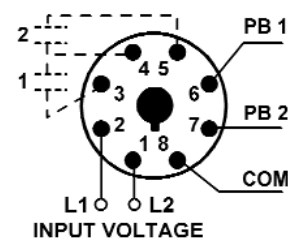
Part Index

## Wiring

PSFR-1C-120A

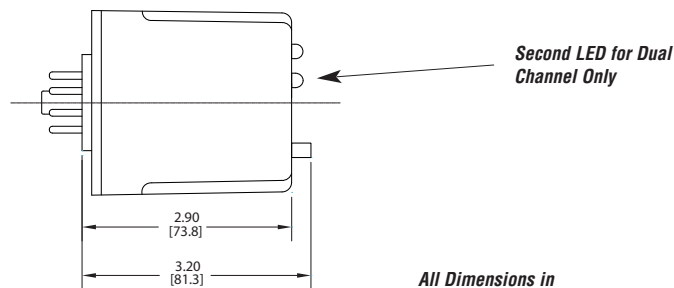
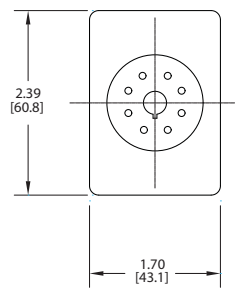


PSFR-2C-120A



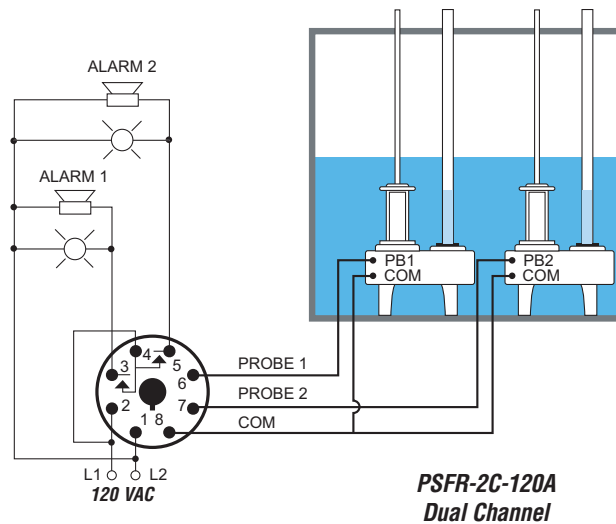
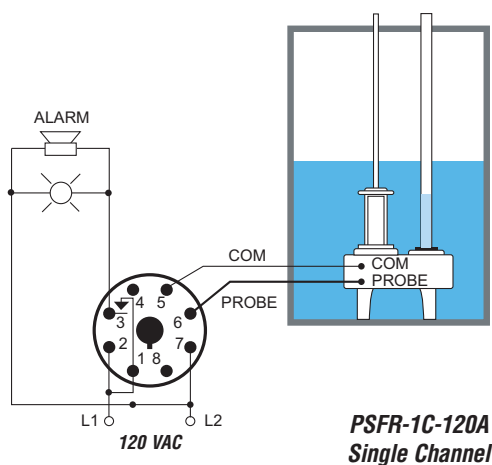
## Dimensions

PSFR-1C-120A, PSFR-2C-120A



All Dimensions in Inches (Millimeters)

## Typical Installations



# proSense™ 8-pin Octal Socket

by AUTOMATIONDIRECT



70169-D



750-2C-SKT

## Features

- 600V (Plug-in 3-phase monitor relays require a 600V-rated socket when used with system voltages greater than 300V)
- Mounts on 35mm DINrail
- Screw pressure wire clamp termination

## Agency Approvals

- cURus, File number E191059, E225080
- CE
- RoHS

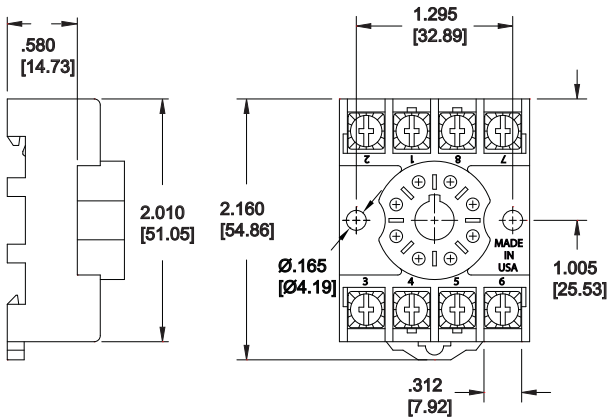


ProSense Series Temperature Sensors				
Part Number	Description	Pcs/Pkg	Wt (lb)	Price
70169-D	Relay socket, works with all phase monitor relays, 10A at 600 V rated, 8-pin octal configuration. Can be mounted on 35mm DIN rail or directly mounted to the panel.	1	0.1	<--->
750-2C-SKT	Relay socket, works with all phase monitor relays, 5A at 600 V rated, 8-pin octal configuration. Can be mounted on 35mm DIN rail or directly mounted to the panel.	1	0.1	<--->

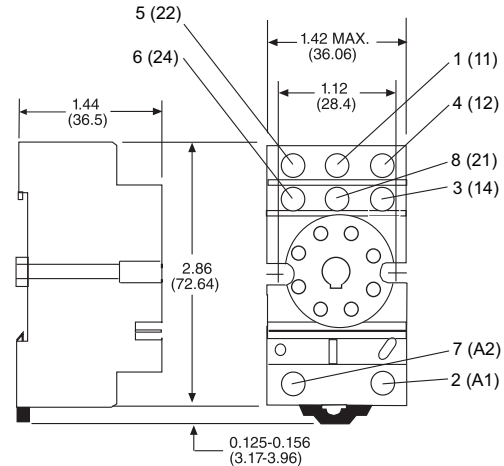
Technical Specifications						
Part Number	Voltage	Current	Screw Size	Screw wire size (capacity)	Screw wire torque	Screw chassis mounting torque
70169-D	600V	10A	6-32	1 or 2 #12-#22 AWB	6-7 Lb-in (12 Lb-in max)	7 Lb-in
750-2C-SKT	600V	5A	M3.5	(1) #12/ (2) #14 AWG	9 Lb-in	7Lb-in

## Dimensions

70169-D



750-2C-SKT

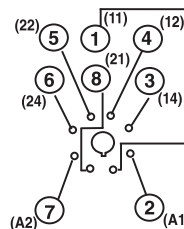


## Socket Pinouts

70169-D



750-2C-SKT



All Dimensions in Inches (Millimeters)