



# Installation & Adjusting Instructions

### Mounting to Namur Style Actuator

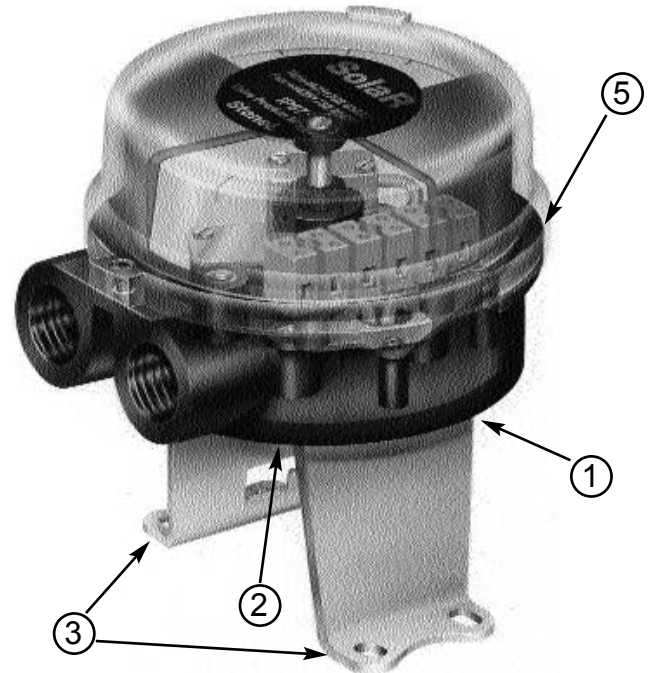
1. Attach mounting plate to monitor using fasteners and lockwashers provided.
2. Align namur shaft so that it fits in the groove on the top of the actuator shaft.
3. Attach mounting plate to actuator using fasteners and lockwashers provided.
4. Operate actuator to full open and full closed positions to check for proper coupling alignment. Eccentricity of shaft must be no greater than .01" from centerline. Adjust if necessary and snug-down adjustment bolts tightly.

### Mounting to Non-Namur Actuator

1. Attach mounting plate to monitor using fasteners and lockwashers provided.
2. Remove spacer screw and attach spring torque coupler or drive block to the shaft with spacer screw or screw provided with mounting kit. Align drive block or spring torque coupler with mating shaft and lower until the mounting bracket meets its mating surface. Ensure the coupler or drive block have fully engaged the output shaft of the device to be monitored.
3. Attach mounting plate to actuator using fasteners and lockwashers provided.
4. Operate actuator to full open and full closed positions to check for proper coupling alignment. Eccentricity of shaft must be no greater than .01" from centerline. Adjust if necessary and snug-down adjustment bolts tightly.

### Visual Indicator Adjustment

5. Remove cover from unit. Lift indicator drum to disengage from splined drive. Rotate indicator until it reaches the desired position. Slide indicator drum onto splined drive to re-engage. Replace the cover.



### Installing & Removing Cover

(Refer to Diagram 1 and 2 below)

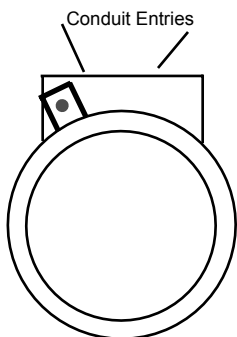
The cover goes from open to full closed with a turn of about 25 degrees.

#### Removing the Cover

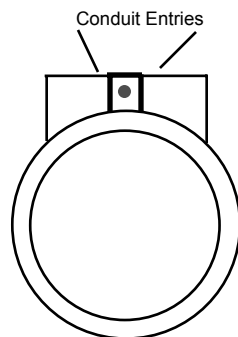
- I. Loosen cover lock screw to where the bottom of the screw head is flush with top of the cover locking tab. This is the non-locking position and the way it is shipped from the factory.
- II. Remove the cover by turning it approximately 25 degrees counterclockwise until it hits the stop and lift the cover off.

#### Replacing the Cover

- I. The cover O'Ring **must** be in place on the housing body.
- II. Place the cover on the housing with the cover locking tab 25 degrees counterclockwise from the hole between the conduit entries (see diagram 1). The cover will fit properly on the housing **only** in this position.
- III. Twist the cover 25 degrees clockwise until the cover locking screw is directly over the hole between the conduit entries (see diagram 2).
- IV. To insure NEMA 4 & 4X ratings the cover **must be** completely closed and the O'Ring sealed to keep out water. This is achieved when the cover is closed and locking screw can be easily screwed in until the top of the screw head is flush with the top of the cover locking tab. Check the cover O'Ring to make sure it is in place and not buckled.



Cover Open Position Diagram 1



Cover Closed Diagram 2



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## 3-Wire NPN Sinking Sensor (SR2E\_ \_ \_ \_)

Output: (2) cam selectable N.O. or Hold closed switching outputs  
 Volatge Range: 10-30 VDC  
 Voltage Drop: <2.0 VDC  
 Load Current: 100mA Maximum  
 Current Consumption: <15mA  
 Short Circuit and Overload Protected

## 3-Wire PNP Sourcing Sensor (SR2F\_ \_ \_ \_)

Output: (2) cam selectable N.O. or Hold closed switching outputs  
 Volatge Range: 10-30 VDC  
 Voltage Drop: <2.0 VDC  
 Load Current: 100mA Maximum  
 Current Consumption: <15mA  
 Short Circuit and Overload Protected

### Touch & Tune™ Switch Setting

Notes: All adjustments assume you are looking down on the top of the sensors. The edge of the cam metal strip will be at the edge of the sensor target when activation occurs. When the cam is released be sure it slides fully onto the spline. One spline tooth setting is 4 1/2°.

#### I. For Normally Open Function (See Fig. 1):

6. With the valve in the "Closed" position and if the valve turns counter-clockwise to open, set both cams so that the metal activation strips are 180° from each other with the bottom cam set in the middle of the sensor target. Connect test equipment to bottom switch as per Bench Test Procedure.
- 6a. Lift the bottom cam and turn counter-clockwise until the voltmeter reads 0 VDC then clockwise again until the voltmeter just reads >20 VDC. (Reverse the direction of the cam if the valve opens clockwise.)
- 6b. Move the valve to the opposite position (Open), connect test equipment to top switch. Push down on the top cam and rotate counter-clockwise until the voltmeter just reads >20 VDC. (Reverse the direction of the cam if the valve opens clockwise.)

*For the normally open operation, both sensors will be off during the actuation period.*

#### II. For Normally Closed Function (See Fig.2):

7. With the valve in the closed position, set both cams so that the metal activation strips are aligned with each other and set in the middle of the sensor targets. Connect test equipment to bottom switch as per Bench Test Procedure.
- 7a. If the valve turns counter-clockwise to open, pull up on the bottom cam and rotate clockwise until the voltmeter just reads 0 VDC. (If the valve turns clockwise to open, rotate bottom cam counter-clockwise until the voltmeter reads 0 VDC)
- 7b. Operate the valve to the opposite position (Open). Connect test equipment to top switch. Push down on the top cam. If the voltmeter reads 0 VDC, rotate top cam clockwise until it reads >20 VDC. With the voltmeter reading >20 VDC rotate cam counter-clockwise until the voltmeter just reads 0 VDC.

*For the normally closed operation, both sensors will be activated during the actuation period.*

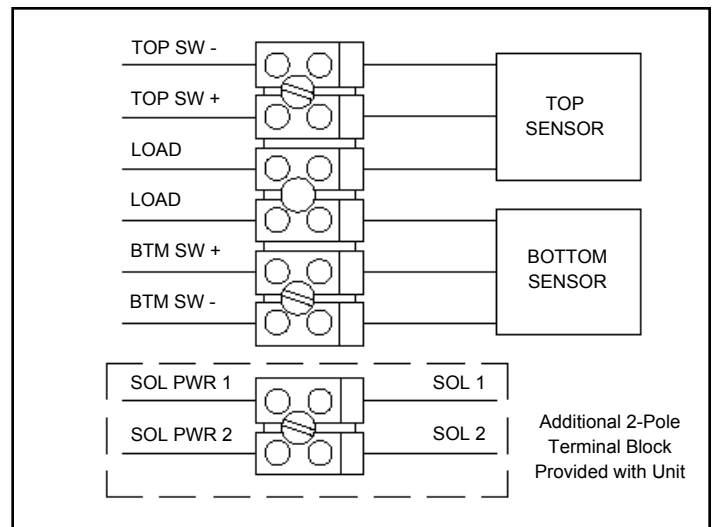
### Bench Test Procedure (See Wiring Diagram):

Connect a load resistor of 3K Ω to 10K Ω across a switch's Load and (+) terminals (SR2E\_ \_ \_ \_), or a switch's Load and (-) terminals (SR2F\_ \_ \_ \_). Using a 24 VDC power source, connect the power source (+) lead to a switch's (+) terminal and the power source (-) lead to a switch's (-) terminal. Connect a voltmeter across the load resistor. Apply 24 VDC. With cam activation strip in front of sensor target, the voltmeter will read >20 VDC.

Activation strip away from sensor target voltmeter will read 0 VDC

**Warning: Connecting the sensor to a power source without a load resistor may result in irreparable damage to the switch.**

### Wiring Diagram



### Sensor Settings

#### Cams Set for Normally Open Function

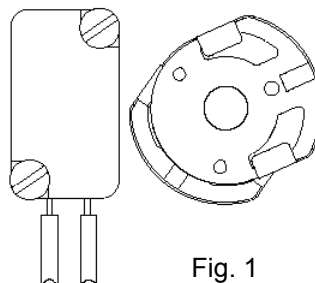


Fig. 1

#### Cams Set for Normally Closed Function

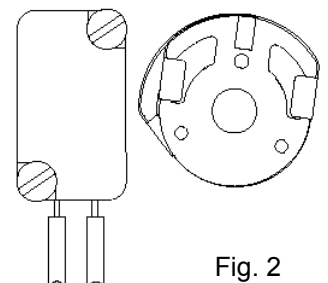


Fig. 2