

The Rock

Model SW100 Thermal Flow and Level Switch

- X All-welded 316SS wetted parts
- X FM Approved explosion proof
- X CE approved
- X NEMA 4X wash-down proof
- X Single board, "no-connectors" design
- X 1000 psig (69 barg)
- X No moving parts
- X DPDT 5 amp relay
- X Single pot adjustment
- X Works on gases, liquids and slurries
- X Clean and steam in place
- X $\pm 1\%$ of reading repeatability



PRODUCT DESCRIPTION

The ROCK flow and level switch was specifically designed for long-term reliable operation in the harshest industrial environments. Simply insert the SW100 in a line or vessel and adjust the single pot to the desired flow rate. Wetted parts are 316 stainless steel for durability and corrosion resistance. The sensors utilize reference grade platinum RTD's resulting in excellent repeatability and rangeability.

THEORY OF OPERATION

The Model SW100 operates on the thermal principal of flow measurement. Its electronics provide a constant wattage to the sensor, heating it above the temperature of the fluid. Flow of the fluid causes removal of heat from the sensor, measured as a reduction in temperature. Therefore, the measure of mass flow velocity is the sensor's temperature above the fluid temperature.

The ROCK utilizes an advanced Mass-Balanced sensor which causes each sensing element to respond equally and indifferently to changes in temperature. This feature eliminates the "hunting" problem inherent in three-element, unbalanced thermal flow switches.



FOX THERMAL INSTRUMENTS, INC.
399 RESERVATION ROAD X MARINA, CA 93933 X USA
Phone: 831-384-4300 X Fax: 831-384-4312
E-MAIL: sales@foxthermalinstruments.com
www.foxthermalinstruments.com

SPECIFICATIONS

Performance Specs

Repeatability:

± 1% of reading

Operating Specs

Switchpoint Liquid Range:

0.015 to 3 fps
(0.005 to 1 mps)

Switchpoint Gas Range:

1 to 100 sfps
(0.3 to 30 nmpps)

Note: Higher velocities will not damage the SW100. However, the switchpoint must be within the specified range.

Sensor:

Std -40 to 300°F (-40 to 150°C)
1000 psig (69 barg)

Enclosure:

-40 to 131°F (-40 to 55°C)

Response Time:

2 to 20 seconds
application dependent

Input Power:

24 VDC, ± 10%, 0.6 amp max.
115/230 VAC, ± 10%, 50/60 Hz,
25 watts max.

Relay Contacts:

2 form C (DPDT) 5 amp,
250 VAC resistive

Physical Specs

Materials:

Sensor: 316 SS

Switch point adjustment:

Field set with single pot

Clean and steam in place

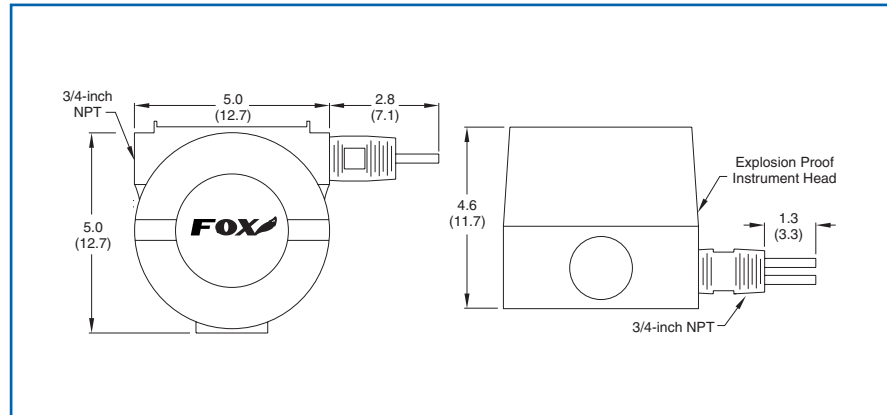
Enclosure:

Cast aluminum; NEMA 4X (IP65)
Factory Mutual approved Class I,
Division 1, Groups B, C & D (T2C).
Class II/III, Division 1, Groups E, F
& G(T2A).
CE approved.

Dimensional

Note: Dimensions in parenthesis are centimeters. For certified drawings consult factory.

Standard Switch



Extended Switch

