

Single Channel Mass Flow or Point Level Switch

Features

- Mass flow Switch for the detection of the mass flow rate of liquids and gases
- Point level switch for liquid level detection
- Wide operating temperature range -100F to +850F (-70C to 458C)
- Flow Switch range of 0.01 to 5 fps liquids and 0.1 to 500 fps gases
- Level Switch switches on level change 0.03 inch
- Fast flow switch response time of 0.5 to 10 seconds (media dependent)
- Level switch response time of 0.1 to 1 second of wetting (media dependent)
- CE, CENELEC and CSA approvals

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Innova-Switch™



Description

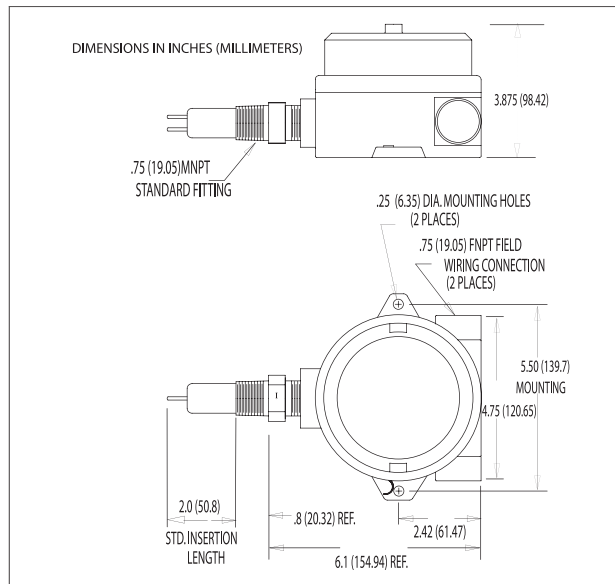
Sierra Instruments' Innova-Switch represents the State-of-the-art in gaseous and liquid flow switching or liquid level control and continues the Sierra tradition of providing the highest quality mass flow meters and controllers in the industry.

Flow and level detection is accomplished by using a high-resolution thermal differential technique. The sensor consists of a pair of matched Resistance Temperature Detectors (RTD's). One RTD is self-heated using a constant DC current. The other RTD is unheated and provides an accurate process temperature reference. The thermal differential created between the reference and the heated RTD pair is a function of the density and/or velocity of the media with which the sensor is in contact.

The sensor and wetted parts are of durable 316L stainless steel, all welded construction with no moving parts. The switch is easy to install and adjust, giving reliable, low maintenance performance in the most demanding applications.

The information contained herein is subject to change without notice.
Go to www.sierrainstruments.com for the most current information.

Dimensional Specifications



Performance Specifications

Operating Range:

Flow Switch: Adjustable flow rate (feet per second-fps), typical: 0.01 to 5.0 fps liquids and 0.1 to 500 fps gases

Level Switch: Switch on level change of 0.03 inch

Response Time:

Flow Switch: 0.5 to 10 seconds (media dependent)

Level Switch: 0.1 to 1 second (media dependent)

Repeatability: +/- 1% of setpoint (Flow) or 1/32" (0.8mm) Level

Stability: Drift <0.5% from calibrated setpoint over a range of +/-50F.

Temperature compensated through entire range.

Ordering Information

PARENT MODEL NUMBER		<div>q</div>	
LS32	Innova-Switch LEVEL Switch		
FS42	Innova-Switch FLOW Switch		
AGENCY APPROVALS			NX Non-explosion proof switch
CS CSA approved			
CN CENELEC approved			
PROCESS CONNECTIONS			RA1 Raised face flange 150# 1"
3A1 1.5" Sanitary with 3A stamp			RA2 Raised face flange 150# 2"
075 0.75" MNPT (STD)			RB1 Raised face flange 300# 1"
050 0.50" MNPT			RA1 Raised face flange 300# 2"
100 1" MNPT			SPL Special
SENSOR MATERIAL			HC Hastalloy C
S6 316SS (STD)			IO Iconel 600
S4 304SS			MN Monel
SL 304L SS			A2 Alloy 20
HB Hastalloy B			SM Special Material
INSERTION LENGTH			000.00 0.5" to 120" in .25" increment
002.00 2.00" (STD)			
POWER INPUT			24D 24 VDC
110 110 VAC			
220 220 VAC			
CONFIGURATION			RE Remote Electronics
LE Local Electronics (STD)			
SPECIAL OPTIONS			MT Medium T
00 No special options			HT Hi T
CB Calibration Required			RTD RTD output
EN Extended Neck			TO Thermocouple output
XW Explosion Proof window			CA Additional cable
V1 Variable insertion			CE CE approval
LT Live (hot) tap			
DS Double Sided			

FS420 A IH 2/05

Operating Specifications

Operating Temperature:

Process: -70C to 200C (-100F to 390F) standard. Medium T to 300C (572F) optional

Hi T to 485C (850F)

Electronics: -40C to 60C (-40F to 140F). Optional remote electronics for use in medium and Hi T environments

Operating Pressure: to 3000 psia (207 bar)

Input Power: 115 VAC, 50/60Hz standard. 230 VAC, 50/60Hz optional, 24VDC optional. 3.1 Watt maximum

Output: 5A. 250 VAC. DPDT with fail safe capability

Physical Specifications

Wetted Materials: 316 SS standard. Hastelloy, Monel, Inconel or other materials optional

Enclosure: Explosion Proof; NEMA 3,4X,7,9. CSA, FM, UL, CENELEC and EECs approved

Process Connection: 0.75" MNPT standard. 0.5" and larger MNPT and various other process connections such as sanitary and flanges optional

Insertion Length: 2.0" standard. 0.5" or greater optional

Approvals: CE, CSA, CENELEC Class 1 Div 1 Groups B,C,D