# 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 -100°F to +850°F (-73.3°C to 454°C)
- 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 wetting (media dependent)
- CE, CENELEC and CSA approvals
- Buy Online, ships next day!



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# DESCRIPTION

ierra's InnovaSwitch<sup>™</sup> represents the State-ofthe-art in gaseous and liquid flow switching or liquid 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 selfheated 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.

# 2 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.

# PHYSICAL SPECIFICATIONS

#### Wetted Materials:

316 L SS, 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

# **OPERATION SPECIFICATIONS**

#### **Operating Temperature:**

Process: -73.3°C to 200°C (-100°F to 390°F) standard. Medium T to 300°C (572°F)optional

Hi T to 454°C (850°F)

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

# **Operating Pressure:**

to 3000 psia (207 bar)

#### Input Power:

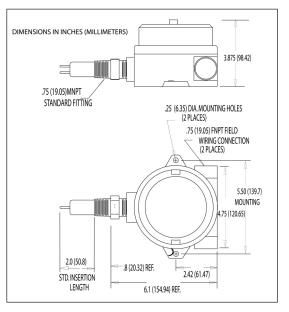
115 VAC, 50/60Hz standard. 230 VAC, 50/60Hz optional, 24VDC optional. 3.1 Watt maximum

#### Output

5A. 250 VAC. DPDT with fail safe capability

# DIMENSIONS

# Front and Side Views of InnovaSwitch





Instructions: To order the 615, please fill in each number block by selecting the codes from the corresponding features below.

Parent Number		
615-LS32	InnovaSwitch LEVEL Switch	
615-FS42	InnovaSwitch™ Flow Switch	

	Feature 1: Approvals	
CS CSA approved		CSA approved
NX Non-explosion proof switch (STD)		

Feature 2:	Feature 2: Mounting	
3A1	1.5-inch Sanitary with 3A stamp	
N06	0.75-inch MNPT (STD)	
N04	0.50-inch MNPT	
N08	1-inch MNPT	
RA1-S6	Stainless steel raised face flange class 150 1 inch	
RA2-S6	RA2-S6 Stainless steel raised face flange class 150 2 inch	
RB1	B1 Stainless steel raised face flange class 300 1 inch	
RB2	RB2 Stainless steel raised face flange class 300 2 inch	
SPL	SPL Special	
LFS	S Low flow sensor	

Feature 3:	Materials
S6	316L SS
S4	304SS
SL	304L SS
НС	Hastalloy® C
10	Iconel 600
MN	Monel
A2	Alloy 20
SM	Special material

Feature 5:	Feature 5: Power Input		
110 110 VAC			
220 220 VAC			
24D	24 VDC not available with HT Switch (615-FS42)		

Feature 4: Insertior		Insertion Length
<b>2</b> 2.0 inch (50.8 mm) (STD)		2.0 inch (50.8 mm) (STD)
	XXX.XX	0.5 inch to 120 inch (12.7 mm to 3048 mm) in .25 inch (6.35 mm) increments (example 20.25)

Feature 6:	Feature 6: Configuration	
LE	Local electronics (STD)	
RE	Remote Electronics (25 ft of cable). Note that MT and HT option MUST be RE and RE adder is included in the MT and HT price)	
РС	Potted cable (not Ex Proof)	

Feature	eature 7: Special Options			
0	No special options	HT	High temperature (includes RE with 6-inch EN with no price adder)	
СВ	Calibration required (air, water only, all others consult factory)	RTD	RTD output	
EN	Extended neck (specify length up to 6 inches (152.4mm))	то	Thermocouple output	
XW	Explosion proof window	CA	Additional cable	
VI	Variable insertion ( >3-inch pipe ID req), 3/4-inch NPT with Teflon ferrules. 15 psig (1.0 barg) max	TG	Stainless steel tag	
LT	Live (hot) tap	CE	CE approval	
DS	Double sided	0 <sub>2</sub> Cleaning	Oxygen Cleaning	
MT	Medium temperature (includes RE with 3-inch EN with no price adder)			

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# Shop Flow Online. The InnovaSwitch<sup>™</sup> Product Line is In Stock!



# In Stock Products. Ship In Three Days.\*

# https://sierrainstruments.com/shop

\*Disclaimer: Dependent on availability of stock.

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