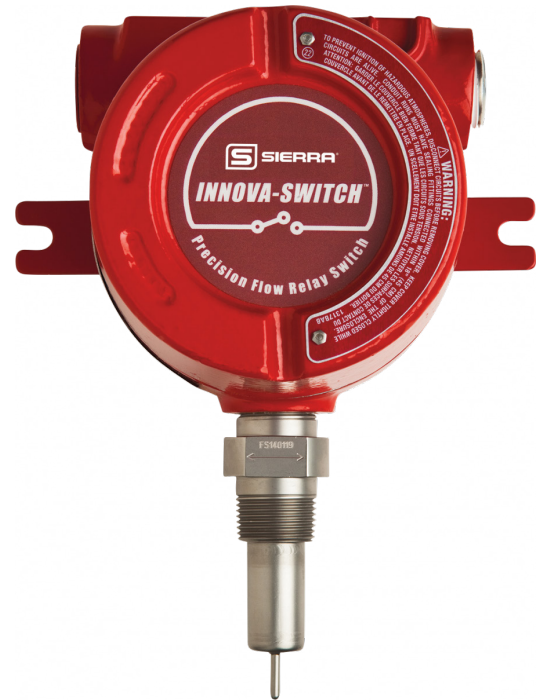


## Single Channel Mass Flow Switch

### FEATURES

- Mass flow switch for the detection of the mass flow rate of liquids and gases
- 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
- Fast Flow switch response time of 0.5 to 10 seconds (media dependent)
- CE, CENELEC and CSA approvals

# INNOVA-SWITCH™



### DESCRIPTION

**S**ierra's InnoVaSwitch™ represents the state-of-the-art in gaseous flow switching, continuing the Sierra tradition of providing the highest quality mass flow meters and controllers in the industry.

Flow 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 welded 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.



## 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

### Response Time:

Flow Switch: 0.5 to 10 seconds (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.

## OPERATING SPECIFICATIONS

### Operating Temperature

Standard Temp: -70°C to 200°C (-100°F to +39°F)

Medium Temp (MT): 300°C max (572°F)

High Temp (HT): 458°C max (856°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

## OPERATING SPECIFICATIONS (CONTINUED)

### 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:

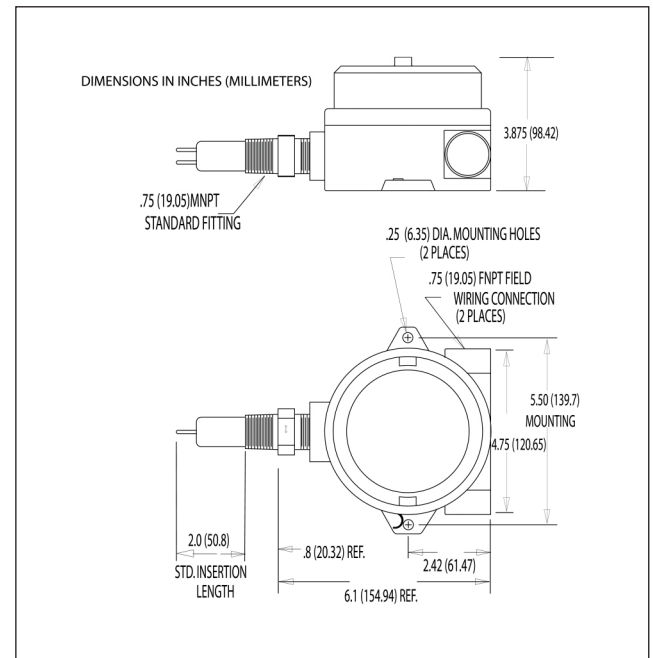
2.0" standard. 0.5" or greater optional

### Approvals

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

## PHYSICAL SPECIFICATIONS

### Front and Side Views of InnovaSwitch



Instructions: To order a TM500 Inline, please fill in each number block by selecting the codes from the corresponding features below and following pages.  
Notes: The "Parent" model number and one of each "Feature" must be specified. Example: TM500-40F-E1-RS

PARENT	FEATURES						
	1	2	3	4	5	6	7
615-FS42							

**Parent**

615-FS42	InnovaSwitch™ Flow Switch
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**Feature 1: Approvals**

<b>CS</b>	CSA approved
<b>NX</b>	Non-explosion proof switch (STD)

**Feature 2: Mounting**

<b>3A1</b>	1.5-inch Sanitary with 3A stamp
<b>N06</b>	0.75-inch MNPT (STD)
<b>N04</b>	0.50-inch MNPT
<b>N08</b>	1-inch MNPT
<b>RA1-S6</b>	1-inch Stainless steel raised face flange class 150
<b>RA2-S6</b>	2-inch Stainless steel raised face flange class 150
<b>RB1</b>	1-inch Stainless steel raised face flange class 300
<b>RB2</b>	2-inch Stainless steel raised face flange class 300

**Feature 4: Insertion Length**

<b>2</b>	2.0-inch (50.8 mm) (STD)
<b>xxx.xx</b>	0.5-inch to 120-inch (12.7 mm to 3048 mm) in .250inch (6.35 mm) increments (example 20.25)

**Feature 3: Materials**

<b>S6</b>	316L SS
<b>S4</b>	304SS
<b>SL</b>	304L SS
<b>HC</b>	Hastalloy® C
<b>IO</b>	Iconel 600
<b>MN</b>	Monel
<b>AZ</b>	Alloy 20

**Feature 5: Power Input**

<b>110</b>	110 VAC
<b>220</b>	220 VAC
<b>24D</b>	24 VDC not available with HT Switch (615-FS42)

**Feature 6: Configuration**

<b>LE</b>	Local electronics (STD)
<b>RE</b>	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)

**Feature 7: Special Options**

<b>O</b>	No communications option	<b>HT</b>	High temperature to 850°F (458°C); includes RE with 6-inch EN with no price adder
<b>CB</b>	Calibration required (air, water only, all others consult factory)	<b>RTD</b>	RTD output
<b>EN (X)</b>	Extended neck (specify length up to 6 inches (152.4mm))	<b>TO</b>	Thermocouple output
<b>XW</b>	Explosion proof window	<b>TG</b>	Stainless steel tag
<b>VI</b>	Variable insertion (>3-inch pipe ID req), 3/4-inch NPT with Teflon ferrule. 15 psig (1.0 barg) max	<b>CE</b>	CE approval
<b>MT</b>	Medium temperature to 572°F (300°C); includes RE with 3-inch EN with no price adder		



Measurably Different™

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