



## **GENERAL**

Smartmeasurement<sup>™</sup> ALTS thermal switch represents the State-of-the-art in gas or liquid flow switching or liquid level controls. The ALTS provides the highest quality flow and level detection by using a high-resolution thermal differential technique. The sensor consists of a pair of matched Resistance Temperature Detectors (RTD's). One RTD is using a self-heated 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 stainle 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.

## **≯** FEATURING

- ☐ Mass flow Switch for the detection of the mass flow rate of liquids and gases
- No moving parts and no leak paths, no O-rings or graph oil seals to ware, fail or leak.
- ☐ Point level switch for liquid level detection
- ☐ Wide operating temperature range -70C to 458C (-100F to +850F)
- ☐ Flow Switch range of 0 to 1.5 mps( 5 fps) liquids and 0.07 to 150 mps (500 fps) gases
- □ Level Switch switches on level change 0.076 cm (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
- ☐ Insertion length from 1.27cm to 100 cm

## **INVESTIGATION INVESTIGATION**

- Process Connection: 0.75" MNPT standard. 0.5 to larger MPNT, Sanitary and flanges optional
- Process temperature : -70C to 200C (-100F to 390F) standard Medium T to 300C (572F) and High T to 485C (850F)
- Operating pressure: to 207 bar (3000 psia)
- Velocity Range : Depends on fluids Liquids: 0 to 1.5 mps Adjustable flow rate

Gas: 0.07 to 150 mps Adjustable flow rate

+/- 1% of set point (Flow) or 1/32" (0.8mm) Level Temperature compensated through entire range. Repeatability:

Material: 316 SS standard. Hastelloy, Monel, Inconel, etc. Stability:

Housing protection: Explosion Proof; NEMA 3,4X,7,9

Ex-protection : CSA, FM, UL, CENELEC and EECS approved

Power requirements: 115 VAC, 50/60Hz or 230 VAC, 50/60Hz

24VDC optional. 3.1 Watt maximum

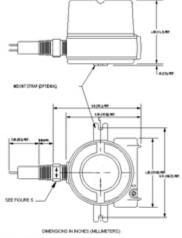
Electronics: -40C to 60C (-40F to 140F)

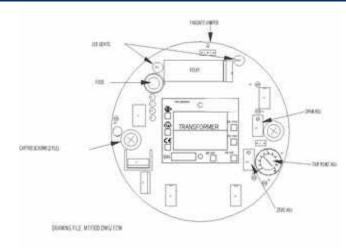
Output: 5A. 250 VAC. DPDT with fail safe capability

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

Flow Switch: over a range of +/-10C.

Drift <0.5% from calibrated set point







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## ALTS Thermal Flow & Level Switch

Type of liquid	We ne	ed the	name	of you	r liqui	d, or ga	as			
Switch point settings	Flows	set poir	nt and	units						
Line Size	we need to know your pipe size as well connection type (flange, threaded, etc)									
Process Temperature	We ca	libratio	n your	Flow	neter	as clos	e to y	our app	olication as	possible
Type of Electronics		Indicat	te if yo	u wan	t integ	ral or	remot	e moun	ited	
Power Requirements	Specify your power requirements such as 24 VDC or 115 VAC or 230 VAC									
ALTS Thermal flow & level s	switch	nes								
ALTS-FS4200 flow switch		XX	XXXX	XXX		XX"	XXX	XXX		Description
ALTS-FS3200 - level switch		XX	XXXX	XXX		XX"	XXX	XXX		Description
CSA approvals	CSA									- U/V2
Cenelec Approvals	CNL									Agency Approvals
No Approvals	NX									
0.75" MNPT (Standard)		0750							(	
0.5" MPNT		050								
1" MNPT	]	100								
Raised face flange 150# 1"	]	RA1								
Raised face flange 150# 2"	]	RA2								Process connection
Raised face flange 300# 1"		RB1								
Raised face flange 300# 2"		RB2								
Special		SPL								
Sanitary with 3A stamp		3A1		7		1				
316 SS (Std)			S6		44					
304 SS			S4							
304L SS			SL							
Hastelloy B			НВ							
Hastelloy C			HC							Sensor Material
Inconel 600			Ю							
Monel			MN							
Alloy 20			A2							
Special Material			SM							
Local Electronics				LE						Mounting
Remote electronics with 3 meter cable	0/2			RE						Mounting
2 inch standard					002.0					Insertion length
000.00 (0.5" and greater)					??					insertion length
24VDC					-	DC24				
AC120						AC110				Power requirement
AC220						AC220				
200-300C							NT			Temperature
300-458 C							НТ			remperature
Calibration required								СВ		
Extended Neck (high temp)	]							EN		
Explosion Proof Window								XW		
Variable insertion								V1		
Hot Tap (live)	]							LT		
DS (double sided enclosure)								DS		
Thermocouple output								THM		
RTD output								RTD		
CE Approvals								CE		
Smartmassurament LLC										

**Smartmeasurement LLC.** 

