

Series 107 Low Differential Pressure Switches

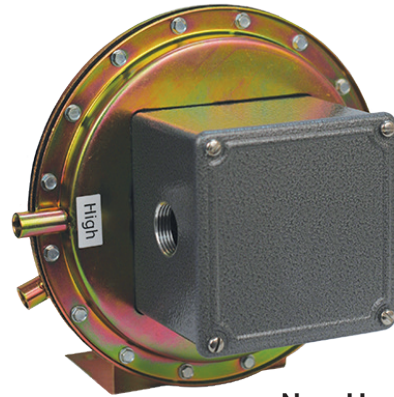
Form 459CM

Low Differential Pressure Switches for Air & Gas Applications

Low differential pressure switches are robust, field-mounted instruments designed for the process industries. These instruments accurately read very low pressures by utilizing a diaphragm with a large sensing area. The switching element is SPDT. An external Set Point adjustment with visual indication is standard, allowing for simplified calibration of the switch.

Applications

Built to high-quality standards for reliability, this switch is suitable for draft ranges commonly associated with HVAC applications and burner management systems. It is also suited for other industrial air and gas services which are compatible with the wetted parts. Standard models are available for weathertight or explosion-proof environments.



**Non-Hazardous
Locations**



Hazardous Locations

Features and Benefits

- External Set Point adjustment with visual scale
- Fine Set Point resolution
- Narrow dead band
- High repeatability
- UL Listed and CSA Certified snap-action switching elements
- Screw terminals standard on weathertight switches; wire leads standard on explosion proof
- Rugged design
- 3-year warranty from date of manufacture

Low Differential Pressure Switches

How to Order

Select model number from table. Accessory designators may be added after F0A if required.

Adjustable Range		Contact Rating		Model Number	Typical Dead Band	
in. wc	mm wc				in. wc	mm wc
0 to 12	0 to 305	10 amps	250 VAC	107AL - N12 - P1 - F0A	0.25	6.4
5 to 40	125 to 1000			107AL - N40 - P1 - F0A	0.3	7.5
0 to 12	0 to 305	15 amps	250 VAC	107AL - K12 - P1 - F0A	0.3	7.5
5 to 40	125 to 1000			107AL - K40 - P1 - F0A	0.35	9.0
		5 amps	30 VDC*			
		0.4 amps	125 VDC*			

Product Specifications

Electrical Housing		Electrical Service	
Type	Weathertight NEMA 4	Contact form	SPDT
Material	6063-T5 aluminum	* DC electrical ratings are for resistive loads only. They may not be agency approved, listed or certified, but have been verified by testing or experience.	
Pressure Ports		Temperature Limits	
Material	Plated cold-rolled steel	Ambient	-40 to 150°F (-40 to 65°C)
Connection size	1/8" NPT(F)	Process	-40 to 150°F (-40 to 65°C)
	For 1/4" NPT(F), change F0A to F1A in selected model.	Max System Pressure	10 psig (.69 bar)
Wetted Materials	Buna-N, brass, aluminum, cork, stainless steel, acrylic tubing, nylon, plated cold-rolled steel		Vacuum protected to 30" Hg
Electrical Connection	3/4" NPT(F); screw terminals	Weight	Approximate 5 lb (2.3 kg)

Accessories

Design and specifications are subject to change without notice.

Description	Designator
CSA Certified differential pressure switch. (107AL only) (CSA type 4 enclosure)	CS
Pipe Stanchion mounting kit.	PK
Tag, fiber. Attached with plastic tie to housing. Contains customer P.O. number and specified tagging information.	PP
120 VAC powered DPDT Relay, contact rating: 10 amps @ 110 VAC, 10 amps @ 24 VDC	RC
220 VAC powered DPDT Relay, contact rating: 5 amps @ 220 VAC, 10 amps @ 24 VDC	RD
Tag, stainless steel. Attached with stainless steel wire to housing. Stamped with customer-specified tagging information. (2 lines, 18 characters and spaces per line.)	RR
Oversize nameplate. Stamped with customer-specified tagging information. (3 lines, 25 characters and spaces per line.)	TT
Fungicidal varnish. Covers exterior and interior except working parts.	VV

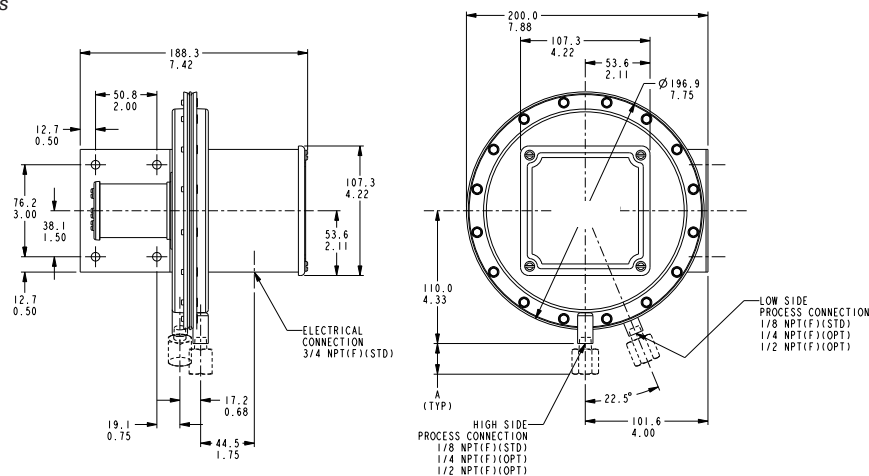
NOTE: see page 4 for Test Certificates

Dimensions

Dimensions are for reference only. Contact the factory for certified drawings for a particular model number.

$$\text{Linear} = \frac{\text{mm}}{\text{in.}}$$

Drawing 0090594



Low Differential Pressure Switches

How to Order

Select model number from table. Accessory designators may be added after **F0A** if required.

Adjustable Range		Contact Form	Model Number	Typical Dead Band	
in. wc	mm wc			in. wc	mm wc
0 to 12	0 to 305	SPDT	107EL - EF12 - P1 - F0A	0.3	7.5
		DPDT	107EL - EG12 - P1 - F0A	0.5	13
5 to 40	125 to 1000	SPDT	107EL - EF40 - P1 - F0A	0.6	15
		DPDT	107EL - EG40 - P1 - F0A	0.8	20

Product Specifications

Electrical Housing

Type Contains explosion-proof hermetically sealed switching element. See Electrical Service. Class I, Groups A, B, C, D; Class II, Groups E, F, G; Divisions 1 & 2
Weathertight

Body Material

356-T6 aluminum

Pressure Ports

Material Plated cold-rolled steel
Connection size 1/8" NPT(F)
For 1/4" NPT(F), change F0A to F1A in selected model.

Wetted Materials

Buna-N, brass, aluminum, cork, stainless steel, acrylic tubing, nylon, plated cold-rolled steel

Electrical Connection

1/2" NPT(M); 18" stranded wire leads, 18-AWG color-coded and marked.

Temperature Limits Ambient -40 to 150°F (-40 to 65°C)
Process -40 to 150°F (-40 to 65°C)

Electrical Service Contact ratings 5 amps 250 VAC
* 5.0 amps 30 VDC
* 0.5 amps 125 VDC

The hermetically sealed switching element capsule is UL Listed and CSA Certified as an explosion-proof snap switch per the following table.

Agency	Hazardous Location Conditions
UL	Weathertight Class I, Groups A, B, C, & D; Class II, Groups E, F, & G; Divisions 1 & 2
CSA Certified	
ATEX Approved	II 2 EEx m II

*DC electrical ratings are for resistive loads only. DC ratings are not agency approved or listed but have been verified by testing or experience.

Max. System Pressure 10 psig (.69 bar)
Vacuum protected to 30" Hg

Weight Approximate 5 lb. (2.3 kg)

Accessories

Design and specifications are subject to change without notice.

Description	Designator
Explosion-proof and weathertight junction box with screw terminals. Aluminum 3/4" NPT(F) top or right conduit connections. UL Listed and CSA Certified Class I, Groups A, B, C, & D; Class II, Groups E, F, & G; Divisions 1 & 2. Includes cover o-ring for weathertight applications. Only available with 'EL' housing.	TB*

* Agency ratings for product sold with junction boxes will be limited to either the rating of the instrument housing or the junction box, whichever is lower.

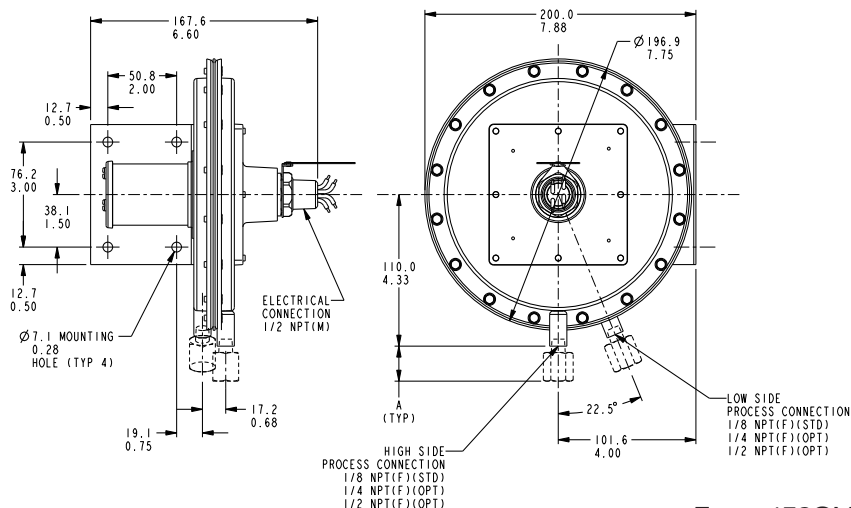
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Dimensions

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Linear = $\frac{\text{mm}}{\text{in.}}$

Drawing 0090593



Low Differential Pressure Switches

Test Certificates

Certificates	C1	C2	C3	C4	C5	C6	C8	B1	B4	B5	B6	B7	A1	A2	A3	A4	A5	A6	A7	A8
Calibration	◆							◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Hydrostatic Pressure Test		◆						◆	◆					◆	◆	◆	◆	◆	◆	◆
Inspection Report			◆					◆	◆	◆	◆	◆			◆	◆		◆	◆	◆
Compliance / Conformance				◆								◆	◆	◆		◆	◆			◆
Dielectric Test					◆				◆	◆										◆
Insulation Resistance						◆			◆	◆	◆							◆	◆	◆
Typical Material of Wetted Parts							◆	◆	◆				◆				◆	◆		