



## The Sub-Mini Hermet

has the ability to be externally adjusted without disconnecting electrical service or tamperproof. These field mounted instruments are suited for compact areas and hostile environments.

A UL Listed, CSA Certified, and SAA Approved hermetically sealed explosion proof detector capsule is provided in a rugged 316 stainless steel housing for harshest service in hazardous locations.



Factory Set  
Sub-Mini-Hermet



Adjustable  
Sub-Mini-Hermet

## Omni pressure detectors

are environmentally sealed pressure detectors that can be externally adjusted without disconnecting electrical service. Diaphragm type detectors are recommended for most process applications. Pivot Seal type detectors are recommended for fluid power (hydraulic) applications where high-shock pressures and high-cycle rates are expected, and where industrial clean hydraulic fluid is used.



Omni

# Sub-Mini-Hermet Pressure Detectors

Adjustable

## Product Specifications

Enclosure	316SS housing contains explosion proof hermetically sealed detecting element (See Agency Approvals) NEMA 4X, IP65
Primary Diaphragm	316SS
O-Ring	Viton
Pressure Port	1/4" NPT(F) 316SS
Ambient Temperature Range	-40 to 167°F (-40 to 75°C)
Process Temperature Range	32 to 400°F (0 to 204°C)
Electrical Connection**	1/2" NPT(M); 18" stranded wire leads, 18-AWG color-coded and marked
Electrical Rating	24 volt, 5 amp 24 volt, 5 amp* 24 volt, .5 amp*
Weight	Approximate 1 lb (0.5 kg)

Design and specifications are subject to change without notice.

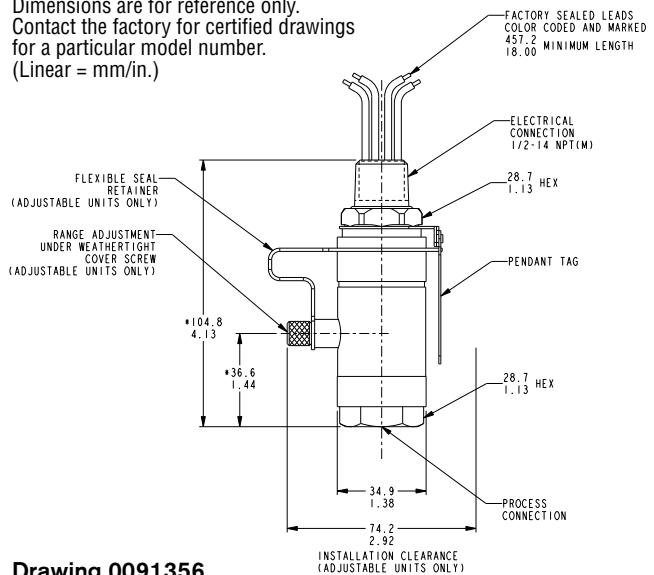
\* DC electrical ratings are for resistive loads only. DC ratings are not agency approved or listed but have been verified by testing or experience.

\*\* Change model number from 9013-00\_to 9013-10\_ for 6 foot leads.

Consult factory for availability of special product configurations: gold contact snap detectors for dry circuits; 1/2" NPT(F) or 1/4" BSP(F) process connections; alternate pressure port, diaphragm, or o-ring materials, etc.

## Dimensions

Dimensions are for reference only. Contact the factory for certified drawings for a particular model number. (Linear = mm/in.)



Drawing 0091356

The hermetically sealed detecting element capsule is UL Listed, CSA Certified and SAA Approved as an explosion proof snap detector per the following table:

Agency	Hazardous Location Conditions
UL Listed	Class I, Groups A, B, C & D Class II, Groups E, F & G; Divisions 1 & 2
CSA Certified	
SAA Approved	Ex s Zone 2 IIC T4 IP65 Ex tD A22 T105°C IP65

## How to Order

Model Number	Electical Contact Form	Range		Typical Dead Band		Overrange		Proof	
		psi	bar	psi	bar	psi	bar	psi	bar
9013 - 001	SPDT	8 - 30	0.55 - 2	3	0.2	1500	100	2500	170
9013 - 002	DPDT			6	0.4				
9013 - 003	SPDT	15 - 60	1.0 - 4.1	5	0.35				
9013 - 004	DPDT			10	0.7				
9013 - 005	SPDT	40 - 200	2.8 - 13.8	25	1.7	2500	170	6000	410
9013 - 006	DPDT			50	3.5				

### Notes

1. Dead band values are expressed as typical expected at mid-range.
2. Metric bar values are conservative. They are practical equivalents of the reference English values: not necessarily exact mathematical conversions.

### Safety Certified to IEC 61508 (SIL)

SOR products are certified to IEC 61508 for non-redundant use in SIL1 and SIL2 Safety Instrumented Systems for most models. For more details or values applicable to a specific product, see the Safety Integrity Level Quick Guide (Form 1528).

# Sub-Mini-Hermet Pressure Detectors

**Factory Pre-set  
Non-adjustable**

## Product Specifications

<b>Enclosure</b>	<b>316SS housing contains explosion proof hermetically sealed detecting element (See Agency Approvals) NEMA 4X, IP65</b>
<b>Primary Diaphragm</b>	<b>316SS</b>
<b>O-Ring</b>	<b>Viton</b>
<b>Pressure Port</b>	<b>1/4" NPT(F) 316SS</b>
<b>Ambient Temperature Range</b>	<b>-40 to 167°F (-40 to 75°C)</b>
<b>Process Temperature Range</b>	<b>32 to 400°F (0 to 204°C)</b>
<b>Electrical Connection**</b>	<b>1/2" NPT(M); 18" stranded wire leads, 18-AWG color-coded and marked</b>
<b>Electrical Rating</b>	<b>24 volt, 5 amp 24 volt, 5 amp* 24 volt, .5 amp*</b>
<b>Weight</b>	<b>Approximate 1 lb (0.5 kg)</b>

Design and specifications are subject to change without notice.

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

\*\* Change model number to **\_SM-EF\_-M4-C1A** for 6 foot leads.

Consult factory for availability of special product configurations: DPDT detector assemblies; gold contact snap detectors for dry circuits; 1/2" NPT(F) or 1/4" BSP(F) process connections; alternate pressure port, diaphragm, or o-ring materials, etc.

## How to Order

Model Number	Electical Contact Form	Range		Typical Dead Band		Overrange		Proof	
		psi	bar	psi	bar	psi	bar	psi	bar
6AT - EF19 - M4 - C1A	SPDT	6 - 18	0.4 - 1.2	3	0.2	1500	100	2500	170
6AT - EF20 - M4 - C1A	SPDT	18 - 30	1.2 - 2	3	0.2				
5AT - EF19 - M4 - C1A	SPDT	15 - 50	1.0 - 3.5	5	0.35				
5AT - EF20 - M4 - C1A	SPDT	50 - 75	3.5 - 5	6	0.4	2500	170	6000	410
9AT - EF19 - M4 - C1A	SPDT	35 - 175	2.4 - 12	25	1.7				
9AT - EF20 - M4 - C1A	SPDT	175 - 230	12 - 16	25	1.7	5000	340	6000	410
1AT - EF19 - M4 - C1A	SPDT	100 - 315	7 - 22	50	3.5				
1AT - EF20 - M4 - C1A	SPDT	315 - 500	22 - 35	50	3.5				

## Accessories

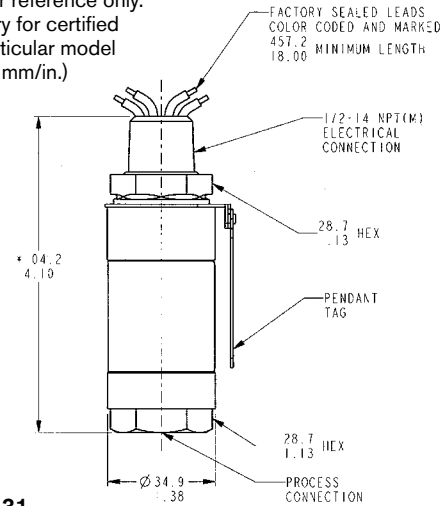
Description	Designator (add after C1A)
Fiber tag with customer specified tag information	PP
304SS nameplate wired to unit with customer specified tag information	RR
304SS nameplate permanently affixed to housing with customer specified tag information.	TT

## Safety Certified to IEC 61508 (SIL)

SOR products are certified to IEC 61508 for non-redundant use in SIL1 and SIL2 Safety Instrumented Systems for most models. For more details or values applicable to a specific product, see the Safety Integrity Level Quick Guide (Form 1528).

## Dimensions

Dimensions are for reference only. Contact the factory for certified drawings for a particular model number. (Linear = mm/in.)



Drawing 0090131

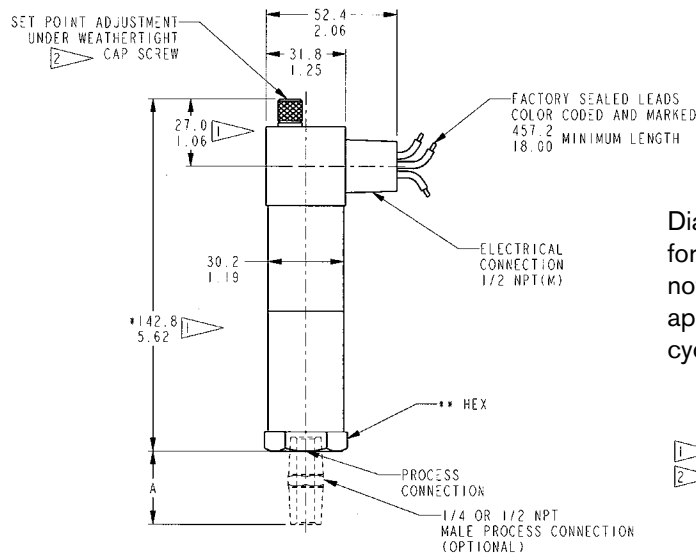
The hermetically sealed detecting element capsule is UL Listed, CSA Certified and SAA Approved as an explosion proof snap detector per the following table:

Agency	Hazardous Location Conditions
UL Listed	Class I, Groups A, B, C & D Class II, Groups E, F & G; Divisions 1 & 2
CSA Certified	
SAA Approved	Ex s Zone 2 IIC T4 IP65 Ex tD A22 T105°C IP65

**Product Specifications**

<b>Enclosure</b>	Aluminum with corrosion resistant, chromate conversion coating. Environmentally sealed. NEMA 4	<b>Pressure Port (Diaphragm Type)</b>	1/4" NPT(F) carbon steel electroless nickel plated
<b>Primary Diaphragm (Diaphragm type)</b>	316SS	<b>Pressure Port (Pivot Seal Type)</b>	1/4" NPT(F) brass
<b>Piston (Pivot Seal Type)</b>	316SS	<b>Electrical Rating</b>	24 volt, 10amps
<b>O-Ring</b>	Buna-N		24 volt, 5 amps
Design and specifications are subject to change without notice.			24 volt, .5 amps

**Dimensions**

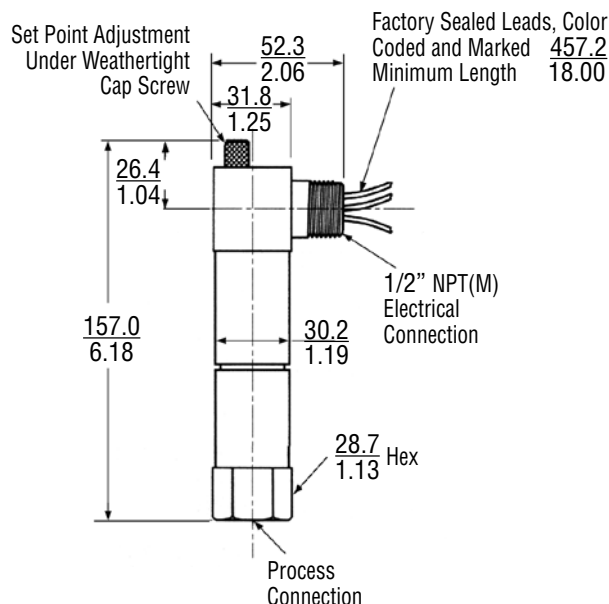


**Drawing 0090179**

Dimensions are for reference only. Contact the factory for certified drawings for a particular model number. (Linear = mm/in.).

Diaphragm Type Pressure Detectors are suitable for a wide variety of process applications. They are not recommended for high-pressure fluid power applications where highshock pressure and high cycle rates are expected.

- NOTES:
- 1. SUBTRACT 10.4 (0.41) FOR "TP" OPTION.
  - 2. NOT USED WITH "TP" OPTION.



Pivot Seal Type Pressure Detectors are designed for fluid power (hydraulic) applications where high-shock pressure and high-cycle rates are expected, and where industrial-clean hydraulic fluid is used. They are not recommended for process applications as the piston requires lubrication for proper operation.

### Diaphragm Type Pressure Detector

Model Number	Range		Typical Dead Band		Overrange		Proof	
	psi	bar	psi	bar	psi	bar	psi	bar
6AC - AD2 - M2 - F1A	7 - 30	0.5 - 2	1.5	0.10	1500	100	2500	170
6AC - AD3 - M2 - F1A	12 - 100	0.8 - 7	2.4	0.17				
5AC - AD45 - M2 - F1A	45 - 550	3.1 - 38	10	0.7	2500	170	6000	410
9AC - AD45 - M2 - F1A	200 - 1750	14 - 120	40	2.8				

### Pivot Seal Type Pressure Detector

Model Number	Range		Typical Dead Band		Overrange		Proof	
	psi	bar	psi	bar	psi	bar	psi	bar
2AC - AD3 - P1 - D1A	100 - 1900	7 - 130	125	8.6	8000	550	10,000	690
2AC - AD5 - P1 - D1A	500 - 3000	35 - 205	145	10				
3AC - AD45 - P1 - D1A	1000 - 7000	70 - 480	290	20				

### Accessories

Description	Designator (add after F1A or D1A)
Fiber tag with customer specified tag information	PP
304SS nameplate wired to unit with customer specified tag information	RR
Factory set and potted to prevent future adjustment of pressure detector	TP

### Test Certificates

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

### Safety Certified to IEC 61508 (SIL)

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**Level  
Detectors**



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