

# Flush Diaphragm Pressure Transducers

## Model A-105 and A-205

UNITIZED DIAPHRAGM

HIGH FREQUENCY

FLUSH DIAPHRAGM



Model A-105

Model A-205

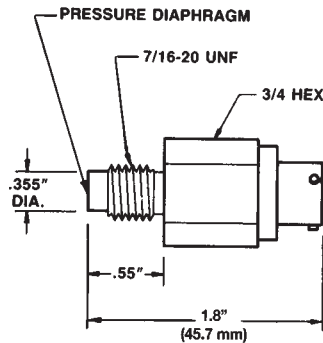
SENSOTEC Models A-105, A-205 Subminiature Pressure Transducers are manufactured with a unitized stainless steel diaphragm. The advantage of this type of design is that a thin diaphragm and heavy sidewalls are made from one piece of stainless steel. This unitized diaphragm is rugged, but at the same time can be made thin enough to measure low pressures. Available pressure ranges span from 15 to 15,000 psi. These models can be used in corrosive fluid environments. Models A-105 and A-205 have welded stainless steel electrical connectors as an integral part of the transducer body. A-105's and A-205's are recommended for applications involving rough handling or where a completely hermetically sealed transducer is required.

### Dimensions

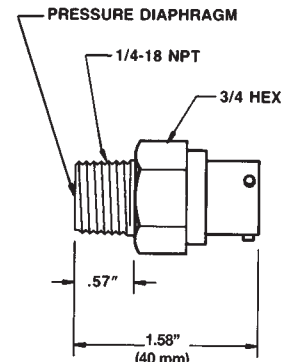
Model A-105 (Order Code AP311)  
Model A-205 (Order Code BP312)

Available Ranges\* (All Models)  
15; 25; 50; 75; 100; 150; **200**; 300; **500**; 750; **1000**;  
1500; **2000**; **3000**; **5000**; 7500; **10,000**; 15,000 psi

\*Stocked ranges (in bold) for Models A-105 only.



Model A-105



Model A-205

### Options (See Appendix)

Temperature compensated 1b, 1c, 1f

**Premium Options:** 1d, 1e, 1g, 1h, 1i

**Accessories:** Mating connectors and connector/cable assemblies

	<b>Models</b>	<b>Pressure Threads</b>
	A-105      Order Code AP311	7/16-20 UNF
	A-205      Order Code BP312	1/4-18 NPT
	<b>Low Pressure Ranges</b>	<b>High Pressure Ranges</b>
<b>PERFORMANCE</b>	Pressure Ranges..... <100 psi (1 bar to 7 bar)	100 to 15,000 psi (10 bar to 1000 bar)
	Non-Linearity and Hysteresis (max)*..... 1% F.S.	+ /-0.5% F.S.
	Non-repeatability (max)*..... 1% F.S.	+ /-0.1% F.S.
	Output (standard)*..... .1mV/psi (@ 5VDC)	2mV/V
	Resolution ..... Infinite	Infinite
<b>ENVIRONMENTAL</b>	Temperature, Operating..... -65° to 300° F (-54° to 150° C)	-65° to 300° F (-54° to 150° C)
	Temperature, Compensated ..... 60° to 160° F (15° to 71° C)	60° to 160° F (15° to 71° C)
	Temperature Effect	
	– Zero (max)* ..... 0.001mV/° F (0.0027mV/° C)	0.01% F.S./° F (0.018% F.S./° C)
	– Span (max)* ..... 0.002mV/° F (0.0036mV/° C)	0.02% Rdg./° F (0.036% Rdg./° C)
<b>ELECTRICAL</b>	Strain Gage Type ..... Bonded foil	Bonded foil
	Excitation (calibration) ..... 5VDC	5VDC
	Excitation (acceptable) ..... Up to 5VDC or AC	Up to 5VDC or AC
	Insulation Resistance ..... 5000 megohm @ 50VDC	5000 megohm @ 50VDC
	Bridge Resistance ..... 350 ohms	350 ohms
	Shunt Calibration Data ..... Included	Included
	Wiring Code (std)	
	A-105/A-205 ..... #2 (See Pg. AP-8)	#2 (See Pg. AP-8)
	Electrical Termination (std)	
	A-105/A-205 ..... PTIH-10-6P or equiv. (Hermetic stainless)	PTIH-10-6P or equiv. (Hermetic stainless)
	Mating Connector (not incl.)	
	A-105/A-205 ..... PT06A-10-6S or equiv.	PT06A-10-6S or equiv.
<b>MECHANICAL</b>	Media..... Gas, Liquid	Gas, Liquid
	Overload-Safe ..... 100% over capacity	50% over capacity
	Overload-Burst ..... 400% over capacity	400% over capacity
	Pressure Port	
	A-105 ..... 7/16-20 UNF male	7/16-20 UNF male
	A-205 ..... 1/4-18 NPT male	1/4-18 NPT male
	Dead Volume..... Flush diaphragm	Flush diaphragm
	Wetted Parts Material..... 17-4 PH Stainless	17-4 PH Stainless
	Type ..... Gage	Gage
	Weight ..... 1-2 oz.	1-2 oz.
	Case Material ..... 17-4 PH Stainless	17-4 PH Stainless
<b>IN-LINE AMPLIFIERS</b>	Outputs Available ..... 0-5VDC, 4-20mA ( 50 psi)	0-5VDC, 4-20mA
		0-1VDC (<50 psi)

**NOTES** \*Unit of measure in specifications is different for low ranges than high ranges.

## General Information

How to order (See Pg. AP-19)  
Gage/Absolute pressure selection flow chart (See Pg. PR-1)

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