

# Subminiature, Flush Diaphragm Pressure Transducers

## Models G & F

10 TO 20,000 psi

FLUSH DIAPHRAGM

HIGH FREQUENCY



Model G



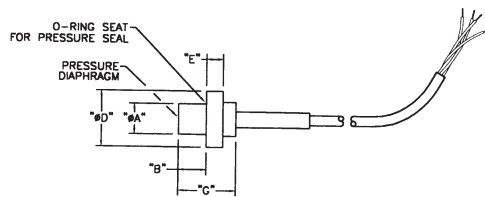
Model F

SENSOTEC products include a full line of subminiature pressure transducers to accurately measure pressure ranges from 10 psi to 20,000 psi. These subminiature pressure transducers have a high natural frequency and utilize a flush diaphragm. The specifications listed below are classified by high pressure ranges or low pressure ranges, and by foil gages (350 ohms) or semiconductor gages (500 ohms).

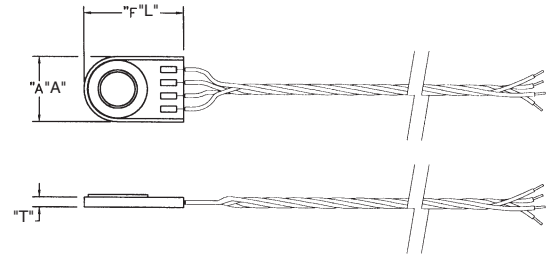
Temperature compensation is accomplished by using temperature sensitive components located inside the transducers. These transducers have a small electrical zero balance circuit board which is in the lead wire (approximately 1" X .087" thick). This balance board does not have to be the same temperature as the transducer. The application should dictate the type of strain gage utilized. Generally, the semiconductors are used when high output (30 mv/v) is required; and foil strain gages are used when longer term very high stability and excellent thermal characteristics are required. All units have four (4) active bonded strain gages arranged in a Wheatstone bridge configuration.

Most SENSOTEC subminiature 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 it is thin enough to measure low pressures.

## Dimensions



Model G



Model F

Model G Order Code	Available Ranges	A"	D"	B"	G"	E'	Diaphragm
BP386	150-15,000 psi	.310	.44	.15	.47	.15	Welded
BP387	150-20,000 psi	.375	.50	.15	.47	.15	Welded

Model F Order Code	Available Ranges	A"	T"	L"
BP340 Foil	10-500 psi	.275	.042*	.38
BP341 Foil	10-3000 psi	.320	.042*	.50
BP342 Foil	10-3000 psi	.425	.060	.56
BP343 Semiconductor	15-500 psi	.150	.042	.38
BP344 Semiconductor	10-500 psi	.275	.042	.38
BP345 Semiconductor	10-3000 psi	.320	.042	.50
BP346 Semiconductor	10-3000 psi	.425	.060	.56

\* Nominal

Note: All Model F's have a cemented diaphragm.

## High Pressure Ranges

		<b>Foil Gages (350 ohms)</b>
<b>PERFORMANCE</b>	Pressure Ranges.....	150 to 20,000 psi
	Non-Linearity and Hysteresis (max) .....	1.0% F.S.
	Non-repeatability (max).....	±0.1% F.S.
	Output (standard) .....	2mV/V
	Resolution .....	Infinite
<b>ENVIRONMENTAL</b>	Temperature, Operating.....	-65° to 300° F
	Temperature, Compensated .....	60° to 160° F
	Temperature Effect	
	- Zero (max).....	.01% F.S./° F
- Span (max).....	.02% Rdg./° F	
<b>ELECTRICAL</b>	Strain Gage Type .....	Bonded foil
	Excitation (calibration) .....	5VDC
	Bridge Resistance .....	350 ohms
	Wiring Code (std) .....	#1 (See Pg. AP-8)
	Electrical Termination (std).....	4 twisted leads (5 ft.)
<b>MECHANICAL</b>	Media.....	Gas, Liquid
	Overload-Safe .....	50% over capacity
	Wetted Parts Material.....	17-4 PH Stainless
	Type .....	Gage
	Case Material .....	17-4 PH Stainless

## Low Pressure Ranges

		<b>Semiconductor Gages (500 ohms)</b>
<b>PERFORMANCE</b>	Pressure Ranges.....	10 to 100 psi
	Non-Linearity and Hysteresis (max) .....	±0.5mV
	Non-repeatability (max).....	±0.1mV
	Output (standard) .....	2-5mV/psi (@ 5VDC)
	Resolution .....	Infinite
<b>ENVIRONMENTAL</b>	Temperature, Operating.....	-65° to 300° F
	Temperature, Compensated .....	60° to 160° F
	Temperature Effect	
	- Zero (max).....	.02mv/° F
- Span (max).....	.03mv/° F	
<b>ELECTRICAL</b>	Strain Gage Type .....	Bonded semiconductor
	Excitation (calibration) .....	5VDC
	Bridge Resistance .....	500 ohm
	Wiring Code (std) .....	#1 (See Pg. AP-8)
	Electrical Termination (std).....	4 twisted leads (5 ft.)
<b>MECHANICAL</b>	Media.....	Gas, Liquid
	Overload-Safe .....	100% over capacity
	Wetted Parts Material.....	17-4 PH Stainless or BeCu
	Type .....	Gage
	Case Material .....	17-4 PH Stainless

**Available Ranges** (depending on model)  
10; 15; 25; 50; 75; 100; 150; 200; 300; 500; 750; 1000; 1500; 2000; 3000; 5000; 7500; 10,000;  
15,000; 20,000 psi

## Options (See Appendix)

Temperature compensated 1b, 1c, 1f

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

Special options such as underwater cable, microtech connector, special headers and 400° F temperature are available on some ranges of the Model G. Consult factory.

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

## General Information

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

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