

# AccuSense™ Model ASM

## High Accuracy Pressure Transducer

Pressure Ranges: 15 psi up to 1000 psi



### *Unparalleled Performance*

- 0.05% "End-Point" Accuracy—Guarantees Test Results
- Low Thermal Error over Wide Temperature Range

### *Small & Robust Package*

- 1.3" Diameter—Fits in Tight Locations
- Overpressure Protection—10X Proof Pressures

### *Secure & Simple Field Calibration*

- SecureCal™ Accessory
  - Fingertip Digital Operation
  - Eliminates Field Tampering

**setra**

# AccuSense Model ASM

## Less Down Time...More Test Time



### SecureCal™ Calibration



### Superior Performance

- Patented digital sensor enables excellent linearity and stability (Patent # 6,532,834)
- $\pm 0.05\%$  Full Scale (End-Point Accuracy) or 0.1% of Reading accuracy ensures accurate test results
- $< \pm 0.25\%$  full scale total error band over wide temperature range virtually eliminates thermal errors
- Patented high overpressure option enables up to 10x proof pressure (Patent #6,718,827)

### Versatile Configuration

- 0, to 5 VDC, 0 to 10 VDC, and 4 to 20 mA outputs
- Multiple pressure fittings to accommodate various installation
- Choice of Bayonet pinouts offers a drop-in solution for existing systems

### Pressure Measurement Capabilities

- 15 to 1000 psi ranges
- Gauge, Absolute or Vacuum gauge
- Engineering Units in psi, bar, or other

### SecureCal™ Accessory

- Eliminates trim pots on transducer, ensuring tamper-proof calibration
- Simple push-button enables zero-tare and snap-span adjustment
- Foolproof factory calibration restore function
- Visual feedback thru LCD & LEDs.
- Calibrate multiple ASM transducers with one SecureCal™

# Specifications

## Performance Data

	Accuracy Code			
	A	B	C	D
Accuracy	<±0.05% FS RSS*	<±0.1% Reading	<±0.1% FS RSS*	
Non-Linearity	<±0.025% FS End Point Typ.		<±0.05% FS End Point Typ.	
Hysteresis	<0.03% FS Typ.		<0.03% FS Typ.	
Non-Repeatability	<±0.02% FS Typ.		<±0.02% FS Typ.	
Offset Setting Tol.	<±0.05% Typ.		<±0.1% FS	
Span Setting Tol.	<±0.05% FS		<±0.1% FS	
Thermal Total Error Band	<±0.25% FS (-20°C to 60°C)	<±0.50% FS (-20°C to 60°C)	<±1.5% FS Typ. (-20°C to 60°C)	

\*RSS: Root Sum Square of endpoint linearity.

\*\* % of Reading accuracy achieved down to 20% of pressure range when zero offset is removed.

Below 20% of pressure range uncertainty is ±0.02% FS.

Zero Offset Position Effect	<0.05%/g (Ranges ≥ 50 psi) <0.1%/G (Ranges ≥ 100 psi)
Unit factory calibrated in vertical position (Pressure Port downward)	
Long-term Stability	<0.15%FS/Year
Response Time to Pressure Input	<15 ms for Voltage Output <80 ms for Current Output

## Environmental Data

Temperature Calibrated °F (°C)	-4 to 140 (-20 to 60)
Operating °F (°C)	-40 to +185 (-40 to +75)
Storage °F (°C)	-40 to +185 (-40 to +85)

## Pressure Media

Gases or liquids compatible with 17-4 PH stainless steel.

Note: Hydrogen not recommended for use with 17-4 PH stainless steel.

## Physical Description

Dimensions	See outline drawings on right
Weight	9 oz. (254 g)
Case Materials	Stainless Steel
Moisture / Splash Resistance	NEMA 4X IP65
Pressure Fittings	See Table, pg4 (Ordering Information)

## Sensor Description

Proof Pressure	See Table on Right
Burst Pressure	See Table on Right
Wetted Materials	17-4 PH SS
Life Cycle Rating	>10 <sup>6</sup> Pressure Cycles

## Electrical Data

Signal Output Ranges	0-5 VDC, 0-10 VDC (4-wire), 4-20mA (2-Wire)
Nominal Excitation	24 V DC
Excitation Range	9-30V DC (5V DC & 4-20mA output) 15-30V DC ( 10V DC Output)
Excitation Range Sensitivity	±0.02% Over Full Excitation Range
Current / Power Consumption	TBD (Voltage Version), <3.5mA (4-20mA Version)
Circuit Response Time	<10ms (Voltage Version), <80ms (4-20mA Version)
Warm-up, Environmental	Within +/- .02%FS after 15min Warm-up Time
Miswiring	Reverse Excitation Protection

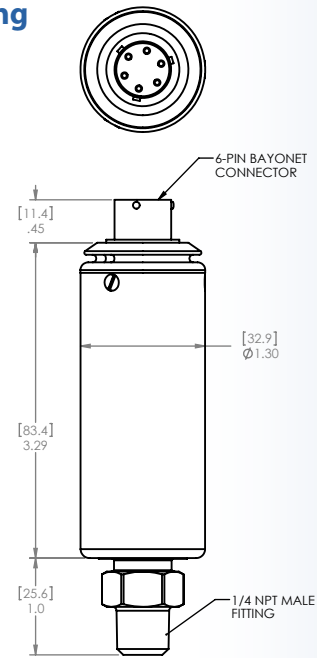
## Configurations

Electrical Terminations	6-Conductor Cable, Pigtail 6-Pin Bayonet Connector
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## Regulatory Data

RoHS Compliant  
CE Compliant

## Outline Drawing



Wiring Codes		Code B3 (Standard)	Code B4 Option	Code B5 Option
Electrical Connection	Wire Color	Bayonet Connector Pinout	Bayonet Connector Pinout	Bayonet Connector Pinout
+ EXC	Red	A	A	A
- EXC	Black	D	B	B
+ Sig Out	Green	B	D	C
- Sig Out	White	C	C	D
Reserved for communication with SecureCal™ calibration module				
SecureCal	Blue	E	E	E
SecureCal	Brown	F	F	F

Pressure Ranges		Standard Code "1"	High Over pressure-Option Code "2"
Full Scale Range (PSI)	Burst Pressure* (PSI)	Proof Pressure** (PSI)	High Proof Pressure (PSI)
15	3000	30 (2x)	150 (10x)
25	3000	50 (2x)	250 (10x)
50	8000	100 (2x)	500 (10x)
100	10,000	200 (2x)	1000 (10x)
150	10,000	300 (2x)	1500 (10x)
200	10,000	400 (2x)	1600 (8x)
300	10,000	600 (2x)	2100 (7x)
500	10,000	800 (1.5x)	2500 (5x)
750	10,000	1200 (1.5x)	3000 (4x)
1000	10,000	1500 (1.5x)	4000 (4x)

Specification subject to change without notice.

# Model ASM ORDERING INFORMATION

Example: Part No. ASMF050PG2M1103A for an ASM Transducer 0 to 50 PSIG Range, 1/4" NPT Male Pressure Fitting, 4 to 20 mA Output, 3 Feet of Cable, and  $\pm 0.05\%$  FS RSS  $< 0.25\%$  TEB.

**Code all blocks in table.**

A	S	M	I	[ ] [ ]		[ ]	[ ] [ ]		[ ] [ ]		[ ]	[ ]
Model				Pressure Ranges		Type	Pressure Port	Output	Elec. Termination	Accuracy	Option	
ASM1 = ASM				PSI	BAR							
				Z01P = 0 to -14.7 PSI	Z01B = -1 BAR	G = Gauge	IF = 1/8" NPT Female	2B = 0 to 5 VDC	03 = 3 ft., 1m Std Cable	A = $\pm 0.05\%$ FS RSS	H = High Overpressure Capability	
				015P = 0 to 15 PSI	002B = 2 BAR	A = Absolute	1M = 1/8" NPT Male	2C = 0 to 10 VDC	B3 = 6-PIN Male	$< 0.25\%$ TEB	(See Table)	
				025P = 0 to 25 PSI	005B = 5 BAR	V = Vacuum Gauge*	2F = 1/4" NPT Female	11 = 4 to 20 mA	Bayonet Connector, Standard Wiring	B = $\pm 0.1\%$ Reading		
				050P = 0 to 50 PSI	010B = 10 BAR	*Z01 Range	2M = 1/4" NPT Male		B4 = 6 Pin Male Bayonet Connector, Optional Wiring	C = $\pm 0.1\%$ FS RSS		
				100P = 0 to 100 PSI	020B = 20 BAR	Code Only	J7 = 7/16"-20 SAE Male			$< 0.25\%$ TEB		
				150P = 0 to 150 PSI	040B = 40 BAR					D = $\pm 0.1\%$ FS RSS		
				200P = 0 to 250 PSI	050B = 50 BAR					$< 1.5\%$ TEB		
				300P = 0 to 300 PSI	070B = 70 BAR							
				500P = 0 to 500 PSI								
				750P = 0 to 750 PSI								

While we provide application assistance on all Setra products both personally and through our literature, it is the customer's responsibility to determine the suitability of the product in the application.

## Other Pressure Products to Fit your Test & Measurement Requirements.



**Model 239R**  
High Accuracy/Low range Pressure  
(CE and RoHS Compliant)



**Model 470T**  
Setraceram™ Extended Temperature for  
Barometric Medium Pressure



**3100 series**  
Engine Mount/Low Cost  
High Accuracy