Pressure Sensors

Absolute Unamplified Noncompensated





FEATURES

- Absolute pressure measurement
- Miniature package
- 2-15 and 2-30 psi pressure ranges
- 2 mA constant current excitation significantly reduces sensitivity shift over temperature*

24PC PERFORMANCE SPECIFICATIONS

Accuracy Specifications @ 10.0 ± .01 VDC Excitation, 25°C							
Parameter	Range psia	bar	Min.	Тур.	Max.	Units	
Excitation			_	10	12	VDC	
Null Shift	2-15	1		±2.0	±4.0	mV	
0 to 25°C, 25 to 50°C	2-30	2		±2.0	±5.5		
Linearity	2-15	1		.10	.20	% Span	
B.F.S.L. P2 < P1**	2-30	2		.15	.30		
Sensitivity Shift 0 to 25°C, 25 to 50°C	All			±5.0	±6.5	% Span	
Repeatability & Hysteresis	All			±0.5		% Span	
Input Resistance			4.0 K	5.0 K	6.0 K	Ohms	
Output Resistance	•	•	4.0 K	5.0 K	6.0 K	Ohms	
Weight			_	2.0	_	grams	

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40 to +85°C (-40 to +185°F)
Storage Temperature	-55 to +100°C (-67 to +212°F)
Shock	Qualification tested to 150 G
Vibration	Qualification tested to 0 to 2 kHz, 20 G sine
Media Compatibility	Limited only to those media which will not attack polyetherimide, silicon, fluorosilicone and silicone seals.

^{*}Span: the algebraic difference between output end points

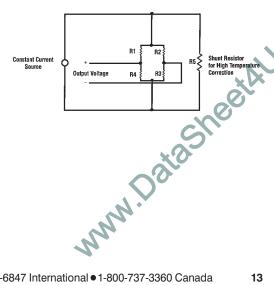
24PC ABSOLUTE ORDER GUIDE

Catalog Listing				Null Offset mV			Sensitivity mV/psi	Over- pressure	
Type	psia	Min.	Тур.	Max.	Min.	Тур.	Max.	Typ.	psia Typ.
24PCC	2-15	-140	-200	-260	-46	-16	+14	15	45
24PCD	2-30	-160	-300	-440	-61	-16	+29	11	60

* Non-compensated pressure sensors, excited by constant current instead of voltage, exhibit temperature compensation of Span. Application Note #1 briefly discusses current excitation.

Constant current excitation has an additional benefit of temperature measurement. When driven by a constant current source, a silicon pressure sensor's terminal voltage will rise with increased temperature. The rise in voltage not only compensates the Span, but is also an indication of die temperature.

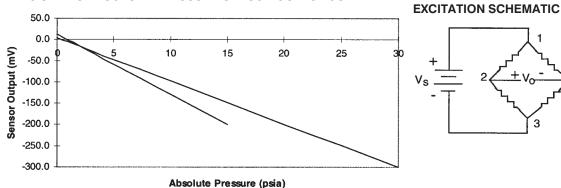
Constant Current Excitation Schematic



^{**}B.F.S.L.: Best Fit Straight Line

Absolute Unamplified Noncompensated

24PC SERIES ABSOLUTE PRESSURE SENSOR OUTPUT CURVE



3

TERMINATION STYLE Style 6 - 1 x 4 Pin 1 = Vs (+)Pin 2 = Output (+)Pin 3 = Ground (-)Pin 4 = Output (-)Pin 1 is notched Pin 2 is next to

Pin 1, etc.

SENSOR SELECTION GUIDE

2	4	PC	C			6	A	
Product	Circuit	Pressure	Pressure			Termination	Pressure	
Family	Type	Transducer	Range			Style	Measurement	
2 20PC Family	4 Standard noncompensated		C 2-15 psia 1 bar D 2-30 psia 2 bar	F Fluoro- silicone	A Straight D Modular	6 1 x 4 (.600" long)	A Absolute	

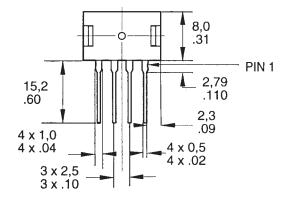
^{*}Port type refers to P1

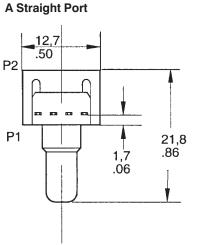
Example: 24PCCFD6A

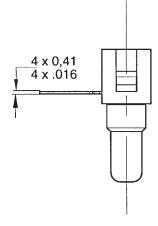
Non-compensated 15 psi Absolute sensor with fluorosilicone seal, modular port, 1 x 4 terminals, .600" long.

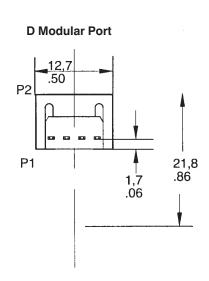
See Accessory Guide, page 27.

MOUNTING DIMENSIONS (for reference only)









^{**} Media seal is on P1 side and will not be in contact with media