Honeywell

Interactive Catalog Replaces Catalog Pages

Honeywell Sensing and Control has replaced the PDF product catalog with the new Interactive Catalog. The Interactive Catalog is a power search tool that makes it easier to find product information. It includes more installation, application, and technical information than ever before.

Click this icon to try the new Interactive Catalog.

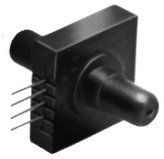
Sensing and Control
Honeywell Inc.
11 West Spring Street
Freeport, Illinois 61032

Pressure Sensors

170PC Series

Low Pressure Gage & Differential/Unamplified

Temperature Compensated Sensors



FEATURES

- Miniature package
- Low pressure measurement
- Calibrated Null and Span
- Temperature compensated for Span over 0 to 50°C
- Provides interchangeability

176PC SERIES PERFORMANCE CHARACTERISTICS at 10.0 ±0.01 VDC Excitation, 25°C

	Min.	Typ.	Max.	Units
Excitation	---	10	16	VDC
Null Offset	–2	0	+2	mV
Null Shift, 25° to 0°, 25° to 50°C	---	±3.0	---	mV
Sensitivity Shift, 25° to 0°, 25° to 50°C	---	---	±4.0[1]	%Span
	---	---	±3.5[2]	%Span
Repeatability & Hysteresis	---	±0.25	---	%Span
Response Time	---	---	1.0	msec
Input Resistance	---	6.3 K	---	ohms
Output Resistance	---	4.0 K	---	ohms
Stability over One Year	---	±0.5	---	%Span
Weight	---	7	---	grams

Key: 1 = 0-7″, 0-14″ H_2O only
2 = 0-28″ H_2O only

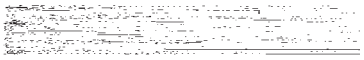
ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	–40° to +85°C (–40° to +185°F)
Storage Temperature	–55° to +125°C (–67° to +257°F)
Compensated Temperature	0° to +50°C (32° to +122°F)
Shock	MIL-STD-202, Method 213 (150 g, half sine, 11 msec)
Vibration	MIL-STD-202, Method 204 (10 to 2000 Hz at 20 g)
Media	P2 port Wetted materials; polyester housing, epoxy adhesive, silicon, borosilicate glass, and silicon-to-glass bond*
	P1 port Dry gases only

* Liquid media containing some highly ionic solutions could potentially neutralize the chip-to-glass tube bond.

ELECTRICAL CONNECTIONS

(Internal Circuitry Shown)



NOTES

1. Circled numbers refer to sensor termination.
2. $V_0 = V_2 - V_4$ (referenced to pin 3).
3. R_B = Strain gage resistors (~4.8 kΩ).
4. R_T = Sensitivity temperature compensation resistor.
5. R_S = Sensitivity calibration resistor.

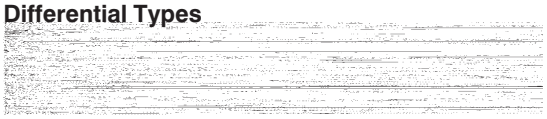
When a positive pressure is applied to port P2, the differential voltage $V_2 - V_4$ (voltage at pin 2, with respect to ground, increases and voltage at pin 4 decreases) increases linearly with respect to the input pressure. When a vacuum pressure is pulled at port P2 (or positive pressure applied to port P1) the voltage $V_2 - V_4$ decreases linearly with respect to the input pressure.

176PC SERIES ORDER GUIDE

Catalog Listing	Pressure Range H_2O	Span, mV			Sensitivity mV/″H_2O Typ.	Overpressure ″H_2O Max.	Linearity, %Span	
		Min.	Typ.	Max.			P2 > P1 Max.	P2 < P1 Max.
176PC07HG2	0-7	26	28	30	4.00	140	±3.00	±1.50
176PC07HD2	0-7	26	28	30	4.00	140	±3.00	±1.50
176PC14HG2	0-14	33	35	37	2.50	140	±3.00	±1.50
176PC14HD2	0-14	33	35	37	2.50	140	±3.00	±1.50

MOUNTING DIMENSIONS (For reference only)

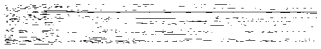
Differential Types



Terminals
1 – Vs (+)
2 – Output A
3 – Ground (–)
4 – Output B

Gage Types

Mounting Hardware - PC10198



170PC CONSTRUCTION