

FEATURES

- 0...4 "H₂O to 0...150 psi gage or differential,
0...15 to 0...150 psi absolute
- Precision temperature compensated
- Calibrated offset and span
- Voltage excitation
- Excellent long term stability

SERVICE

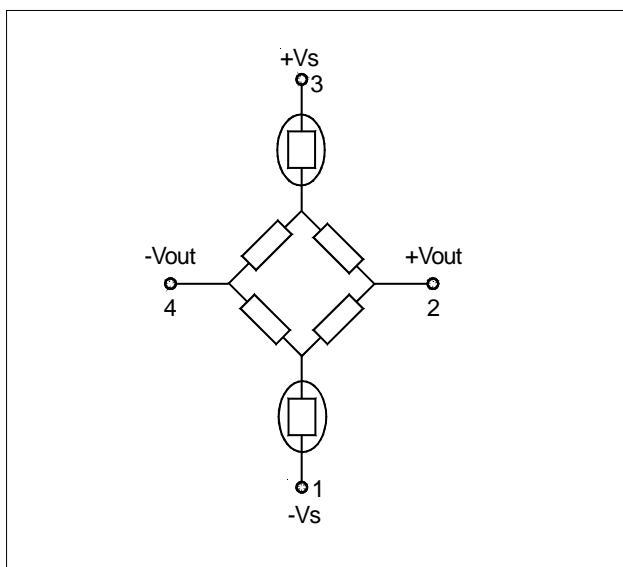
Non-corrosive, non-ionic working fluids such as clean dry air, dry gases and the like.

The media wetted materials are:

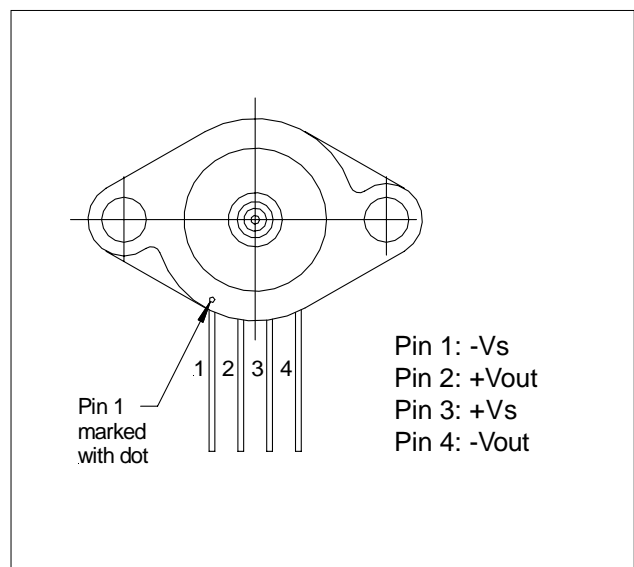
- port 1:
 - front side of silicon sensor chip
 - glass filled nylon
 - RTV
 - silgel (for devices of 5 psi and above)
 - ceramic (Al₂O₃)
- port 2:
 - silicon sensor chip
 - glass filled nylon
 - RTV
 - ceramic (Al₂O₃)



EQUIVALENT CIRCUIT



ELECTRICAL CONNECTION



SPECIFICATIONS

Maximum ratings (for all devices)

Supply voltage V_s	3 to 16 V
Lead temperature (soldering 5 seconds)	315°C
Common mode pressure	50 psig

Environmental specifications (for all devices)

Temperature range	Compensated	0 to 70°C
	Operating	-25 to 85°C
	Storage	-40 to 125°C
Humidity limits (non-condensing)		0 to 95 %RH

PRESSURE SENSOR CHARACTERISTICS

$V_s = 12\text{ V}$, $T_A = 25^\circ\text{C}$, pressure applied to port P1⁷

Part no.	Operating pressure	Proof pressure ¹	Burst pressure ²	Full scale span ³		
				Min.	Typ.	Max.
XPCL04...	4 "H ₂ O	3 psi	5 psi	23 mV	25 mV	27 mV
XPCL10...	10 "H ₂ O	3 psi	5 psi	19 mV	20 mV	21 mV
XPC0.3...	0.3 psi	3 psi	5 psi	19 mV	20 mV	21 mV
XPC01...	1 psi	3 psi	5 psi	17 mV	18 mV	19 mV
XPC05...	5 psi	15 psi	25 psi	57 mV	60 mV	63 mV
XPC15...	15 psi	45 psi	75 psi	85 mV	90 mV	95 mV
XPC30...	30 psi	90 psi	150 psi	85 mV	90 mV	95 mV
XPC60...	60 psi	180 psi	300 psi	85 mV	90 mV	95 mV
XPC100...	100 psi	250 psi	400 psi	95 mV	100 mV	105 mV
XPC150...	150 psi	250 psi	400 psi	85 mV	90 mV	95 mV

PERFORMANCE CHARACTERISTICS

$V_s = 12\text{ V}$, $T_A = 25^\circ\text{C}$, pressure applied to port P1⁷

Characteristics	Min.	Typ.	Max.	Unit
Zero pressure offset	-1.0	0	+1.0	mV
Combined non-linearity and hysteresis ⁴		±0.25	±1.0	%FSS
Temperature effects (0 to 70°C) ⁵	Span		±2.0	
	Offset		±1.0	mV
Input resistance	5			kΩ
Output resistance		3		
Response time (10 to 90 %FSS)	XPCL...		500	μs
	XPC...		100	
Common mode voltage ⁶		6		V

Notes

- Proof pressure is the maximum pressure which may be applied without causing durable shifts of the electrical parameters of the sensing element.
- Burst pressure is the maximum pressure which may be applied without causing damage to the sensing element or leaks from the housing.
- Full scale span is the algebraic difference between the output voltage at full-scale pressure and the output at zero pressure. The span is ratiometric to the supply voltage.
- Non-linearity refers to the **Best Straight Line** fit measured for offset pressure, full-scale pressure and ½ full-scale pressure.
- Shift is relative to 25°C. The XPCL04... has a compensated temperature range from 0 to 50°C.
- This is the common-mode voltage of the output arms (pins 2 and 4) for $V_s = 12\text{ V}$.
- For backside port devices (XPC...B...) pressure applied to P2.

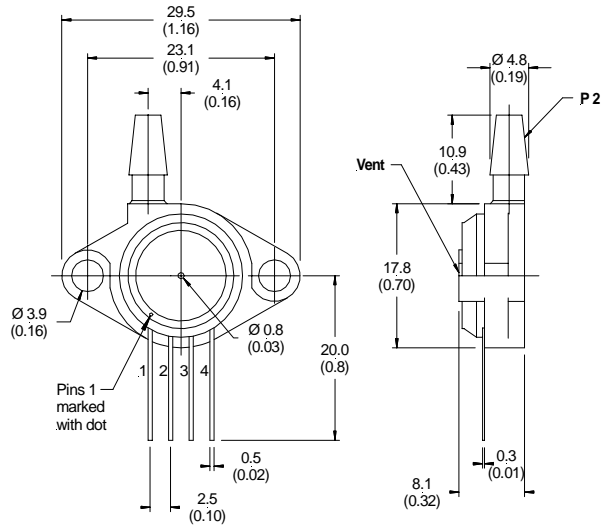
XPC/XPCL Series *C-grade*

Precision compensated pressure sensors / mV-output

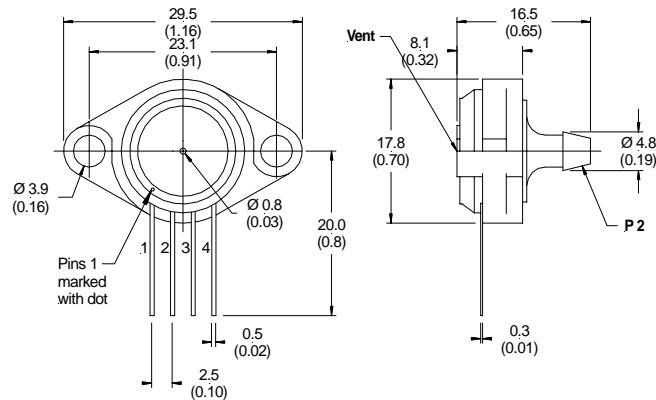
Honeywell

OUTLINE DRAWING

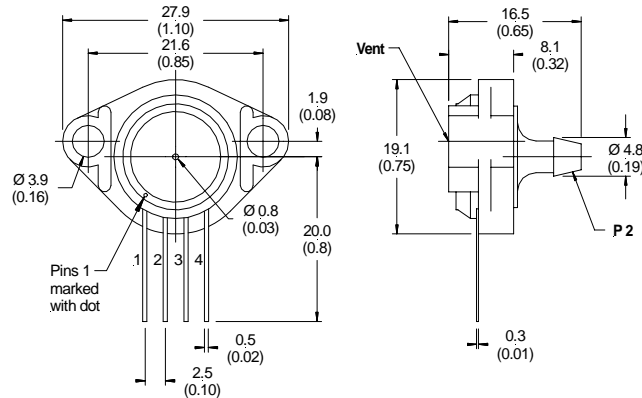
Package version GBT



Package version GBF



Package version GBFS

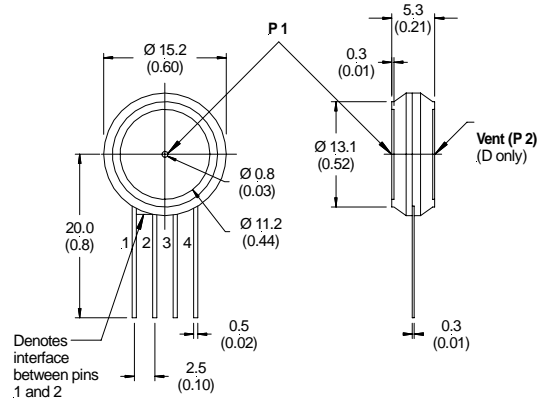


mass: approx. 2 g

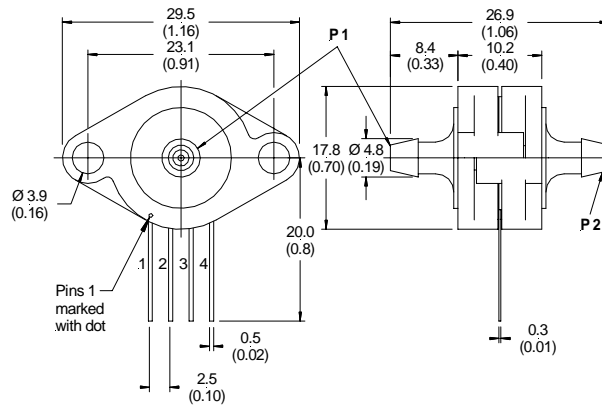
dimensions in
mm (inches)

OUTLINE DRAWING

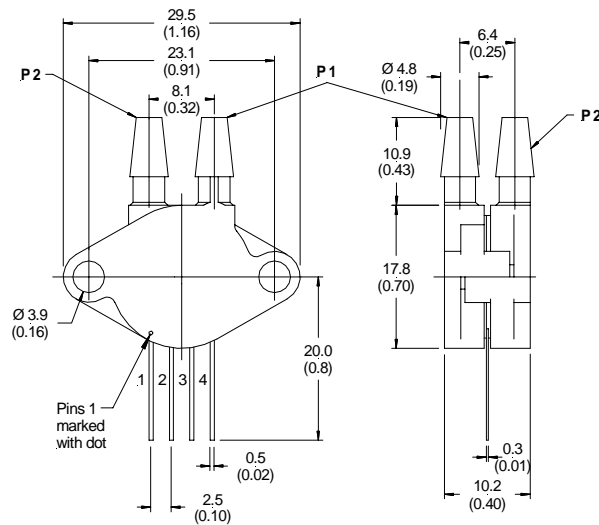
Package version A and D (no port)



Package version DF



Package version DT



mass: approx. 2 g

dimensions in
mm (inches)

ORDERING INFORMATION

Pressure range	Gage devices					
	Axial port (GF)	Radial port (GT)	Offset axial port (GFS)	Back side Axial port (GBF)	Back side Radial port (GBT)	Back side Offset axial port (GBFS)
4 "H ₂ O	---	XPCL04GTC	XPCL04GFSC	---	---	XPCL04GBFSC
10 "H ₂ O	---	---	---	---	---	XPCL10GBFSC
0.3 psi	---	---	---	---	---	---
1 psi	---	XPC01GTC	---	---	---	---
5 psi	---	---	---	---	---	---
15 psi	---	XPC15GTC	---	---	---	---
30 psi	XPC30GFC	XPC30GTC	XPC30GFSC	---	---	---
60 psi	---	XPC60GTC	---	---	---	---
100 psi	---	XPC100GTC	---	---	---	---
150 psi	---	XPC150GTC	XPC150GFSC	---	---	---

Pressure range	Absolute devices				Differential devices		
	No port (A)	Axial port (AF)	Radial port (AT)	Offset axial port (AFS)	No port (D)	Axial port (DF)	Radial port (DT)
4 "H ₂ O					XPCL04DC	XPCL04DFC	XPCL04DTC
10 "H ₂ O					XPCL10DC	---	XPCL10DTC
0.3 psi					---	XPC0.3DFC	XPC0.3DTC
1 psi					---	---	XPC01DTC
5 psi					---	---	XPC05DTC
15 psi	---	XPC15AFC	XPC15ATC	XPC15AFSC	---	---	XPC15DTC
30 psi	---	---	XPC30ATC	---	---	---	---
60 psi	---	---	---	---	---	---	---
100 psi	---	---	---	---	XPC100DC	---	XPC100DTC
150 psi	---	---	---	---	---	---	---

Note

⁸ THESE DEVICES ARE AVAILABLE ON SPECIAL REQUEST. MINIMUM ORDER QUANTITY APPLIES.

Sensortech reserves the right to make changes to any products herein. Sensortech does not assume any liability arising out of the application or use of any product or circuit described herein, neither does it convey any license under its patent rights nor the rights of others.