



- Constant current excitation
- Easy to use DIP package
- Wide compensated range
- Zero calibration
- High-Performance OEM applications
- RoHS compliant

The Pressure Transducer model HPSAC 3000 is a temperature compensated pressure sensing device with zero calibrated output. High performance and accuracy in a compact design makes this transducer suitable for many applications. The HPSAC3000 pressure transducer is constructed on 1 mm thick ceramic substrate with one or two pressure tubes. Thick film resistors printed

on substrate are individually laser trimmed to provide temperature compensation and zero calibration. An additional resistor is trimmed according to individual transducer span to provide easy transducer amplification with external differential amplifier. Pressure media compatible with this transducer family is dry air or non-corrosive gases and liquids.

Applications:

Medical instrumentation	HVAC	Leak detection	Altimeters
Respirators	Process control	Pneumatic controls	

Specifications				
Parameter	Unit	Min.	Typ	Max.
Input current	mA		1.5	3
Thermal error of span (0 to 70° C)	%FS		±0.2	±1
Thermal error of offset (0 to 70° C)	mV		±0.1	±0.5
Combined linearity and hysteresis	%FS		±0.2	±0.5
Input impedance	kΩ	2		4
Output impedance	kΩ	2.7		4
Repeatability	%FSO	2	±0.05	4
Long term stability of offset and span	mV		±0.1	
Media compatibility	see specification notes			
Weight	g		2	

TAMB = 25° C

Vcc = 5 V, unless otherwise noted

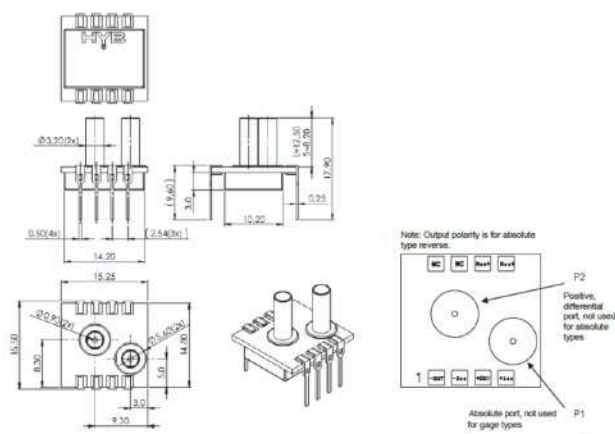
Pressure range	10 mbar (0,15 psi)	20 mbar (0,3 psi)	50 mbar (0,8 psi)	100 mbar (1,5 psi)	350 mbar (5 psi)	1 bar (15 psi)	2 bar (30 psi)	4 bar (60 psi)	7 bar (100 psi)
V _{OUT}	25 to 75 mV				50 to 150 mV				
V _{OFFS} (MAX)		±1.0 mV							
Operating Temp		-25 to 85° C							
Compensated Temp.		0 to 70° C							
Storage Temp		-40 to 125° C							
Over pressure	100 mbar	200 mbar	500 mbar	1 bar	1 bar	3 bar	6 bar	8 bar	14 bar
Burst pressure	150 mbar	300 mbar	750 mbar	1.5 bar	1.7 bar	5 bar	10 bar	12 bar	21 bar



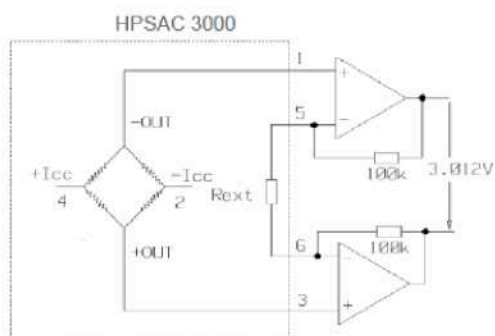
Specification notes

- 1) Over pressure is the maximum pressure which may be applied without causing damage to the sensing element
- 2) Burst pressure is the maximum pressure which may be applied without causing leakage damage to the sensing element
- 3) Analog output signal is ratiometric to power supply V_{cc} .
- 4) Offset voltage is the voltage output at zero pressure.
- 5) Span is the algebraic difference between the output at full scale pressure range and offset.
- 6) Thermal error of span and offset represents the maximum deviation of transducer signal (span and offset) through whole compensated temperature range from 0 to 70° C in comparison to value at 25° C. For pressure ranges $p \leq 100$ mbar this parameter is defined as 0.5 mV max.
- 7) Repeatability is defined as typical deviation of the output signal after 10 pressure cycles.
- 8) Nonlinearity is defined as the BFSL (best fit straight line) across entire pressure range, measured on P1 - top die side.
- 9) Media compatibility: on pressure port P1: clean, dry and noncorrosive gases to silicone, Pyrex, RTV, gold, ceramics, Al_2O_3 , epoxy, tin.
- 10) Media compatibility: on pressure port P2: noncorrosive gases or liquids to silicone, Pyrex, RTV, ceramics Al_2O_3 , epoxy, tin.

Dimensions



Application example



Ordering information

(Please use the characters in the chart below to construct your product code)

Sample Code HPSAC3000 - 02M - G - L

Pressure Range

See table below*

Pressure Type

- D Differential
- G Gauge pressure
- A Absolute (for p≥1 bar)

Pressure Port

- L Long
- S Short
- O Without ports

Pressure Range									
mBar	10	20	50	100	350	1000	2000	4000	7000
Order Code	010M	020M	050M	100M	350M	001B	002B	004B	007B

If you require a customized solution for your program contact our sales team.