

- ▶ Constant voltage excitation
- ▶ Easy to use DIP package
- ▶ Wide compensated range
- ▶ Zero and span calibration
- ▶ Outstanding long term stability
- ▶ RoHS conform

The Pressure Transducer model HPSAV 4110 is an OEM pressure sensing device with precision temperature compensated and calibrated sensor output. This transducer was specifically designed to provide stable output signal (offset and span) over a wide temperature

range from 0 to 70°C. Thick film resistors printed on substrate are individually laser trimmed to provide temperature compensation, zero and span calibration. The pressure transducer is intended for use with non-corrosive gases and fluids.

Applications:

Medical instrumentation	Respirators	HVAC	Process control
Leak detection	Pneumatic controls	Altimeters	

Specifications								
Pressure range	10 mbar (4 H ₂ O)	10 H ₂ O	25 mbar (0.3 psi)	50 mbar (0.8 psi)	70 mbar (1 psi)	100 mbar (1.45 psi)	250 mbar (3.62 psi)	350 mbar (5 psi)
V _{out}	25 ± 2 mV	20 ± 0.5 mV	20.1 ± 0.5 mV	13.1 ± 0.15 mV	18 ± 0.2 mV	26.1 ± 0.3 mV	43.5 ± 0.7 mV	60 ± 1 mV
V _{ofs} (MAX), 25° C	±1 mV							
Operating Temp	-25 to 85° C							
Compensated Temp.	0 to 70° C							
Storage Temp	-40 to 125° C							
Over pressure	200 mbar	200 mbar	200 mbar	250 mbar	500 mbar	500 mbar	1 bar	1 bar
Burst pressure	350 mbar	350 mbar	350 mbar	750 mbar	1500 mbar	1500 mbar	1.7 bar	1.7 bar



Specifications						
Pressure range	1 bar (15 psi)	2 bar (30 psi)	4 bar (60 psi)	5 bar (72 psi)	7 bar (100 psi)	10 bar (150 psi)
V_{out}	90 ± 1 mV	90 ± 1 mV	90 ± 1 mV	72.5 ± 0.7 mV	100 ± 1 mV	90 ± 1 mV
V_{ofs} (MAX), 25° C	± 1 mV					
Operating Temp	-25 to 85° C					
Compensated Temp.	0 to 70° C					
Storage Temp	-40 to 125° C					
Over pressure	3 bar	6 bar	12.4 bar	17 bar	17 bar	17 bar
Burst pressure	5 bar	10 bar	20.6 bar	27 bar	27.5 bar	27 bar

Performance characteristics

TAMB = 25° C

Vcc = 5 V, unless otherwise noted

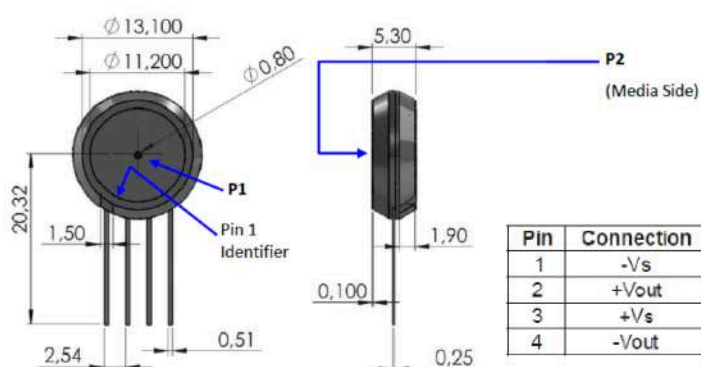
Parameter	Unit	Min.	Typ	Max.
Input voltage	V		12	16
Bridge resistance	k Ω	2		4
Thermal error of span (0 to 70° C)	%FSS		± 0.2	± 1
Thermal error of offset (0 to 70° C)	mV		± 0.2	± 0.5
Combined linearity and hysteresis	%FSS		± 0.2	± 0.5
Input impedance	k Ω	4		25
Output impedance	k Ω	2		4
Repeatability	%FSS		± 0.05	
Long term stability of offset and span	mV		± 0.1	
Response time	μ s		100	
Common mode voltage	V		6	
Media compatibility	see specification notes			
Humidity limits (non-condensing)	%RH	0...95		
Weight	g		5	

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) FSS (Full Scale 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 .
- 7) Repeatability is defined as typical deviation of the output signal after 10 pressure cycles.
- 8) Nonlinearity is defined as the BFS (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, RTV, ceramics, Al_2O_3 , gold, epoxy, polymer.
- 10) Media compatibility: on pressure port P2: clean, dry and noncorrosive gases to RTV, ceramics Al_2O_3 , epoxy, polymer.



Dimensions



Notes:

- All dimensions in mm.
- Output polarity is defined for pressure applied to P1.
- Material: Polyamide PA6T

Ordering information

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

Sample Code HPSAV4110 - 025M - D

Pressure range

See table below*

Pressure Range									
mBar	4 H ₂ O	10	10 H ₂ O	25	50	1 psi	100	250	5 psi
Order Code	004H	010M	010H	025M	050M	001P	100M	250M	005P

Pressure Range									
Bar	1	15 psi	2	30 psi	60 psi	5	100 psi	150 psi	10 bar
Order Code	001B	015P	002B	030P	060P	005B	100P	150P	010B

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