

140PC...-PCB Series

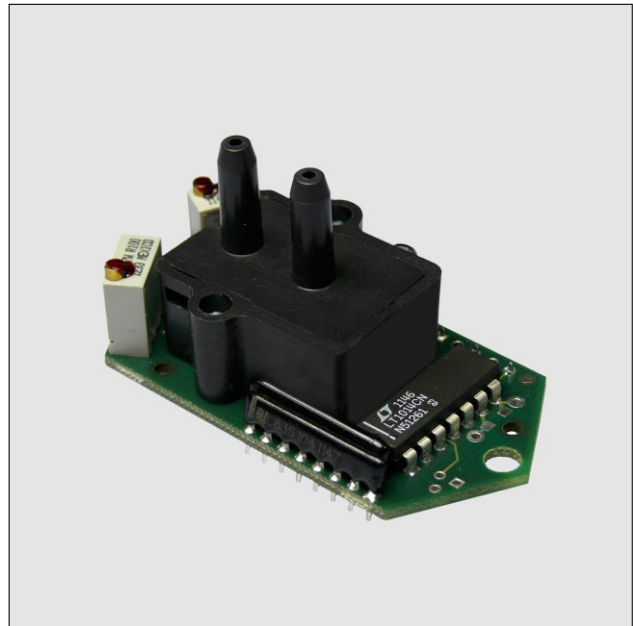
Signal conditioned precision pressure transducers

FEATURES

- 1 to 150 psi absolute, gage or differential pressure
- 1...6 V output
- Output ratiometric to supply voltage
- Precision temperature compensated and calibrated
- EMC-proof

SERVICE

Non-corrosive, non-ionic working fluids, such as dry air and dry gases

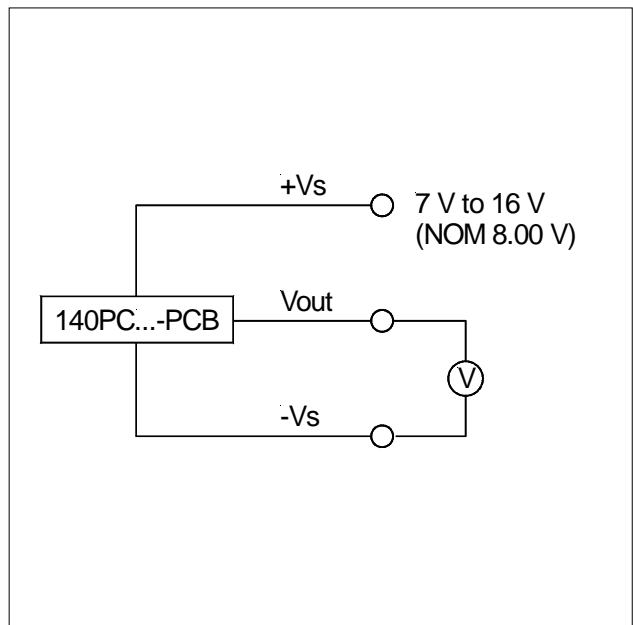


SPECIFICATIONS

Maximum ratings

Supply voltage	7...16 V
Maximum load current	
Source	10 mA
Sink	5 mA
Temperature limits	
Storage	-40...100 °C
Operating	-25...85 °C
Compensated	0...70 °C
Humidity limits (non-condensing)	95 %RH

ELECTRICAL CONNECTION



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PERFORMANCE CHARACTERISTICS^{3, 4}

($V_s = 8.00 \pm 0.01$ V, $R_L > 100$ k Ω , $t_{amb} = 25^\circ\text{C}$)

Part number	Operating pressure	Proof pressure ¹	Burst pressure ²
142PC01D-PCB	0...1 psi	5 psi	15 psi
142PC05D-PCB	0...5 psi	10 psi	30 psi
142PC15D-PCB	0...15 psi	60 psi	120 psi
142PC30D-PCB	0...30 psi	90 psi	150 psi
142PC100D-PCB	0...100 psi	200 psi	250 psi
142PC150D-PCB	0...150 psi	200 psi	250 psi
142PC15A-PCB	0...15 psia	60 psia	120 psia
142PC30A-PCB	0...30 psia	90 psia	150 psia
142PC100A-PCB	0...100 psia	200 psia	250 psia
143PC01D-PCB	-1...1 psi	5 psi	15 psi
143PC03D-PCB	-2.5...2.5 psi	10 psi	30 psi
143PC05D-PCB	-5...5 psi	10 psi	30 psi
143PC15D-PCB	-15...15 psi	60 psi	120 psi

Characteristics		Min.	Typ.	Max.	Unit
Zero pressure offset	141PC.../142PC...-PCB	0.95	1.00	1.05	V
	143PC...-PCB	3.45	3.50	3.55	
Full scale span ⁵	141PC.../142PC...-PCB	4.95	5.00	5.05	
	143PC...-PCB	2.45	2.50	2.55	
Full scale output			6.00		
Output at lowest specified pressure	143PC...-PCB		1.00		
Non-linearity and hysteresis (BSL) ⁶			0.1	0.5	%FSO
Thermal effects (0...70 °C) ⁷	Offset	1 psi devices	± 0.025	± 0.12	%FSO/°C
		5 psi devices	± 0.008	± 0.04	
	all others	± 0.005	± 0.02		
	Span		± 0.010	± 0.04	
Long term stability ⁸			± 0.1		%FSO
Response time (10 to 90 %)			1		ms
Current consumption			4.5		mA
Radiated, radio frequency electromagnetic field immunity (RFI) EN6100-4-3 grade 3, 80 to 1000 MHz, 80 % AMC (1 KHz)		10			V/m

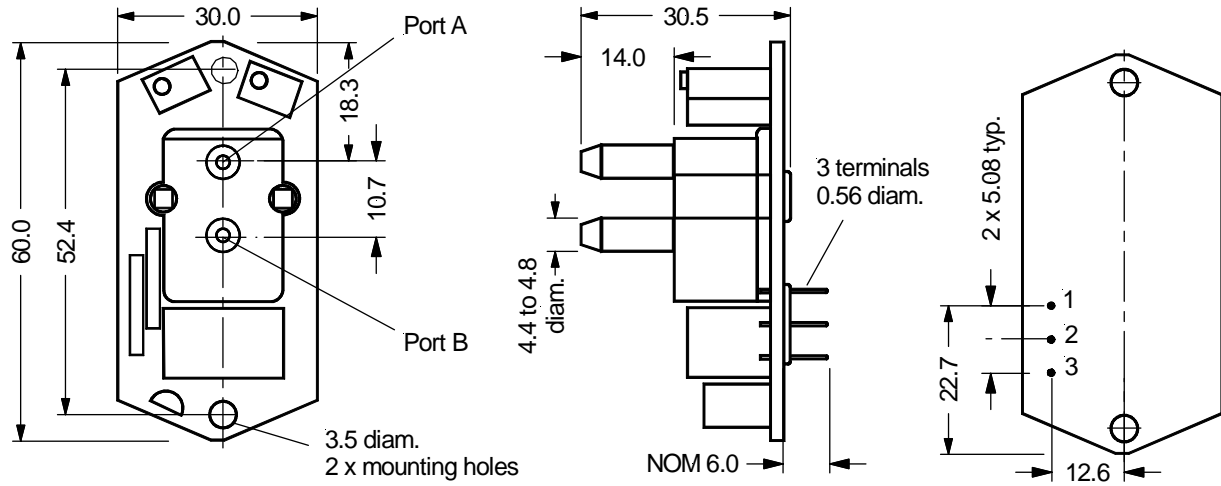
Specification notes:

1. Proof pressure is the maximum pressure which may be applied without causing durable shifts of the electrical parameters of the sensing element.
2. Burst pressure is the maximum pressure which may be applied without causing damage to the sensing element or leaks to the housing.
3. The output signal of all differential/gage devices is proportional to the pressure applied to port B, relative to port A, e.g. the output signal increases when vacuum is applied to port A relative to port B.
4. The output signal of all absolute devices is proportional to the pressure applied to port A.
5. Full scale span is the algebraic difference between the positive full scale output and the zero pressure offset.
6. Non-linearity refers to the **Best Straight Line** fit measured for offset pressure, full scale pressure and 1/2 full scale pressure.
7. Thermal effects tested and guaranteed from 0...70 °C relative to 25 °C. All specifications shown are relative to 25 °C.
8. Change in output after one year or 1 million pressure cycles.

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OUTLINE DRAWING^{3, 4}



Pin	Connection
1	+Vs
2	-Vs
3	Vout

mass: 20 g

dimensions in mm

ORDERING INFORMATION

Operating pressure		part number
Differential / gage devices	0...1 psid(g)	142PC01D-PCB
	0...5 psid(g)	142PC05D-PCB
	0...15 psid(g)	142PC15D-PCB
	0...30 psid(g)	142PC30D-PCB
	0...100 psid(g)	142PC100D-PCB
	0...150 psid(g)	142PC150D-PCB
Absolute devices	0...15 psia	142PC15A-PCB
	0...30 psia	142PC30A-PCB
	0...100 psia	142PC100A-PCB
Pressure/vacuum devices	0...±1 psid(g)	143PC01D-PCB
	0...±2.5 psid(g)	143PC03D-PCB
	0...±5 psid(g)	143PC05D-PCB
	0...±15 psid(g)	143PC15D-PCB
Devices highlighted in grey are preferred items.		For all other devices MOQ may apply.
Other pressure ranges and calibrations are available on request. Please contact First Sensor.		

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