160PC...-PCB Series

Fully signal conditioned low pressure transducer

FEATURES

- **Pressure ranges from 0...±2.5 "H_2O (0...±6.4 cm H_2O) to -20...120 cm H_2O (custom calibrations available)**
- **1...6 V output**
- **Output ratiometric to supply voltage**
- **Precision temperature compensated and calibrated**
- **Special calibrations for small volumes on request**
- **EMC-proof**

Scale: 1 cm
1 inch

SERVICE

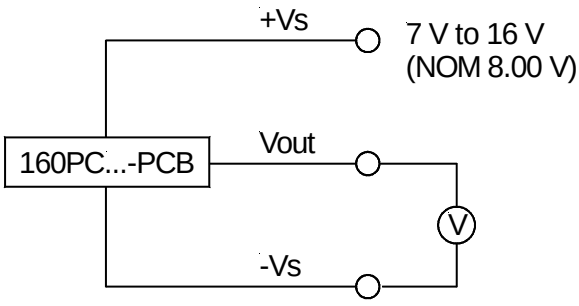
Non-corrosive, non-ionic working fluids, such as dry air and dry gases

SPECIFICATIONS

Maximum ratings

Excitation voltage	7...16 V
Output current	
Source	10 mA
Sink	5 mA
Output load capacitance	10 nF
Temperature limits	
Operating	-25 to +85°C
Storage	-40 to +125°C
Compensated	-18 to +63°C
Humidity (non-condensing)	0 - 95 %RH
Proof pressure[1]	350 mbar

ELECTRICAL CONNECTION



SENSORTECHNICS www.sensortechnics.com

161PC01D-PCB PERFORMANCE CHARACTERISTICS

(unless otherwise noted, V_S = 8.00 V, R_L > 100 kΩ, t_{amb} = 25°C)

Characteristics		Min.	Typ.	Max.	Unit
Operating pressure		0		-1.0	psid
Zero pressure offset		0.95	1.00	1.05	V
Span[4]			5.0		
Full scale output		5.90	6.00	6.10	
Thermal effects (-18 to +63°C)[3]	Offset			±1.0	%FSS
	Span			±1.0	
	Combined offset and span			±1.0	
Non-linearity (BSL)[2]				±1.0	
Hysteresis and repeatability			±0.15		
Ratiometricity	7 to 8 V and 8 to 9 V		±0.5		
	9 to 12 V		±2.0		
Current consumption (no load)				20.0	mA
Response time				1	msec
Radiated, radio frequency electromagnetic field immunity (RFI), EN6100-4-3 grade 3, 80 to 1000 MHz, 80 % AMC (1 KHz)		10			V/m

162PC01D-PCB PERFORMANCE CHARACTERISTICS

(unless otherwise noted, V_S = 8.00 V, R_L > 100 kΩ, t_{amb} = 25°C)

Characteristics		Min.	Typ.	Max.	Unit
Operating pressure		0		1.0	psid
Zero pressure offset		0.95	1.00	1.05	V
Span[4]			5.00		
Full scale output		5.90	6.00	6.10	
Thermal effects[3] (-18 to +63°C)	Offset			±1.0	%FSS
	Span			±1.0	
	Combined offset and span			±1.0	
Non-linearity (BSL)[2]				±1.0	
Hysteresis and repeatability			±0.15		
Ratiometricity	7 to 8 V and 8 to 9 V		±0.5		
	9 to 12 V		±2.0		
Current consumption (no load)				20.0	mA
Response time				1	msec
Radiated, radio frequency electromagnetic field immunity (RFI), EN6100-4-3 grade 3, 80 to 1000 MHz, 80 % AMC (1 KHz)		10			V/m

163PC01D36-PCB PERFORMANCE CHARACTERISTICS

(unless otherwise noted, V_S = 8.00 V, R_L > 100 kΩ, t_{amb} = 25°C)

Characteristics		Min.	Typ.	Max.	Unit
Operating pressure		-5		+5	"H_2O
Zero pressure offset		3.45	3.50	3.55	V
Output voltage	at -5"H_2O	0.80	1.00	1.20	
	at +5"H_2O	5.90	6.00	6.10	
Thermal effects (+5 to +45°C)[3]	Offset			±1.0	%FSS
	Span			±1.0	
	Combined offset and span			±1.0	
Non-linearity (BSL)[2]				±1.0	
Hysteresis and repeatability			±0.25		
Ratiometricity	7 to 8 V and 8 to 9 V		±0.5		
	9 to 12 V		±2.0		
Current consumption (no load)				20.0	mA
Response time				1	msec
Radiated, radio frequency electromagnetic field immunity (RFI), EN6100-4-3 grade 3, 80 to 1000 MHz, 80 % AMC (1 KHz)		10			V/m

164PC01D37-PCB PERFORMANCE CHARACTERISTICS

(unless otherwise noted, V_S = 8.00 V, R_L > 100 kΩ, t_{amb} = 25°C)

Characteristics		Min.	Typ.	Max.	Unit
Operating pressure		0		10	"H_2O
Zero pressure offset		0.95	1.00	1.05	V
Span[4]			5.0		
Full scale output		5.90	6.00	6.10	
Thermal effects (+5 to +45°C)[3]	Offset			±1.0	%FSS
	Span			±1.0	
	Combined offset and span			±1.0	
Non-linearity (BSL)[2]				±1.0	
Hysteresis and repeatability			±0.25		
Ratiometricity	7 to 8 V and 8 to 9 V		±0.5		
	9 to 12 V		±2.0		
Current consumption (no load)				20.0	mA
Response time				1	msec
Radiated, radio frequency electromagnetic field immunity (RFI), EN6100-4-3 grade 3, 80 to 1000 MHz, 80 % AMC (1 KHz)		10			V/m

163PC01D75-PCB PERFORMANCE CHARACTERISTICS

(unless otherwise noted, V_S = 8.00 V, R_L > 100 kΩ, t_{amb} = 25°C)

Characteristics		Min.	Typ.	Max.	Unit
Operating pressure		-2.5		+2.5	"H_2O
Zero pressure offset		3.45	3.50	3.55	V
Output	at -2.5"H_2O	0.80	1.00	1.20	
	at +2.5"H_2O	5.90	6.00	6.10	
Thermal effects (+5 to +45°C)[3]	Offset			±1.25	%FSS
	Span			±1.25	
	Combined offset and span			±1.25	
Non-linearity (BSL)[2]				±1.0	
Hysteresis and repeatability			±0.25		
Ratiometricity	7 to 8 V and 8 to 9 V		±0.5		
	9 to 12 V		±2.0		
Current consumption (no load)				20.0	mA
Response time				1	msec
Radiated, radio frequency electromagnetic field immunity (RFI), EN6100-4-3 grade 3, 80 to 1000 MHz, 80 % AMC (1 KHz)		10			V/m

164PC01D76-PCB PERFORMANCE CHARACTERISTICS

(unless otherwise noted, V_S = 8.00 V, R_L > 100 kΩ, t_{amb} = 25°C)

Characteristics		Min.	Typ.	Max.	Unit
Operating pressure		0		5	"H_2O
Zero pressure offset		0.95	1.00	1.05	V
Span[4]			5.0		
Full scale output		5.90	6.00	6.10	
Thermal effects (+5 to +45°C)[3]	Offset			±1.25	%FSS
	Span			±1.25	
	Combined offset and span			±1.25	
Non-linearity (BSL)[2]				±1.0	
Hysteresis and repeatability			±0.25		
Ratiometricity	7 to 8 V and 8 to 9 V		±0.5		
	9 to 12 V		±2.0		
Current consumption (no load)				20.0	mA
Response time				1	msec
Radiated, radio frequency electromagnetic field immunity (RFI), EN6100-4-3 grade 3, 80 to 1000 MHz, 80 % AMC (1 KHz)		10			V/m

163PC01D48-PCB PERFORMANCE CHARACTERISTICS

(unless otherwise noted, V_S = 10.00 V, R_L > 100 kΩ, t_{amb} = 25°C)

Characteristics		Min.	Typ.	Max.	Unit
Operating pressure		-20		120	cm H_2O
Zero pressure offset		1.59	1.74	1.89	V
Output	at -20 cm H_2O		1.00		
	at 120 cm H_2O	5.82	5.97	6.12	
Thermal effects (+5 to +45°C)[3]	Offset			±1.0	%FSS
	Span			±1.0	
	Combined offset and span			±1.0	
Non-linearity (BSL)[2]				±1.0	
Hysteresis and repeatability			±0.15		
Ratiometricity	9 to 10 V and 10 to 11 V		±0.5		
	7 to 10 V and 11 to 12 V		±2.0		
Current consumption (no load)				20.0	mA
Response time				1	msec
Radiated, radio frequency electromagnetic field immunity (RFI), EN6100-4-3 grade 3, 80 to 1000 MHz, 80 % AMC (1 KHz)		10			V/m

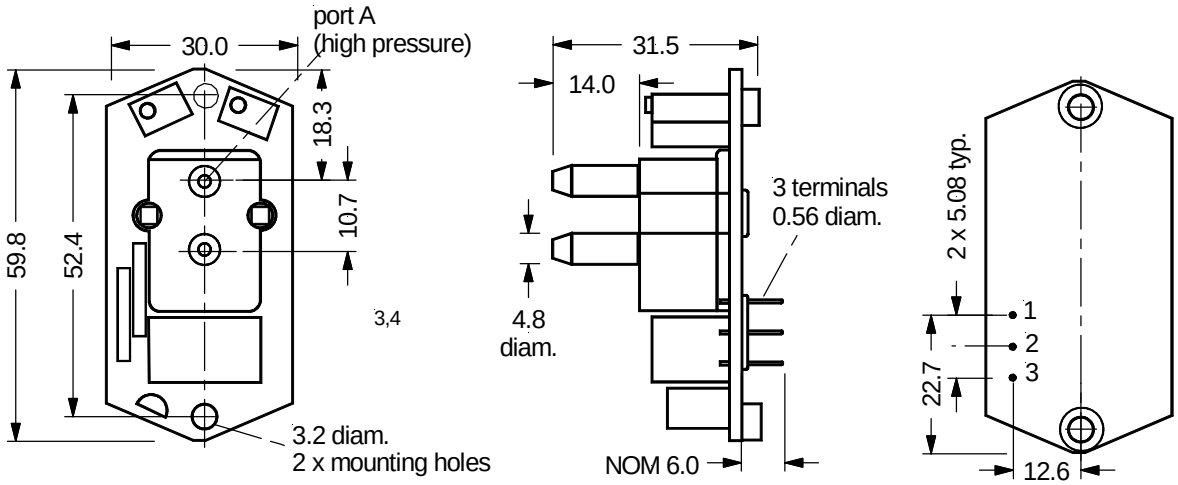
Specification notes:

1. Proof pressure is the maximum pressure which may be applied without causing damage to the sensing element.
2. Non-linearity - the maximum deviation of measured output at constant temperature, from **"B**est **S**traight **L**ine" through three points (offset pressure, full scale pressure and 1/2 full scale pressure).
3. Thermal effects tested and guaranteed in the specified temperature ranges relative to 25°C. All specifications shown are relative to 25°C.
4. Span is the algebraic difference between lowest and highest specified pressure.

160PC...-PCB Series

Fully signal conditioned low pressure transducer

OUTLINE DRAWING



mass: 20 g

pin	connection
1	+Vs
2	-Vs
3	Vout

dimensions in mm

ORDERING INFORMATION

Operating pressure	Part number
0 to -1 psid	161PC01D-PCB
0 to +1 psid	162PC01D-PCB
-5 to +5 "H_2O	163PC01D36-PCB
0 to +10 "H_2O	164PC01D37-PCB
-2.5 to +2.5 "H_2O	163PC01D75-PCB
0 to +5 "H_2O	164PC01D76-PCB
-20 to +120 cm H_2O	163PC01D48-PCB

Custom calibrations available