

# 26PC Series (mbar)

## Temp. compensated and calibrated pressure sensors

### FEATURES

- 0...50 mbar to 0...16 bar gage or differential
- High impedance bridge
- Miniature package
- Different pinning configurations
- Usable for wet/wet applications<sup>8</sup>

### SERVICE

All media compatible with

port 1: - polyetherimide  
- silver-filled silicone  
- silicon nitride

port 2<sup>9</sup>: - polyetherimide  
- fluor-silicone  
- silicon



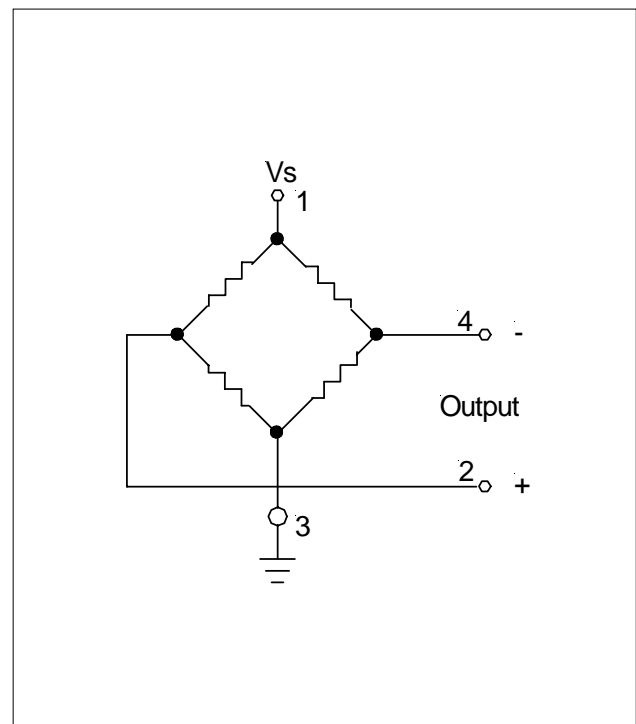
Scale:  1 cm  
1 inch

### SPECIFICATIONS

#### Maximum ratings

Supply voltage	16 V
Temperature limits	
Storage	-55 to +100°C
Operating	-40 to +85°C
Lead temperature (10 sec. soldering)	300°C
Humidity limits	0...100 %RH
Vibration (MIL-STD-202, Meth. 213)	150 g half sine 11 msec.
Mechanical shock (qualification tested)	150 g
Proof pressure <sup>1</sup>	
all 50, 100 and 250 mbar devices	1.4 bar
all 1 bar devices	3 bar
all 2 bar devices	4 bar
all 5 bar devices	12 bar
all 10 and 16 bar devices	35 bar

### ELECTRICAL CONNECTION



# 26PC Series (mbar)

## Temp. compensated and calibrated pressure sensors

### PRESSURE SENSOR CHARACTERISTICS

$V_s = 10.0 \pm 0.01$  V,  $t_{amb} = 20^\circ\text{C}$  (unless otherwise noted)

Part number	Operating pressure	Full-scale span <sup>2</sup>			Sensitivity typ.
		Min.	Typ.	Max.	
26PC0050xxA	0 - 50 mbar	10.5 mV	12.0 mV	13.6 mV	240 $\mu\text{V}/\text{mbar}$
26PC0100xxA	0 - 100 mbar	20.0 mV	24.0 mV	27.0 mV	240 $\mu\text{V}/\text{mbar}$
26PC0250xxA	0 - 250 mbar	33.5 mV	36.0 mV	38.5 mV	144 $\mu\text{V}/\text{mbar}$
26PC01K0xxA	0 - 1 bar	93.0 mV	97.0 mV	100.0 mV	97 $\mu\text{V}/\text{mbar}$
26PC02K0xxA	0 - 2 bar	91.0 mV	97.0 mV	100.0 mV	48.5 mV/bar
26PC05K0xxA	0 - 5 bar	69.0 mV	72.0 mV	76.0 mV	14.4 mV/bar
26PC10K0xxA	0 - 10 bar	82.0 mV	87.0 mV	92.0 mV	8.7 mV/bar
26PC16K0xxA	0 - 16 bar	133.0 mV	140.0 mV	147.0 mV	8.7 mV/bar

### COMMON PERFORMANCE CHARACTERISTICS

$V_s = 10.0 \pm 0.01$  V,  $t_{amb} = 25^\circ\text{C}$  (unless otherwise noted)

Characteristics		Min.	Typ.	Max.	Unit	
Zero pressure offset	all 5 bar devices	-2.0		+2.0	mV	
	all other devices	-1.5		+1.5		
Temperature effects (0 - 50°C) <sup>4</sup>						
Offset	all 50 to 1000 mbar devices		$\pm 0.5$	$\pm 1.0$		
	all 2 bar devices		$\pm 0.75$	$\pm 1.5$		
	all other devices		$\pm 1.0$	$\pm 2.0$		
Span	all 50 and 100 mbar devices		$\pm 1.0$	$\pm 2.0$		
	all other devices		$\pm 0.75 \dots \pm 1.0$	$\pm 1.5$		
Linearity (P2 > P1, BSL) <sup>3</sup>	all 50 to 1000 mbar devices		$\pm 0.25$	$\pm 0.5$		% span
	all 2 bar devices		$\pm 0.1$	$\pm 0.2$		
	all other devices		$\pm 0.1$	$\pm 0.7$		
Repeatability and hysteresis <sup>5</sup>			$\pm 0.2$			
Long term stability <sup>7</sup>			$\pm 0.5$			
Input impedance		5.5	7.5	11.5		
Output impedance		1.5	2.5	3.0	k $\Omega$	
Response time <sup>6</sup>				1.0	ms	

#### Specification notes:

- The maximum specified pressure which may be applied to the sensor without causing a permanent change in the output characteristics.
- Span is the algebraic difference between the output voltage at full-scale pressure and the output at zero pressure. Span is ratiometric to the supply voltage.
- Linearity (BSL), the deviation of measured output at constant temperature (25°C) from "Best Straight Line" determined by three points, offset pressure, full-scale pressure and half full-scale pressure.

$$\left[ V_{\frac{1}{2} \text{ full scale}} - \left\{ \frac{V_{\text{full scale}} - V_{\text{offset}}}{(\text{full scale pressure})} \times (\frac{1}{2} \text{ full scale pressure}) + V_{\text{offset}} \right\} \right] : 2 (V_{\text{full scale}}) \times 100 \%$$

where: V = measured value for each device

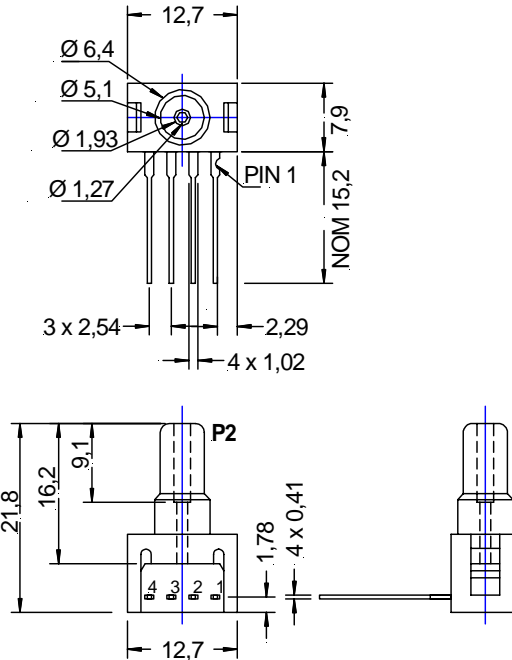
- Error band of the offset voltage, span or bridge impedance in the specified temperature range, relative to the 25°C reading.
- Repeatability, the deviation in output readings for successive application of any given input pressure (all other conditions remaining constant). Hysteresis, the error defined by the deviation in output signal obtained when a specific pressure point is approached first with increasing pressure, then with decreasing pressure or vice versa (all other conditions remaining constant).
- Response time for 0 to full-scale pressure step change, readings taken at 10 % and 90 % of full-scale pressure.
- Long term stability of offset and span over a period over one year.
- The sensors might be used on both ports, for media compatible with the components, specified under "Service" (page 1).
- Other sealing materials are available on request.** Minimum order quantities might be required.
- Other pressure port styles, like barbed ones, luers, modular, M5, needle style or flow through connection, are available on request.** Minimum order quantities might be required.

# 26PC Series *(mbar)*

## Temp. compensated and calibrated pressure sensors

### OUTLINE DRAWINGS<sup>10</sup>

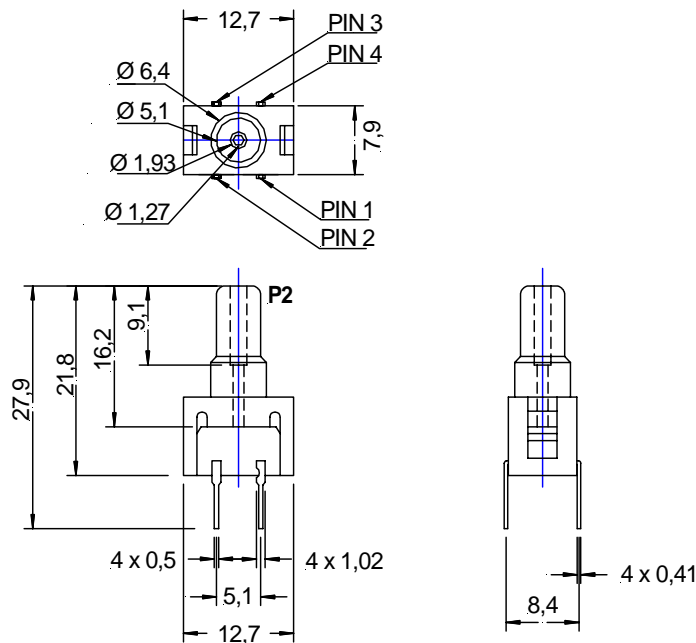
#### 26PCxxxxG6A (single inline pinning, 1 x 4), *gage pressure devices*



mass: 2 g

dimensions in mm

#### 26PCxxxxG2A (dual inline pinning, 2 x 2), *gage pressure devices*



mass: 2 g

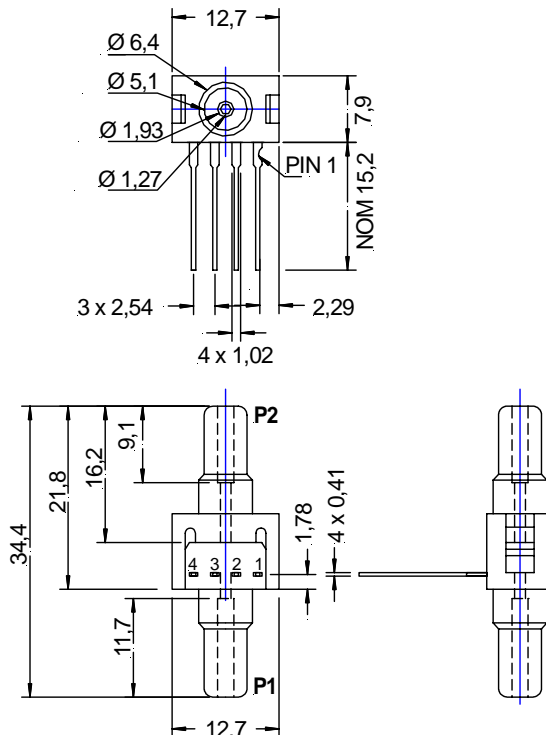
dimensions in mm

# 26PC Series (mbar)

Temp. compensated and calibrated pressure sensors

## OUTLINE DRAWINGS<sup>10</sup>

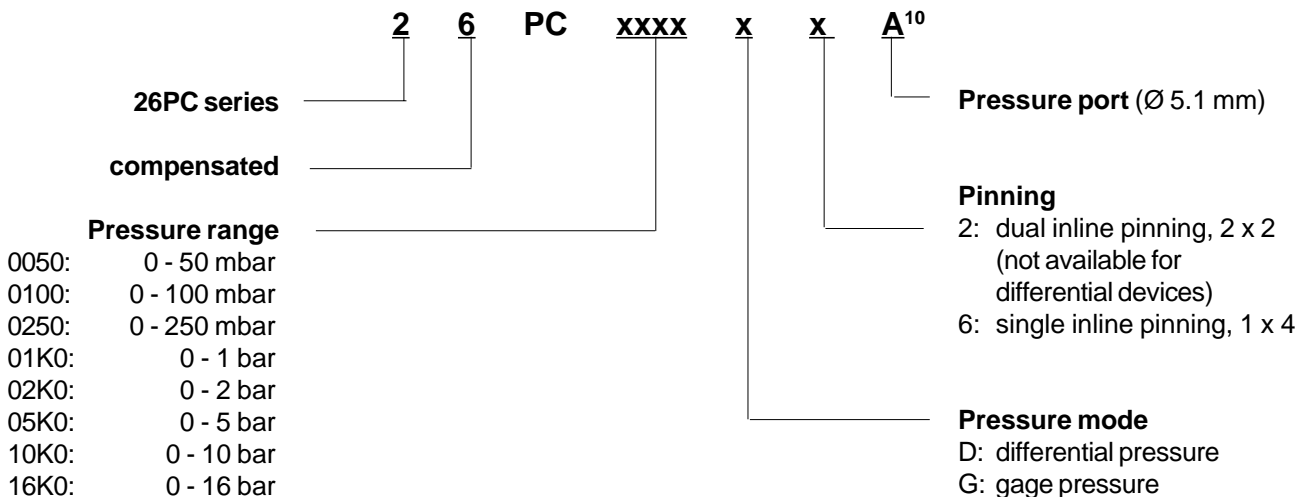
26PCxxxxD6A (single inline pinning, 1 x 4), differential pressure devices



mass: 2 g

dimensions in mm

## ORDERING INFORMATION



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.