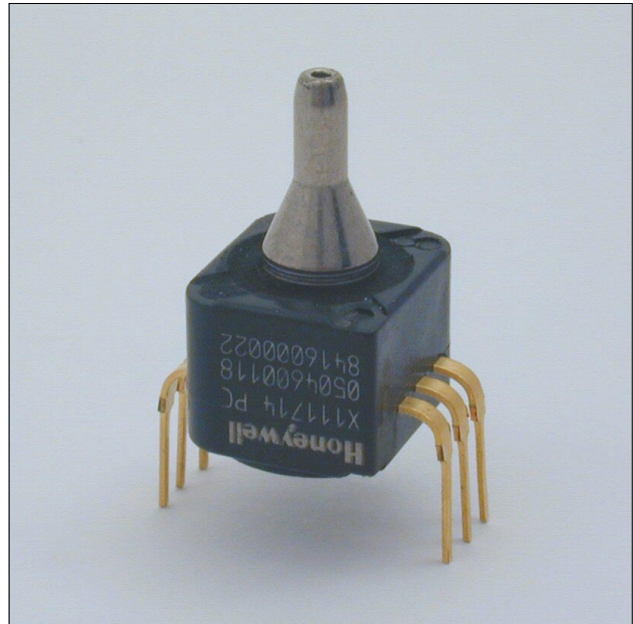


### FEATURES

- Pressure ranges from 0 ...  $\pm 50$  mmHg to 0 ... 500 psi gage
- High accuracy
- TTL power supply
- Ratiometric 0.5 to 4.5 V output
- Dual-Inline pinning for easy PCB-mounting
- Excellent media compatibility



### MEDIA COMPATIBILITY

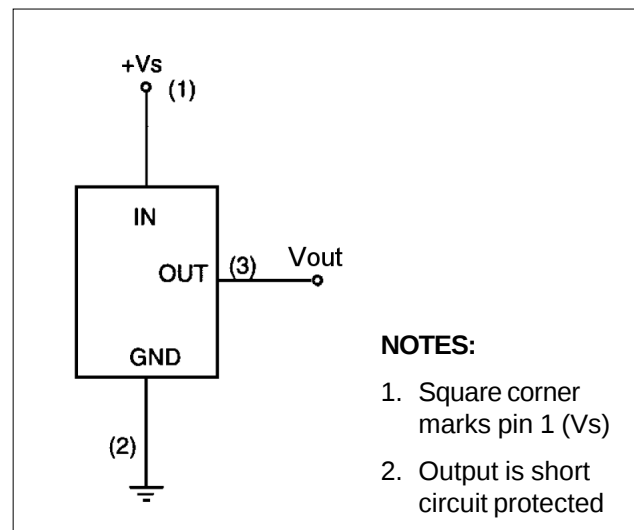
- P1: dry gases only  
 P2: all media compatible with glass, silicon, stainless steel, Invar, Sn/Ni plating or Sn/Ag solder

### SPECIFICATIONS

#### Maximum ratings

|                           |                 |
|---------------------------|-----------------|
| Supply voltage ( $V_s$ )  | 4.75 ... 5.25 V |
| Output current            |                 |
| Source                    | 0.5 mA          |
| Sink                      | 1.0 mA          |
| Output load capacitance   | 10 nF           |
| Temperature limits        |                 |
| Operating                 | -45 to +125°C   |
| Storage                   | -55 to +125°C   |
| Compensated               | -45 to +125°C   |
| Humidity (non-condensing) | 0 - 95 %RH      |

### ELECTRICAL CONNECTION



# 40PC Series

## Fully signal conditioned pressure transducer

Honeywell

### PRESSURE RANGE SPECIFICATIONS

(unless otherwise noted,  $V_s = 5.00\text{ V}$ ,  $R_L > 100\text{ k}\Omega$ ,  $t_{\text{amb}} = 25^\circ\text{C}$ )

| Part number | Operating pressure range   | Proof pressure <sup>1</sup> | Sensitivity (typ.) |
|-------------|----------------------------|-----------------------------|--------------------|
| 40PC001B2A  | 0 ... $\pm 50\text{ mmHg}$ | 170 mmHg                    | 40.0 mV/mmHg       |
| 40PC006G2A  | 0 ... 300 mmHg             | 650 mmHg                    | 13.33 mV/mmHg      |
| 40PC015G2A  | 0 ... 15 psig              | 45 psi                      | 266.7 mV/psi       |
| 40PC015V2A  | 0 ... -15 psig             | 30 psi                      | -266.7 mV/psi      |
| 40PC030G2A  | 0 ... 30 psig              | 60 psi                      | 133.3 mV/psi       |
| 40PC100G2A  | 0 ... 100 psig             | 200 psi                     | 40.0 mV/psi        |
| 40PC150G2A  | 0 ... 150 psig             | 300 psi                     | 25.7 mV/psi        |
| 40PC250G2A  | 0 ... 250 psig             | 500 psi                     | 16.0 mV/psi        |
| 40PC500G2A  | 0 ... 500 psig             | 1000 psi                    | 8.0 mV/psi         |

#### 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 "Best Straight Line" 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  $25^\circ\text{C}$ . All specifications shown are relative to  $25^\circ\text{C}$ .
4. Span is the algebraic difference between lowest and highest specified pressure.
5. Total accuracy is the maximum deviation from the  $25^\circ\text{C}$  reference transfer function at any pressure or temperature over the specified ranges. This calculation includes null, span, linearity, hysteresis, repeatability, null shift and span shift.
6. Response time for 0 to full-scale pressure step change, readings taken at 10 % and 90 % of full-scale pressure.

#### **40PC001B2A** PERFORMANCE CHARACTERISTICS

(unless otherwise noted,  $V_s = 5.00\text{ V}$ ,  $R_L > 100\text{ k}\Omega$ ,  $t_{\text{amb}} = 25^\circ\text{C}$ )

| Characteristics                                           |             | Min. | Typ.  | Max.  | Unit |
|-----------------------------------------------------------|-------------|------|-------|-------|------|
| Operating pressure                                        |             | -50  |       | +50   | mmHg |
| Zero pressure offset                                      |             | 2.45 | 2.50  | 2.55  | V    |
| Span <sup>4</sup>                                         |             |      | 4.0   |       |      |
| Output                                                    | at -50 mmHg |      | 0.5   |       |      |
|                                                           | at +50 mmHg |      | 4.5   |       |      |
| Thermal effects (0 to 50°C) <sup>3</sup>                  | Offset      |      |       | ±1.50 | %FSS |
|                                                           | Span        |      |       | ±1.50 |      |
| Non-linearity (BSL) <sup>2</sup>                          |             |      |       | ±0.8  |      |
| Hysteresis and repeatability                              |             |      | ±0.15 |       |      |
| Ratiometricity error ( $V_s = 4.75 \dots 5.25\text{ V}$ ) |             |      | ±0.25 |       |      |
| Current consumption (no load)                             |             |      |       | 10.0  | mA   |
| Response time <sup>6</sup>                                |             |      | 1     |       | ms   |

#### **40PC006G2A** PERFORMANCE CHARACTERISTICS

(unless otherwise noted,  $V_s = 5.00\text{ V}$ ,  $R_L > 100\text{ k}\Omega$ ,  $t_{\text{amb}} = 25^\circ\text{C}$ )

| Characteristics                                         |                          |               | Min. | Typ.  | Max.  | Unit |
|---------------------------------------------------------|--------------------------|---------------|------|-------|-------|------|
| Operating pressure                                      |                          |               | 0    |       | 300   | mmHg |
| Zero pressure offset                                    |                          |               | 0.45 | 0.50  | 0.55  | V    |
| Span <sup>4</sup>                                       |                          |               | 3.95 | 4.00  | 4.05  |      |
| Full scale output                                       |                          |               |      | 4.5   |       |      |
| Thermal effects <sup>3</sup>                            | Offset                   | -18 to +63°C  |      |       | ±1.25 | %FSS |
|                                                         |                          | -45 to +125°C |      |       | ±2.75 |      |
|                                                         | Span                     | -18 to +63°C  |      |       | ±0.75 |      |
|                                                         |                          | -45 to +125°C |      |       | ±2.0  |      |
|                                                         | Combined offset and span | -18 to +63°C  |      |       | ±1.5  |      |
|                                                         |                          | -45 to +125°C |      |       | ±4.0  |      |
| Total accuracy <sup>6</sup>                             |                          | -45 to +125°C |      |       | ±4.0  |      |
| Non-linearity (BSL) <sup>2</sup>                        |                          |               |      |       | ±0.2  |      |
| Hysteresis and repeatability                            |                          |               |      | ±0.15 |       |      |
| Ratiometricity error (V <sub>s</sub> = 4.75 ... 5.25 V) |                          |               |      | ±0.25 |       |      |
| Current consumption (no load)                           |                          |               |      |       | 10.0  | mA   |
| Response time <sup>6</sup>                              |                          |               |      | 1     |       | ms   |

### 40PC015G2A PERFORMANCE CHARACTERISTICS

(unless otherwise noted,  $V_s = 5.00\text{ V}$ ,  $R_L > 100\text{ k}\Omega$ ,  $t_{\text{amb}} = 25^\circ\text{C}$ )

| Characteristics                                         |                          |              | Min. | Typ.  | Max.  | Unit |
|---------------------------------------------------------|--------------------------|--------------|------|-------|-------|------|
| Operating pressure                                      |                          |              | 0    |       | 15    | psig |
| Zero pressure offset                                    |                          |              | 0.39 | 0.50  | 0.61  | V    |
| Span <sup>4</sup>                                       |                          |              | 3.89 | 4.00  | 4.11  |      |
| Full scale output                                       |                          |              |      | 4.5   |       |      |
| Thermal effects <sup>3</sup>                            | Offset                   | -18 to +63°C |      |       | ±2.0  | %FSS |
|                                                         |                          | -45 to +85°C |      |       | ±2.75 |      |
|                                                         | Span                     | -18 to +63°C |      |       | ±0.75 |      |
|                                                         |                          | -45 to +85°C |      |       | ±1.0  |      |
|                                                         | Combined offset and span | -18 to +63°C |      |       | ±2.0  |      |
|                                                         |                          | -45 to +85°C |      |       | ±3.0  |      |
| Total accuracy <sup>5</sup>                             |                          | -45 to +85°C |      |       | ±4.0  |      |
| Non-linearity (BSL) <sup>2</sup>                        |                          |              |      |       | ±0.2  |      |
| Hysteresis and repeatability                            |                          |              |      | ±0.15 |       |      |
| Ratiometricity error (V <sub>s</sub> = 4.75 ... 5.25 V) |                          |              |      | ±0.25 |       |      |
| Current consumption (no load)                           |                          |              |      |       | 10.0  | mA   |
| Response time <sup>6</sup>                              |                          |              |      | 1     |       | ms   |

### 40PC015V2A PERFORMANCE CHARACTERISTICS

(unless otherwise noted,  $V_s = 5.00\text{ V}$ ,  $R_L > 100\text{ k}\Omega$ ,  $t_{\text{amb}} = 25^\circ\text{C}$ )

| Characteristics                                         |                          |              | Min. | Typ.  | Max.  | Unit |
|---------------------------------------------------------|--------------------------|--------------|------|-------|-------|------|
| Operating pressure                                      |                          |              | 0    |       | -15   | psig |
| Zero pressure offset                                    |                          |              | 0.46 | 0.50  | 0.54  | V    |
| Span <sup>4</sup>                                       |                          |              | 3.9  | 4.0   | 4.1   |      |
| Full scale output                                       |                          |              |      | 4.5   |       |      |
| Thermal effects <sup>3</sup>                            | Offset                   | -18 to +25°C |      |       | ±0.75 | %FSS |
|                                                         |                          | -45 to +85°C |      |       | ±1.0  |      |
|                                                         | Span                     | -18 to +25°C |      |       | ±2.0  |      |
|                                                         |                          | +25 to +85°C |      |       | ±1.25 |      |
|                                                         | Combined offset and span | -45 to +25°C |      |       | ±2.25 |      |
|                                                         |                          | -18 to +25°C |      |       | ±1.5  |      |
|                                                         |                          | +25 to +85°C |      |       | ±1.0  |      |
|                                                         |                          | -40 to +25°C |      |       | ±1.75 |      |
| Total accuracy <sup>5</sup>                             |                          | +45 to +85°C |      |       | ±2.25 |      |
| Non-linearity (BSL) <sup>2</sup>                        |                          |              |      |       | ±0.3  |      |
| Hysteresis and repeatability                            |                          |              |      | ±0.15 |       |      |
| Ratiometricity error (V <sub>s</sub> = 4.75 ... 5.25 V) |                          |              |      | ±0.25 |       |      |
| Current consumption (no load)                           |                          |              |      |       | 10.0  | mA   |
| Response time <sup>6</sup>                              |                          |              |      | 1     |       | ms   |

#### 40PC030G2A PERFORMANCE CHARACTERISTICS

(unless otherwise noted,  $V_s = 5.00\text{ V}$ ,  $R_L > 100\text{ k}\Omega$ ,  $t_{\text{amb}} = 25^\circ\text{C}$ )

| Characteristics                                         |                             |               | Min.          | Typ.  | Max.  | Unit |
|---------------------------------------------------------|-----------------------------|---------------|---------------|-------|-------|------|
| Operating pressure                                      |                             |               | 0             |       | 30    | psig |
| Zero pressure offset                                    |                             |               | 0.46          | 0.50  | 0.54  | V    |
| Span <sup>4</sup>                                       |                             |               | 3.92          | 4.00  | 4.08  |      |
| Full scale output                                       |                             |               |               | 4.5   |       |      |
| Thermal effects <sup>3</sup>                            | Offset                      | -18 to +63°C  |               |       | ±1.5  | %FSS |
|                                                         |                             | -45 to +85°C  |               |       | ±2.0  |      |
|                                                         |                             | -45 to +125°C |               |       | ±2.25 |      |
|                                                         | Span                        | -18 to +63°C  |               |       | ±1.5  |      |
|                                                         |                             | -45 to +85°C  |               |       | ±2.0  |      |
|                                                         |                             | -45 to +125°C |               |       | ±2.25 |      |
|                                                         | Combined offset and span    | -18 to +63°C  |               |       | ±2.0  |      |
|                                                         |                             | -45 to +125°C |               |       | ±2.25 |      |
|                                                         | Total accuracy <sup>5</sup> |               | -45 to +125°C |       |       |      |
| Non-linearity (BSL) <sup>2</sup>                        |                             |               |               |       | ±0.3  |      |
| Hysteresis and repeatability                            |                             |               |               | ±0.15 |       |      |
| Ratiometricity error (V <sub>s</sub> = 4.75 ... 5.25 V) |                             |               |               | ±0.25 |       |      |
| Current consumption (no load)                           |                             |               |               |       | 10.0  | mA   |
| Response time <sup>6</sup>                              |                             |               |               | 1     |       | ms   |

#### 40PC100G2A PERFORMANCE CHARACTERISTICS

(unless otherwise noted,  $V_s = 5.00\text{ V}$ ,  $R_L > 100\text{ k}\Omega$ ,  $t_{\text{amb}} = 25^\circ\text{C}$ )

| Characteristics                                         |                          |               | Min. | Typ.  | Max.  | Unit |
|---------------------------------------------------------|--------------------------|---------------|------|-------|-------|------|
| Operating pressure                                      |                          |               | 0    |       | 100   | psig |
| Zero pressure offset                                    |                          |               | 0.46 | 0.50  | 0.54  | V    |
| Span <sup>4</sup>                                       |                          |               | 3.91 | 4.0   | 4.09  |      |
| Full scale output                                       |                          |               |      | 4.5   |       |      |
| Thermal effects <sup>3</sup>                            | Offset                   | -18 to +63°C  |      |       | ±1.25 | %FSS |
|                                                         |                          | -45 to +85°C  |      |       | ±2.0  |      |
|                                                         |                          | -45 to +125°C |      |       | ±3.0  |      |
|                                                         | Span                     | -18 to +63°C  |      |       | ±0.75 |      |
|                                                         |                          | -45 to +85°C  |      |       | ±1.0  |      |
|                                                         |                          | -45 to +125°C |      |       | ±2.0  |      |
|                                                         | Combined offset and span | -18 to +63°C  |      |       | ±1.5  |      |
|                                                         |                          | -45 to +85°C  |      |       | ±2.5  |      |
|                                                         |                          | -45 to +125°C |      |       | ±3.0  |      |
| Total accuracy <sup>5</sup>                             |                          | -45 to +125°C |      |       | ±3.0  |      |
| Non-linearity (BSL) <sup>2</sup>                        |                          |               |      |       | ±0.1  |      |
| Hysteresis and repeatability                            |                          |               |      | ±0.15 |       |      |
| Ratiometricity error (V <sub>S</sub> = 4.75 ... 5.25 V) |                          |               |      | ±0.25 |       |      |
| Current consumption (no load)                           |                          |               |      |       | 10.0  | mA   |
| Response time <sup>6</sup>                              |                          |               |      | 1     |       | ms   |

# 40PC Series

## Fully signal conditioned pressure transducer

**Honeywell**

### **40PC150G2A** PERFORMANCE CHARACTERISTICS

(unless otherwise noted,  $V_s = 5.00$  V,  $R_L > 100$  k $\Omega$ ,  $t_{amb} = 25^\circ\text{C}$ )

| Characteristics                                         |                          |               | Min. | Typ.  | Max.  | Unit |
|---------------------------------------------------------|--------------------------|---------------|------|-------|-------|------|
| Operating pressure                                      |                          |               | 0    |       | 150   | psig |
| Zero pressure offset                                    |                          |               | 0.46 | 0.50  | 0.54  | V    |
| Span <sup>4</sup>                                       |                          |               | 3.93 | 4.0   | 4.07  |      |
| Full scale output                                       |                          |               |      | 4.5   |       |      |
| Thermal effects <sup>3</sup>                            | Offset                   | -18 to +63°C  |      |       | ±0.75 | %FSS |
|                                                         |                          | -45 to +85°C  |      |       | ±1.0  |      |
|                                                         |                          | -45 to +125°C |      |       | ±1.5  |      |
|                                                         | Span                     | -18 to +63°C  |      |       | ±0.75 |      |
|                                                         |                          | -45 to +85°C  |      |       | ±1.0  |      |
|                                                         |                          | -45 to +125°C |      |       | ±1.5  |      |
|                                                         | Combined offset and span | -18 to +63°C  |      |       | ±0.75 |      |
|                                                         |                          | -45 to +85°C  |      |       | ±1.0  |      |
|                                                         |                          | -45 to +125°C |      |       | ±1.5  |      |
| Total accuracy <sup>5</sup>                             |                          | -45 to +125°C |      |       | ±2.5  |      |
| Non-linearity (BSL) <sup>2</sup>                        |                          |               |      |       | ±0.1  |      |
| Hysteresis and repeatability                            |                          |               |      | ±0.15 |       |      |
| Ratiometricity error (V <sub>s</sub> = 4.75 ... 5.25 V) |                          |               |      | ±0.25 |       |      |
| Current consumption (no load)                           |                          |               |      |       | 10.0  | mA   |
| Response time <sup>6</sup>                              |                          |               |      | 1     |       | ms   |

### **40PC250G2A** PERFORMANCE CHARACTERISTICS

(unless otherwise noted,  $V_s = 5.00$  V,  $R_L > 100$  k $\Omega$ ,  $t_{amb} = 25^\circ\text{C}$ )

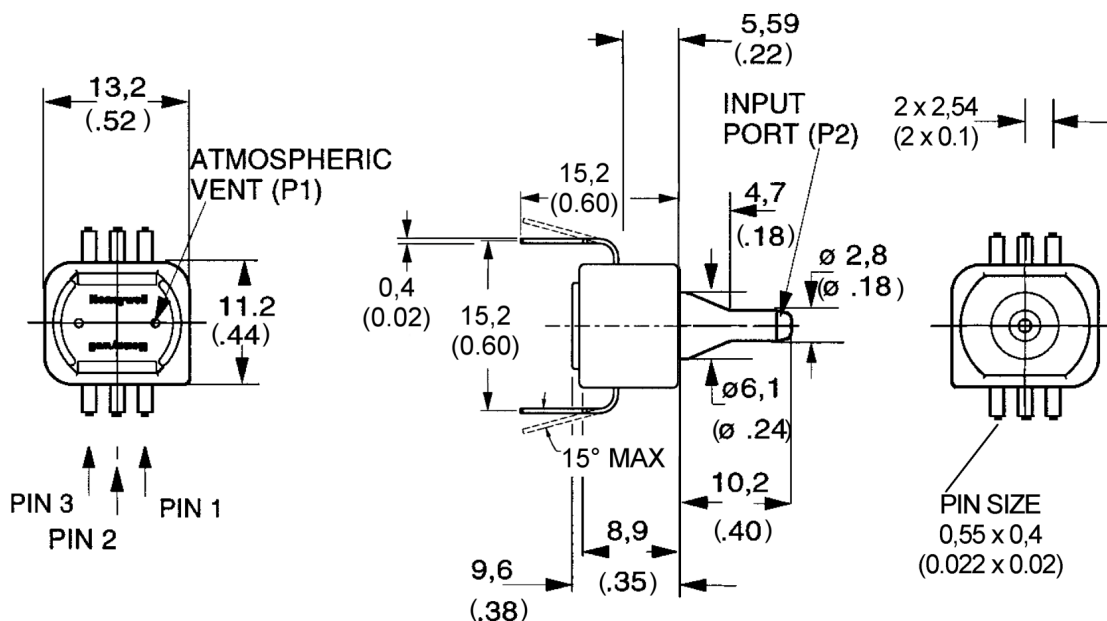
| Characteristics                                         |                          |               | Min. | Typ.  | Max.  | Unit |
|---------------------------------------------------------|--------------------------|---------------|------|-------|-------|------|
| Operating pressure                                      |                          |               | 0    |       | 250   | psig |
| Zero pressure offset                                    |                          |               | 0.46 | 0.50  | 0.54  | V    |
| Span <sup>4</sup>                                       |                          |               | 3.93 | 4.0   | 4.07  |      |
| Full scale output                                       |                          |               |      | 4.5   |       |      |
| Thermal effects <sup>3</sup>                            | Offset                   | -18 to +63°C  |      |       | ±0.75 | %FSS |
|                                                         |                          | -45 to +85°C  |      |       | ±1.0  |      |
|                                                         |                          | -45 to +125°C |      |       | ±2.0  |      |
|                                                         | Span                     | -18 to +63°C  |      |       | ±0.75 |      |
|                                                         |                          | -45 to +85°C  |      |       | ±1.0  |      |
|                                                         |                          | -45 to +125°C |      |       | ±2.0  |      |
|                                                         | Combined offset and span | -18 to +63°C  |      |       | ±0.75 |      |
|                                                         |                          | -45 to +85°C  |      |       | ±1.0  |      |
|                                                         |                          | -45 to +125°C |      |       | ±3.0  |      |
| Total accuracy <sup>5</sup>                             |                          | -45 to +125°C |      |       | ±3.0  |      |
| Non-linearity (BSL) <sup>2</sup>                        |                          |               |      |       | ±0.1  |      |
| Hysteresis and repeatability                            |                          |               |      | ±0.15 |       |      |
| Ratiometricity error (V <sub>s</sub> = 4.75 ... 5.25 V) |                          |               |      | ±0.25 |       |      |
| Current consumption (no load)                           |                          |               |      |       | 10.0  | mA   |
| Response time <sup>6</sup>                              |                          |               |      | 1     |       | ms   |

#### 40PC500G2A PERFORMANCE CHARACTERISTICS

(unless otherwise noted,  $V_s = 5.00$  V,  $R_L > 100$  k $\Omega$ ,  $t_{amb} = 25^\circ\text{C}$ )

| Characteristics                                         |                          |               | Min. | Typ.  | Max.  | Unit |
|---------------------------------------------------------|--------------------------|---------------|------|-------|-------|------|
| Operating pressure                                      |                          |               | 0    |       | 500   | psig |
| Zero pressure offset                                    |                          |               | 0.46 | 0.50  | 0.54  | V    |
| Span <sup>4</sup>                                       |                          |               | 3.91 | 4.0   | 4.09  |      |
| Full scale output                                       |                          |               |      | 4.5   |       |      |
| Thermal effects <sup>3</sup>                            | Offset                   | -18 to +63°C  |      |       | ±1.0  | %FSS |
|                                                         |                          | -45 to +85°C  |      |       | ±1.5  |      |
|                                                         |                          | -45 to +125°C |      |       | ±2.5  |      |
|                                                         | Span                     | -18 to +63°C  |      |       | ±0.75 |      |
|                                                         |                          | -45 to +85°C  |      |       | ±1.0  |      |
|                                                         |                          | -45 to +125°C |      |       | ±1.5  |      |
|                                                         | Combined offset and span | -18 to +63°C  |      |       | ±1.0  |      |
|                                                         |                          | -45 to +85°C  |      |       | ±1.75 |      |
|                                                         |                          | -45 to +125°C |      |       | ±3.0  |      |
| Total accuracy <sup>5</sup>                             |                          | -45 to +125°C |      |       | ±3.0  |      |
| Non-linearity (BSL) <sup>2</sup>                        |                          |               |      |       | ±0.2  |      |
| Hysteresis and repeatability                            |                          |               |      | ±0.15 |       |      |
| Ratiometricity error (V <sub>s</sub> = 4.75 ... 5.25 V) |                          |               |      | ±0.25 |       |      |
| Current consumption (no load)                           |                          |               |      |       | 10.0  | mA   |
| Response time <sup>6</sup>                              |                          |               |      | 1     |       | ms   |

#### OUTLINE DRAWING



mass: 4 g

dimensions in mm (inches)

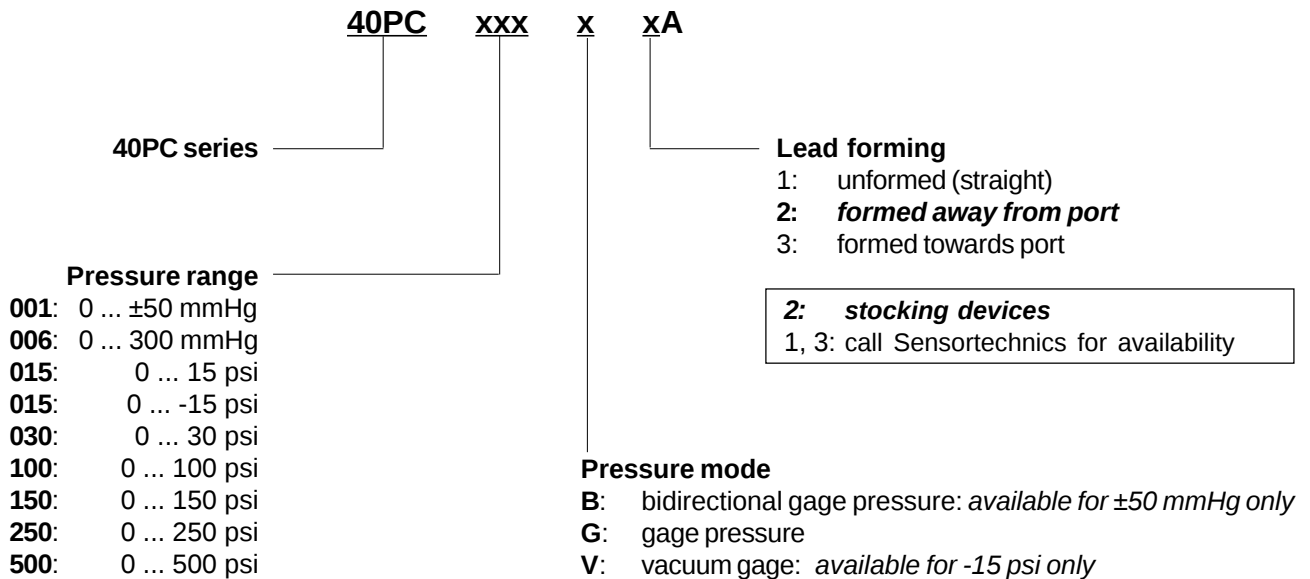
# 40PC Series

## Fully signal conditioned pressure transducer

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Honeywell

### ORDERING INFORMATION



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