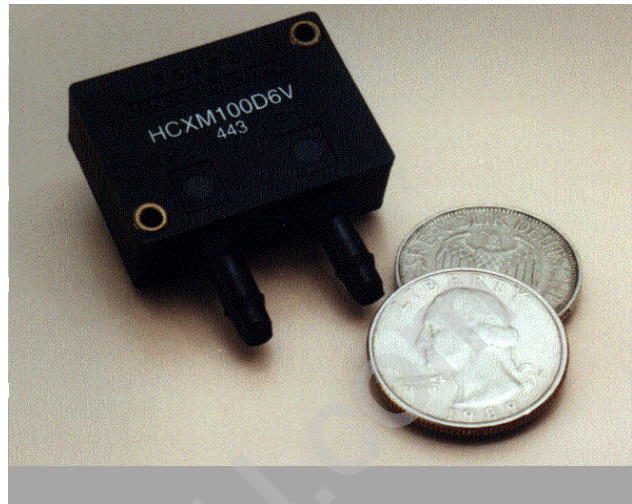


# HCX...A6 / HCX(M)...D6 - Series

## Fully signal conditioned pressure transducer

### FEATURES

- Pressure ranges  
from  $\pm 5$  mbar to 5 bar differential,  
1 and 2 bar absolute
- TTL power supply
- 0.5 to 4.5 V output
- Inline pinning for easy PCB-mounting
- Externally adjustable offset and span



### SERVICE

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

Scale: 1 cm  
 1 inch

### SPECIFICATIONS

#### Maximum ratings

Excitation voltage 4.8 V to 15 V

#### Output current

Source 10 mA

Sink 10 mA

#### Temperature limits

Operating  $-20^{\circ}\text{C}$  to  $70^{\circ}\text{C}$

Storage  $-20^{\circ}\text{C}$  to  $85^{\circ}\text{C}$

Compensated  $0^{\circ}\text{C}$  to  $50^{\circ}\text{C}$

Humidity 0 - 95 %RH

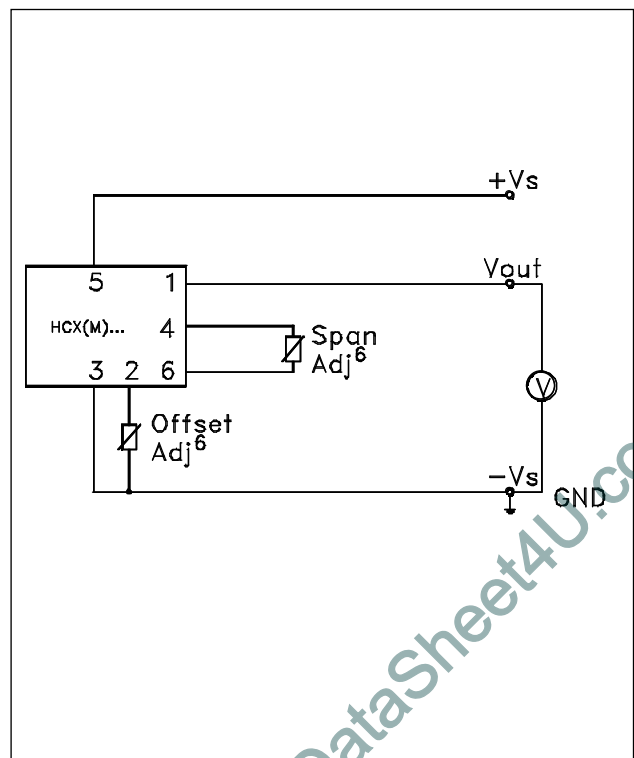
#### Proof pressure<sup>1</sup>

HCXP...M005, HCX...M010 350 mbar

HCXM050 to HCXM350 1.4 bar

all HCX... 2 x rated pressure

### ELECTRICAL CONNECTION



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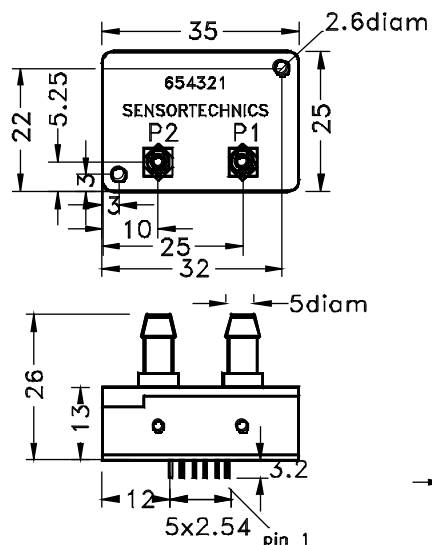
### PERFORMANCE CHARACTERISTICS

(unless otherwise noted,  $V_s = 5\text{ V}$ ,  $R_L > 100\text{ k}\Omega$ ,  $t_{\text{amb}} = 25^\circ\text{C}$ )

| Characteristics                                 |                        | Min. | Typ.      | Max. | Unit     |
|-------------------------------------------------|------------------------|------|-----------|------|----------|
| Operating pressure                              | HCXPM005D6...          | -5   |           | 5    | mbar     |
|                                                 | HCXM010D6...           | 0    |           | 10   |          |
|                                                 | HCXPM010D6...          | -10  |           | 10   |          |
|                                                 | HCXM020D6...           | 0    |           | 20   |          |
|                                                 | HCXM050D6...           | 0    |           | 50   |          |
|                                                 | HCXM100D6...           | 0    |           | 100  |          |
|                                                 | HCXM350D6...           | 0    |           | 350  |          |
|                                                 | HCX001...6...          | 0    |           | 1000 |          |
|                                                 | HCX002...6...          | 0    |           | 2000 |          |
|                                                 | HCX005...6...          | 0    |           | 5000 |          |
| Zero pressure offset                            | all HCXPM...           | 2.40 | 2.50      | 2.60 | V        |
|                                                 | HCXM010D6/HCXM020D6... | 0.40 | 0.50      | 0.60 |          |
|                                                 | all other devices      | 0.45 | 0.5       | 0.55 |          |
| Span <sup>5</sup>                               |                        | 3.95 | 4.0       | 4.05 |          |
| Full scale output                               |                        |      | 4.5       |      |          |
| Output at lowest specified pressure             |                        |      | 0.5       |      |          |
| Non-linearity and hysteresis (BSL) <sup>2</sup> | HCXPM... only          |      | 0.5       | 1.0  | %FSO     |
|                                                 | all other devices      |      | 0.1       | 0.5  |          |
| Thermal effects (0 to 50°C) <sup>4</sup>        |                        |      |           |      | %FSO/°C  |
| Combined offset and span                        |                        |      |           | 0.20 |          |
|                                                 |                        |      |           | 0.12 |          |
|                                                 |                        |      |           | 0.10 |          |
|                                                 |                        |      |           | 0.05 |          |
| Output impedance                                |                        |      |           | 50   | $\Omega$ |
| Long term stability <sup>3</sup>                |                        |      | $\pm 0.2$ |      | %FSO     |
| Power supply rejection                          |                        |      |           |      | %FSO/V   |
| Offset                                          |                        |      | 0.05      |      |          |
| Span                                            |                        |      | 0.03      |      |          |
| Power consumption                               |                        |      | 50        |      | mW       |

### OUTLINE DRAWING

HCX(M)...6H, HCXPM...6H



P1: High pressure port for 5 mbar and 10 mbar devices  
P2: High pressure port for all other devices.

Mass: 14 g

January 1998/026

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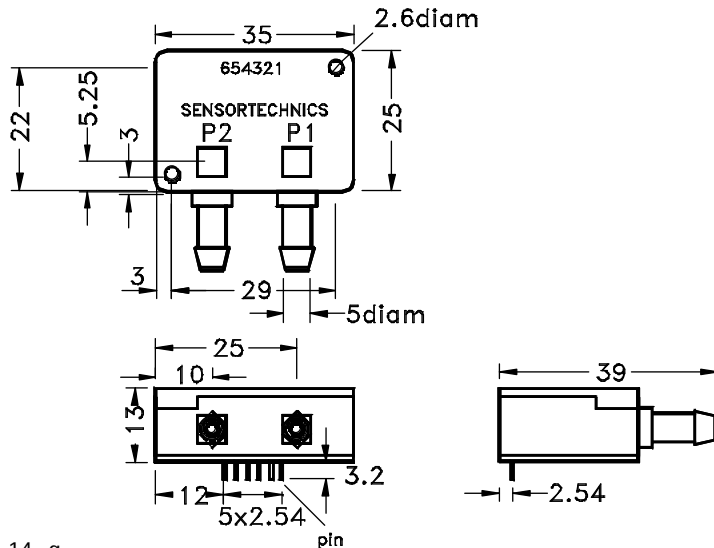
[www.DataSheet4U.com](http://www.DataSheet4U.com)

# HCX...A6 / HCX(M)...D6 - Series

## Fully signal conditioned pressure transducer

### OUTLINE DRAWING

HCX(M)...6V



**P1:** High pressure port for 5 mbar and 10 mbar devices  
**P2:** High pressure port for all other devices.

Mass: 14 g

All dimensions in mm

### ORDERING INFORMATION

| Pressure range                     | Part Number<br>Package version |                  |
|------------------------------------|--------------------------------|------------------|
|                                    | Side facing ports              | Top facing ports |
| <b>Differential / gage devices</b> |                                |                  |
| 0 to $\pm 5$ mbar                  | HCXPM005D6V                    | HCXPM005D6H      |
| 0 to 10 mbar                       | HCXM010D6V                     | HCXM010D6H       |
| 0 to $\pm 10$ mbar                 | HCXPM010D6V                    | HCXPM010D6H      |
| 0 to 20 mbar                       | HCXM020D6V                     | HCXM020D6H       |
| 0 to 50 mbar                       | HCXM050D6V                     | HCXM050D6H       |
| 0 to 100 mbar                      | HCXM100D6V                     | HCXM100D6H       |
| 0 to 350 mbar                      | HCXM350D6V                     | HCXM350D6H       |
| 0 to 1 bar                         | HCX001D6V                      | HCX001D6H        |
| 0 to 2 bar                         | HCX002D6V                      | HCX002D6H        |
| 0 to 5 bar                         | HCX005D6V                      | HCX005D6H        |
| <b>Absolute devices</b>            |                                |                  |
| 0 to 1 bar                         | HCX001A6V                      | HCX001A6H        |
| 0 to 2 bar                         | HCX002A6V                      | HCX002A6H        |

### 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. Change after one year or 1 million pressure cycles.
4. Thermal effects tested and guaranteed from 0°C to 50°C relative to 25°C. All specifications shown are relative to 25°C.
5. Span is the algebraic difference between the output at full scale pressure and offset.
6. Offset adjustment possible to lower values only. Do not trim for nominal value minus 150 mV.  
Span adjustment possible to lower pressure range (higher gain). Do not trim for more than 15% of full scale pressure

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