



DCXL01DS



Pressure Sensors: Measurement Type:  
Differential, Signal Conditioning:  
Unamplified; Pressure Range:  $\pm 1.0$  in  
 $H_2O$ ; Port Style: Barbed

Actual product appearance may vary.

Features

- Available in differential pressure ranges
- Position sensitivity to  $\pm 5$  mV/g
- Temperature compensated to 0 °C to 50 °C [32 °F to 122 °F]
- Combined linearity and hysteresis error <  $\pm 0.25$  % span

Potential Applications

- Medical instrumentation
- HVAC
- Industrial instrumentation
- Environmental controls

Description

The SURSENSE™ line of ultra low pressure sensors is based upon a proprietary, patented technology designed to reduce all output offset or common mode errors. These sensors utilize a silicon, micromachined sensing element that features a unique stress concentration-enhanced structure to provide a highly stable linear output that is proportional to applied pressure. Output offset errors due to changes in temperature, warm-up, long term stability and position sensitivity have all been significantly reduced when compared to conventional sensors. The DCXL-DS Series sensors provide a precision calibrated, ratiometric mV output with SURSENSE-enhanced stability. Each sensor features calibrated offset, full scale span and thermal error calibration to ensure the highest possible accuracy for flow pressure measurement. These highly stable sensors feature an industry-standard, ported package with improved stress isolation for printed circuit board mount applications. The housing design incorporates a snap together cover and housing leading to improved quality and performance. Product is patented by US patent 6023978.

| Product Specifications |                                            |
|------------------------|--------------------------------------------|
| Measurement Type       | Differential, Vacuum Gage, Gage            |
| Signal Conditioning    | Unamplified                                |
| Pressure Range         | $\pm 1.0$ in $H_2O$                        |
| Maximum Overpressure   | 5 psi                                      |
| Supply Voltage         | 3.0 Vdc min., 12.0 Vdc typ., 16.0 Vdc max. |
| Compensated            | Yes                                        |
| Output Calibration     | Yes                                        |
| Termination            | PCB                                        |
| Port Style             | Barbed                                     |

|                               |                                                                                                                                   |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Package Style                 | Honeywell DI-DCXL                                                                                                                 |
| Typical Sensitivity           | 10 mV/in H <sub>2</sub> O                                                                                                         |
| Full Scale Span               | 10 mV typ.                                                                                                                        |
| Null Offset                   | 0 mV typ.                                                                                                                         |
| Null Shift over Temperature   | -250 •V min., +250 •V max.                                                                                                        |
| Span Shift Over Temperature   | -200 •V min., 200 •V max.                                                                                                         |
| Linearity, Hysteresis Error   | 0.05 % Span typ.                                                                                                                  |
| Operating Temperature Range   | -25 °C to 85 °C [-13 °F to 185 °F]                                                                                                |
| Compensated Temperature Range | 0 °C to 50 °C [32 °F to 122 °F]                                                                                                   |
| Storage Temperature Range     | -40 °C to 125 °C [-40 °F to 257 °F]                                                                                               |
| Media Compatibility           | Ports 1 and 2: Dry gases only.<br>Media must be compatible with epoxy-based adhesive, silicon, silicone, gold, nylon and alumina. |
| UNSPSC Code                   | 411121                                                                                                                            |
| UNSPSC Commodity              | 411121 Transducers                                                                                                                |
| Availability                  | Global                                                                                                                            |
| Series Name                   | DCXL-DS                                                                                                                           |

