ND Series Industrial Pressure Sensors

Superior Sensor's ND series measures dry air and non-aggressive gas pressure with very high accuracy and a stable zero point

Based on Superior Sensor's NimbleSense™ architecture, the ND series family extends the operating temperature from -20°C to +85°C while increasing pressures up to 150 psi (10.3 Bar). Available for absolute, differential and gage pressure measurements, the ND series utilizes Multi-Range™ technology to create a wide dynamic range (differential and gage models). This wide dynamic range offers multiple pressure ranges in a single package, thus minimizing the number of sensor variants required to support the demanding functional requirements of the various industrial market segments. For example, one Multi-Range enabled ND sensor replaces up to seven competing products, greatly simplifying installation requirements and significantly lowering inventory costs.

The ND series provides a level of integration combining an advanced piezoresistive sensing element with integrated amplification, ADC, DSP, and a digital interface which dramatically simplifies customer integration efforts. Advanced digital processing enables functionality, thus simplifying system development, adding manufacturing ease, and increasing reliability. Supporting pressure ranges as low as 0.25 in H_2O to as high as 150 psi, the ND series is ideal for various industrial applications from air curtains to aeronautics, environmental chambers to eye surgery equipment, and UAVs to 3D printing.

Features

- Highly integrated sensor with ADC and DSP
- Up to seven selectable pressure ranges per device (differential/gage sensors)
- Pressure ranges 0.25 in H_2O (62.5 Pa) to 150 psi (10.3 Bar)
- 16-bit resolution (each selected range)
- Exceptional zero stability
- Integrated 50/60 Hz notch filter
- Selectable bandwidth filter from 1.0 Hz to 200 Hz
- Output data rate up to 444 Hz

- Total error band less than 0.15% FSS
- Very high accuracy ±0.05% of selected range
- Long term stability ±0.05% FSS
- Silicon gel protection on psi rated models
- Temperature compensated -20°C to +85°C
- Supply voltage compensation
- Fully integrated compensation math
- Standard I^2C and SPI interface

Applications

- Industrial applications
- Air curtains

- Aeronautics
- Environmental chambers

- Eye surgery equipment
- UAVs
- 3D printing