

ND Series Product Brief: Middle Pressures Absolute Pressure Sensor for Industrial Applications

Key Features

- Highly integrated sensor with ADC and DSP
- Pressure ranges 15 to 150 psia (1034mBar to 10.3Bar)
- 16-bit resolution
- Exceptional Zero Stability
- Integrated 50/60Hz Notch Filter
- Selectable Bandwidth Filter from 1.0Hz to 200Hz
- Output Data Rate at 444Hz
- Total Error Band less than 0.15% FSS
- Very High Accuracy +/- 0.1% of Selected Range
- Long Term Stability +/- 0.1% FSS
- Silicone gel protection on all models
- Temperature Compensated -20°C to 85°C
- Supply Voltage Compensation
- Fully Integrated Compensation Math
- Standard I²C and SPI Interface

Product Summary

Based on Superior's market leading, proprietary NimbleSense™ architecture, the ND Absolute Middle Pressure Series family supports operating temperature from to -20°C up to 85°C. Supporting pressure ranges as low as 15 psia (1.03 Bar) to as high as 150 psia (10.3 Bar), the ND Absolute Middle Pressure Series is ideal for a wide variety of applications where there is a need to measure air and gas pressures against absolute zero pressure.

The ND Series provides a new level of integration combining an advanced piezoresistive sensing element with integrated amplification, ADC, DSP and a digital interface to significantly simplify customer integration efforts. Advanced digital processing enables new functionality thus streamlining system development, adding manufacturing ease and increasing reliability.

With true 16-bit output, the ND Absolute Middle Pressure Series measures dry air and non-aggressive gas pressure with very high accuracy. Non-linearity is also outstanding, typically within 0.1% FS.



Industry leading accuracy - The ND Absolute Middle Pressure Series provides accuracy better than 0.10% FS and Total Error Band is also industry leading, typically better than 0.15% FSS.

The ND Series has a selectable bandwidth filter from 1Hz to 200Hz, and exceptional zero stability. For added performance, the ND Series has incorporated a 50/60Hz notch filter to minimize the impact of power noise spikes. The ND Series is an excellent choice for applications requiring the utmost reliability, with long-term stability of 0.1% FSS within the first year. Finally, the Middle Pressure ND Sensors incorporate silicone gel to protect the sensor from any mechanical or thermal stress during field use.

Constructed with a high reliability plastic enclosure, the ND Series family provides the ideal combination of very high performance and reliability at extended temperature ranges while ensuring customers have a high-volume, cost-effective solution optimized for a wide array of industrial requirements.

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