



## TruStability<sup>®</sup> Board Mount Pressure Sensors

### **HSC Series—High Accuracy, Compensated/Amplified**

$\pm 1.6$  mbar to  $\pm 10$  bar |  $\pm 160$  Pa to  $\pm 1$  MPa |  $\pm 0.5$  inH<sub>2</sub>O to  $\pm 150$  psi  
Digital or Analog Output



# TruStability® Board Mount Pressure Sensors

The TruStability® High Accuracy Silicon Ceramic (HSC) Series is a piezoresistive silicon pressure sensor offering a ratiometric analog or digital output for reading pressure over the specified full scale pressure span and temperature range.

The HSC Series is fully calibrated and temperature compensated for sensor offset, sensitivity, temperature effects, and non-linearity using an on-board Application Specific Integrated Circuit (ASIC). Calibrated output values for pressure are updated at approximately 1 kHz for analog and 2 kHz for digital.

The HSC Series is calibrated over the temperature range of 0 °C to 50 °C [32 °F to 122 °F]. The sensor is characterized for operation from a single power supply of either 3.3 Vdc or 5.0 Vdc.

These sensors measure absolute, gage, or differential pressures. The absolute versions have an internal vacuum reference and an output value proportional to absolute pressure. Gage versions are referenced to atmospheric pressure and provide an output proportional to pressure variations from atmosphere. Differential versions allow measurement of pressure between the two pressure ports.

The TruStability® pressure sensors are intended for use with non-corrosive, non-ionic gases, such as air and other dry gases. Available options extend the performance of these sensors to non-corrosive, non-ionic liquids for pressure ranges above 40 mbar | 4 kPa | 20 inH<sub>2</sub>O.

All products are designed and manufactured according to ISO 9001 standards.

## Table of Contents

Features and Benefits . . . . .	3-5
Potential Applications . . . . .	6
General Specifications . . . . .	7-8
Analog Operating Specifications . . . . .	9
Digital Operating Specifications . . . . .	10
Transfer Function Limits . . . . .	11
Total Error Band Values . . . . .	12
Nomenclature and Order Guide . . . . .	13
Pressure Range Specifications	
±1.6 mbar to ±10 bar . . . . .	14
±160 Pa to ±1 MPa . . . . .	15
±0.5 inH <sub>2</sub> O to ±150 psi . . . . .	16
Available Standard Configurations . . . . .	17-18
Dimensional Drawings	
DIP Packages . . . . .	19-21
SMT Packages . . . . .	21-24
SIP Packages . . . . .	24-29
Pinouts, PCB Layouts . . . . .	30
TruStability® Board Mount Pressure Sensors	
Portfolio Overview . . . . .	31
Additional Information . . . . .	32

## What makes our sensors better?

- Stability and reliability
- Industry-leading accuracy of ±0.25 %FSS BFSL
- Port and housing options simplify integration
- Wide pressure range, from ±1.6 mbar to ±10 bar | ±160 Pa to ±1 MPa | ±0.5 inH<sub>2</sub>O to ±150 psi
- Small package size
- Extremely low power consumption

STABILITY • ACCURACY • FLEXIBILITY • SMALL SIZE