



# Performance Specifications

Typical Part number **DSB301 - 20 - C85**

Family      Pressure Temperature

## Pressure Performance

Pressure (kpsi)	5	10	20	30
Sensor	Thickness Shear Mode Quartz Resonator			
Pressure Range <sup>1</sup> (psia / bar)	0 to 5,000 / 0 to 344	0 to 10,000 / 0 to 690	0 to 20,000 / 0 to 1,380	0 to 30,000 / 0 to 2,070
Available Calibration Temperature Ranges (°C)	-40 to 85 or 10 to 35	-40 to 85 or 10 to 35	-40 to 85 or 10 to 35	-40 to 85 or 10 to 35
Field Accuracy <sup>2,4</sup> (% FS) [-40 to 85°C]	0.02	0.02	0.02	n/a
Lab Accuracy <sup>2,4</sup> (% FS) [10 to 35°C]	0.01	0.01	0.01	0.02
Achievable Resolution <sup>3</sup> (psi/sec)	< 0.006	< 0.006	< 0.008	< 0.012
Repeatability (% FS)	< 0.01	< 0.01	< 0.01	< 0.01
Nominal Sensitivity (counts/psi)	1700	1700	1500	1300
Nominal Counts Range	6x10 <sup>6</sup> to 6x10 <sup>7</sup>	6x10 <sup>6</sup> to 6x10 <sup>7</sup>	6x10 <sup>6</sup> to 6x10 <sup>7</sup>	6x10 <sup>6</sup> to 6x10 <sup>7</sup>
Response time to FS step (for 99.5% FS)	< 1 sec	< 1 sec	< 1 sec	< 1 sec
Gravity / Orientation Effect	Negligible	Negligible	Negligible	Negligible
Acceleration Sensitivity (psi/g - any axis)	< 0.02	< 0.02	< 0.02	< 0.02
Drift at 14 psi and 25°C (% FS/year)	Negligible	Negligible	Negligible	Negligible

## Temperature Performance

Temperature (°C)	All Products
Sensor	Thickness Shear Mode Quartz Resonator
Lab Calibration Temperature Range (°C/°F)	10 to 35 / 50 to 95
Field Calibration Temperature Range (°C/°F)	-40 to 85 / -40 to 185
Accuracy (°C)	1.0
Achievable Resolution <sup>3</sup> (°C/sec)	< 0.005
Repeatability (°C)	< 0.01
Average Sensitivity (counts/°C)	83000
Nominal Counts Range	6x10 <sup>6</sup> to 6x10 <sup>7</sup>
Drift at 25°C (°C/year)	Negligible

- Notes: 1. Units calibrated with a bellows meet performance specifications from 14 psi to FS. Operating range is from 0 to FS.  
 2. Combined effects of repeatability, hysteresis, and corrected linearity over the calibrated temperature range.  
 Some transducers require fourth-order coefficients to satisfy accuracy specifications. Consult factory for details.  
 3. Resolution scales directly with gatetime.  
 4. Valid over calibrated temperature range; see Temperature Performance table.