



Performance Specifications

Typical Part Number DSB301 - 20 - C85

Family Pressure Temperature

Pressure Performance

Pressure (kpsi) -YY	05	10	20	30
Sensor	Thickness Shear Mode Quartz Resonator			
Pressure Range ¹ (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 0 to 40	-40 to 85 or 0 to 40	-40 to 85 or 0 to 40	-40 to 85 or 0 to 40
Field Accuracy ^{2,4} (% FS) [-40 to 85°C]	0.02	0.02	0.02	n/a
Lab Accuracy ^{2,4} (% FS) [10 to 35°C]	0.01	0.01	0.01	0.02
Achievable Resolution ³ (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 ⁶ to 6x10 ⁷	6x10 ⁶ to 6x10 ⁷	6x10 ⁶ to 6x10 ⁷	6x10 ⁶ to 6x10 ⁷
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) -ZZZ	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 ³ (°C / sec)	< 0.005
Repeatability (°C)	< 0.01
Average Sensitivity (counts / °C)	83000
Nominal Counts Range	6x10 ⁶ to 6x10 ⁷
Drift at 25°C (°C / year)	Negligible

Notes

- Units calibrated with a bellows meet accuracy specifications from 200 psi to FS. Below 200 psi, non-linear bellows effects may increase ambient pressure readings to 0.04% FS. Operating range is from 0 to FS.
- Accuracy is the combined effects of repeatability, hysteresis, and corrected linearity over the calibrated temperature range. Stated accuracy does not include the deadweight tester error which is 0.01% of reading. Some transducers require fourth-order coefficients to satisfy accuracy specifications. Consult factory for details.
- Resolution scales inversely with gate time (sample interval). Example: If at 1 second the resolution is 0.01psi, a 2 second gate time will result in 0.005psi resolution. Conversely, a 0.1 second gate time would result in 0.1psi resolution.
- Valid over calibrated temperature range; see Temperature Performance table.