

- **FBG acceleration sensor**
- **High Frequency Range**
- **200 g Dynamic range**
- **Zero power, EMI immune, intrinsically safe**
- **Dense multiplexing capability**
- **Multiple km signal integrity for highly remote measurements**



SmartAccel-HF sensor

SmartAccel-HF is a single axis FBG acceleration sensor, suitable for high frequency measurement of small vibrations. The sensor is ideal for condition monitoring of rotating machines such as pumps, turbines, motors and wheeled vehicles. Numerous SmartAccel-HF sensors can be multiplexed with our range of other fibreoptic sensors to form an integrated structural health monitoring system.

A high-resolution, high-speed FBG interrogator is required in order to fully exploit the capabilities of SmartAccel-HF. We recommend our [SmartScan](#) or [SmartScan Aero](#) instruments.

Where lower frequency vibrations are present, for instance in civil engineering applications, our [SmartAccel-LF](#) sensor is recommended.

For each of our SmartAccel products, tri-axis acceleration modules are available.

SmartAccel-HF specifications at 25°C, (Preliminary):

Reference sensitivity at 159.2 Hz	2.0 - 2.5 pm/ms ⁻²
Frequency range (±10 % amplitude)	DC to 900 Hz
Mounted resonance frequency	> 3 kHz
Dynamic range (peak)	1000 ms ⁻²
Broadband noise	Estimated < 0.1 ms ⁻²
Temperature range	-60 to +200°C (on demand) -60 to +85°C (as standard)
Temperature sensitivity	~ 10 pm/°C
Thermal transient sensitivity	~ 0.1 ms ⁻² /°C
Mass	~ 25 g
Dimensions	16.5 x 19 x 29 mm
Mounting method	M5 x 4 mm threaded hole for stud mounting

