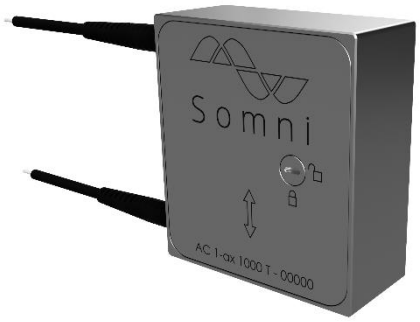
AC 1000 T - Acceleration sensor

The AC 1-ax 1000 T is the flagship FBG acceleration sensor of Somni Solutions! Need sensitivity? The AC 1-ax 1000 T has an unmatched sensitivity. Furthermore, an intrinsic temperature compensation scheme ensures accurate readings at very low frequencies and acceleration levels.

This sensor enables the detection of ultra-low-level, low-frequency vibrations specifically for monitoring large structures, bridges, archways, overpasses, foundations and detecting earth tremors.



- Very high sensitivity
- Double ended
- Robust stainless-steel design for harsh environment
- Intrinsically temperature compensated
- Measures down to 0 Hz

Parameter	Performance
Sensitivity	1100 pm/g ± 100 pm/g
Noise level	0.15 µg/√ Hz
Precision[1]	4.7 µg
Frequency range	0 - 160 Hz
Resonance frequency	> 240 Hz
Cross axis sensitivity	< -40 dB
Maximum acceleration	± 20 m/s^2
Maximum shock (unlocked/locked)	100 m/s^2 / 1000 m/s^2
Weight	400 grams
Material	1.4462 (Duplex)
Operational temperature range[2]	-65 to +80 °C
Protection	IP 67
FWHM	< 0.5 nm
Reflectivity	> 50 %
Insertion loss	< 0.1 dB
FBGs	2
Connector options	FC/APC, LC/APC, open end[3]

1. Measurement bandwidth 1kHz (0.01mm displacement detectable).
2. On request sensors can be adapted to operate at temperatures up to 300 °C.
3. Other connector options available on request.

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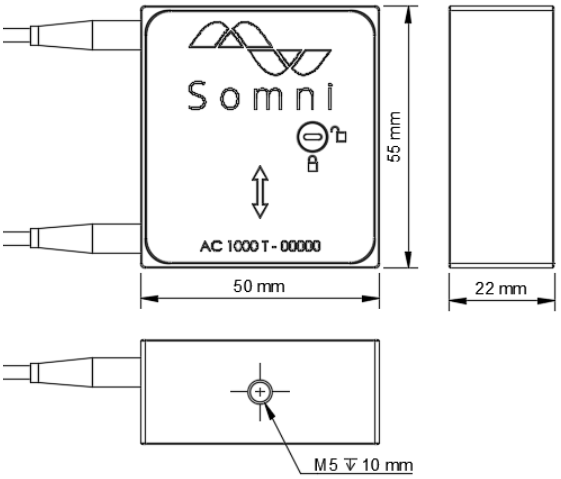


Mounting instructions

It is recommended to fasten the sensor on a flat surface using an M5 bolt as indicated.

Maximum torque to apply is 5 Nm.

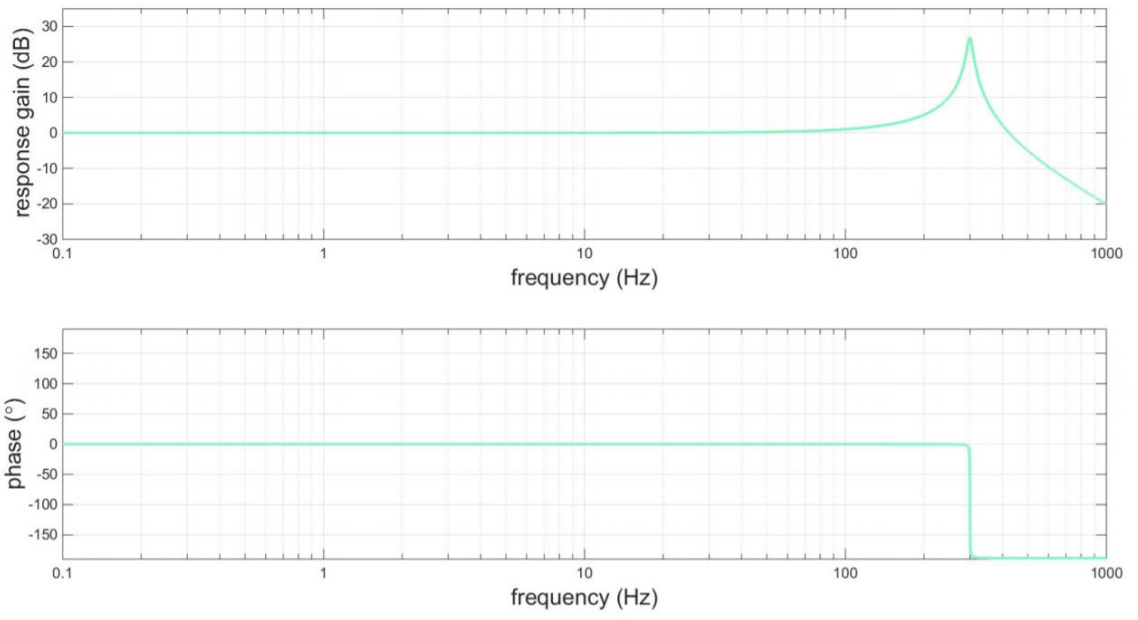
Locking / unlocking

The sensor must be unlocked for measurement. During transportation and installation the sensor must be locked.

Calibration

All sensors are individually tested and calibrated after manufacturing. Each sensor is shipped with a detailed calibration sheet.

The graph shows a typical response of the sensor.



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