

AC 5 T - Acceleration sensor



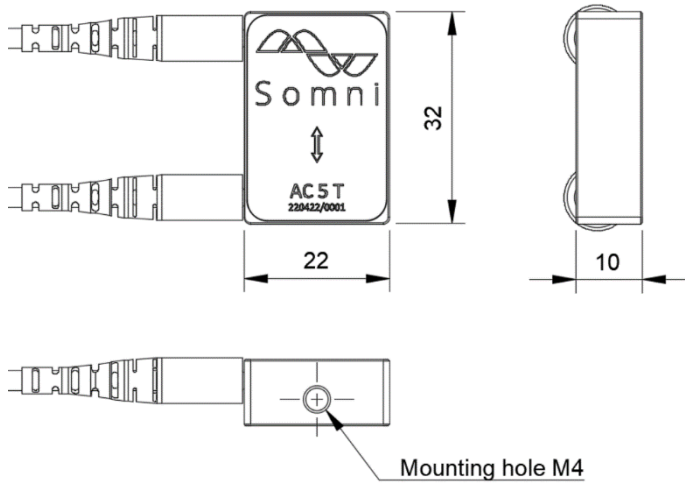
The AC 5 T is Somni's latest Fiber Bragg Grating based single axis accelerometer. The unique properties of the AC 5 T are its unprecedented size and weight. With less than 40 grams this is the world smallest and lightest dual ended FBG based accelerometer in the world!



- Robust stainless-steel design for harsh outdoor environment
- Dual ended
- Shock proof up to 20.000 m/s²
- Unprecedented frequency bandwidth
- Intrinsic temperature compensation

| Parameter | Performance |
|--------------------------------|--------------------------|
| Sensitivity | 5 pm/g ± 2 pm/g |
| Noise level ¹ | 0.01 g |
| Frequency range | 0 - 3000 Hz |
| Resonance frequency | > 4600 Hz |
| Cross axis sensitivity | < -30 dB |
| Maximum acceleration | ± 5.000 m/s ² |
| Maximum shock | 20.000 m/s ² |
| Weight | <40 grams |
| Material | 1.4462 (Duplex) |
| Operational temperature range | -65 to +80 °C |
| Protection | IP 67 |
| FWHM | < 0.7 nm |
| Reflectivity | 40 % |
| Insertion loss | < 0.2 dB |
| FBGs | 2 |
| Connector options ² | FC/APC, LC/APC, open end |

1. Cumulative noise floor, using a FAZ I4G or I4W interrogator.
2. Other connector options available on request.



Mounting instructions

It is recommended to fasten the sensor on a flat surface using an M4 bolt as indicated.

Maximum torque to apply is 5 Nm.

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.

