

Miraex Polaris 12 kHz

Photonic acceleration sensor

Features

- Single-axis sensor
- Frequency range (10%) from DC to 12 kHz
- Digital output calibrated in acceleration (g), optionally in velocity (m/s) or displacement (μm)
- Small form factor with 6mm diameter of the sensor head
- Option available for immunity to magnetic and electrical fields
- Standard cable length of 5m (other lengths available on request)

Description

Photonic acceleration sensors are devices suited for the continuous monitoring of vibrations inside harsh environments. Thanks to its small size design and its strong immunity to high electromagnetic interferences the Polaris offers great monitoring at places where conventional sensing technology fails.

The polaris is made out of a sensing element with remote optical readout. The chosen material of the sensing element ensures a proven extended product lifetime and stability with excellent resistance to temperature cycles up to 155°C.

Key technical specifications

Operation

Measuring range	0 to 40 g (peak)
Frequency range (10%)	DC to 12 kHz
Resonance frequency	> 14 kHz
Transverse sensitivity	< 10% of main axis
Noise (1kHz)	1 $\text{mg}/\sqrt{\text{Hz}}$
Digital sampling rate	64 kS/s
Digital resolution	50 μg
Power	
Voltage	9 - 14V (12V nom.)
Current consumption	< 1A (12V supply)

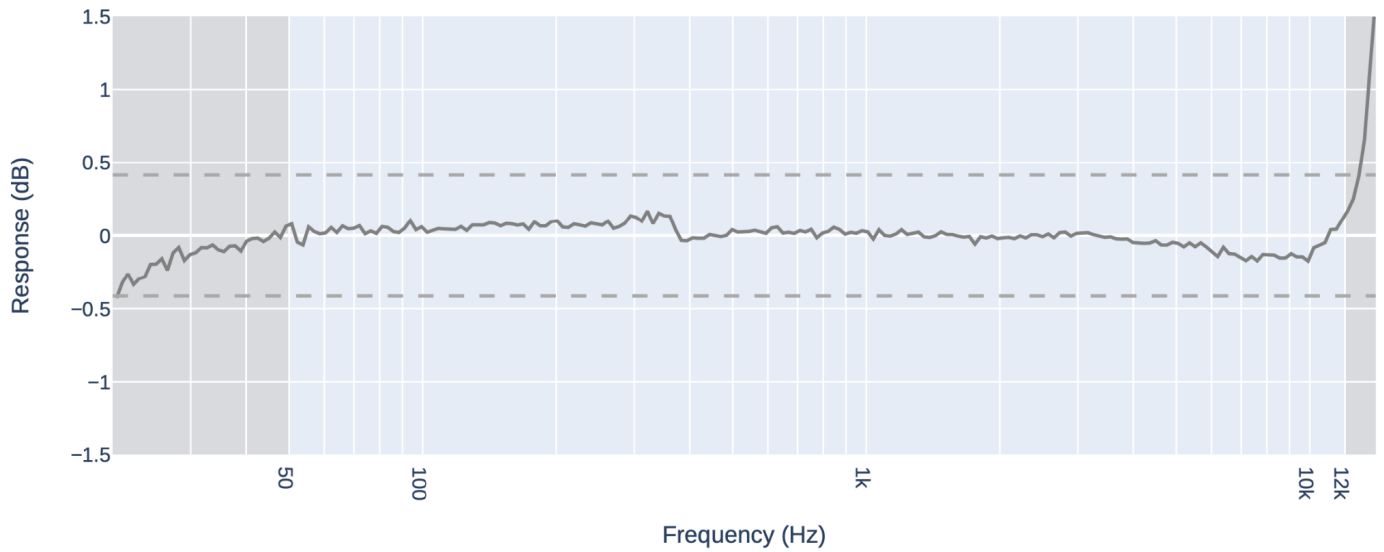
Environmental

Temperature range	
Operating (head)	20 to 155 °C
Operating (controller)	0 to 40 °C
Temperature deviation	10% at 80°C
Max. Shock Acceleration	1500g (0.5 ms)

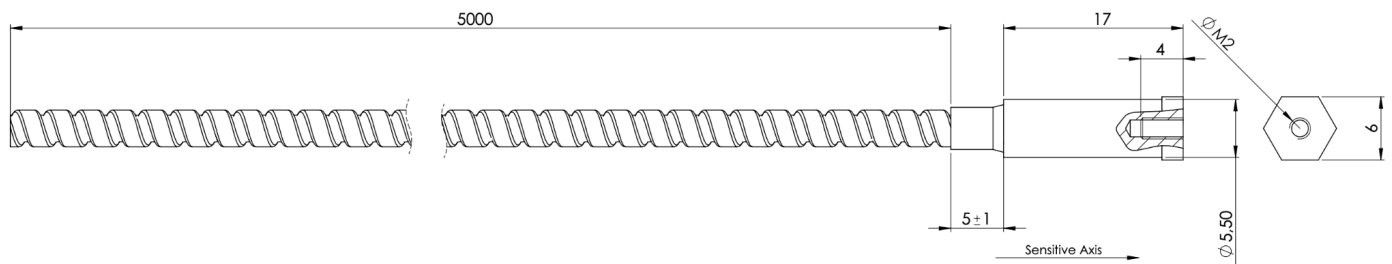
Physical

Sensor head dimensions	22x6x6 (mm)
Sensor head weight	5 g
Max torque	0.45 Nm
Integral cable dimensions	5m x \varnothing 5 mm

Typical frequency response



Dimensions



Ordering information

Sensor P/N: 100629

Edge Controller P/N: 100534

Other ordering options available soon.

Miraex Polaris 20 kHz

Photonic acceleration sensor

Features

- Single-axis sensor
- Frequency range (10%) from DC to 20 kHz
- Digital output calibrated in acceleration (g), optionally in velocity (m/s) or displacement (µm)
- Small form factor with 6mm diameter of the sensor head
- Option available for immunity to magnetic and electrical fields
- Standard cable length of 5m (other lengths available on request)

Description

Photonic acceleration sensors are devices suited for the continuous monitoring of vibrations inside harsh environments. Thanks to its small size design and its strong immunity to high electromagnetic interferences the Polaris offers great monitoring at places where conventional sensing technology fails.

The polaris is made out of a sensing element with remote optical readout. The chosen material of the sensing element ensures a proven extended product lifetime and stability with excellent resistance to temperature cycles up to 155°C.

Key technical specifications

Operation

Measuring range	0 to 40 g (peak)
Frequency range (10%)	DC to 20 kHz
Resonance frequency	> 24 kHz
Transverse sensitivity	< 10% of main axis
Noise (1kHz)	5 mg/√Hz
Digital sampling rate	64 kS/s
Digital resolution	50 µg
Power	
Voltage	9 - 14V (12V nom.)
Current consumption	< 1A (12V supply)

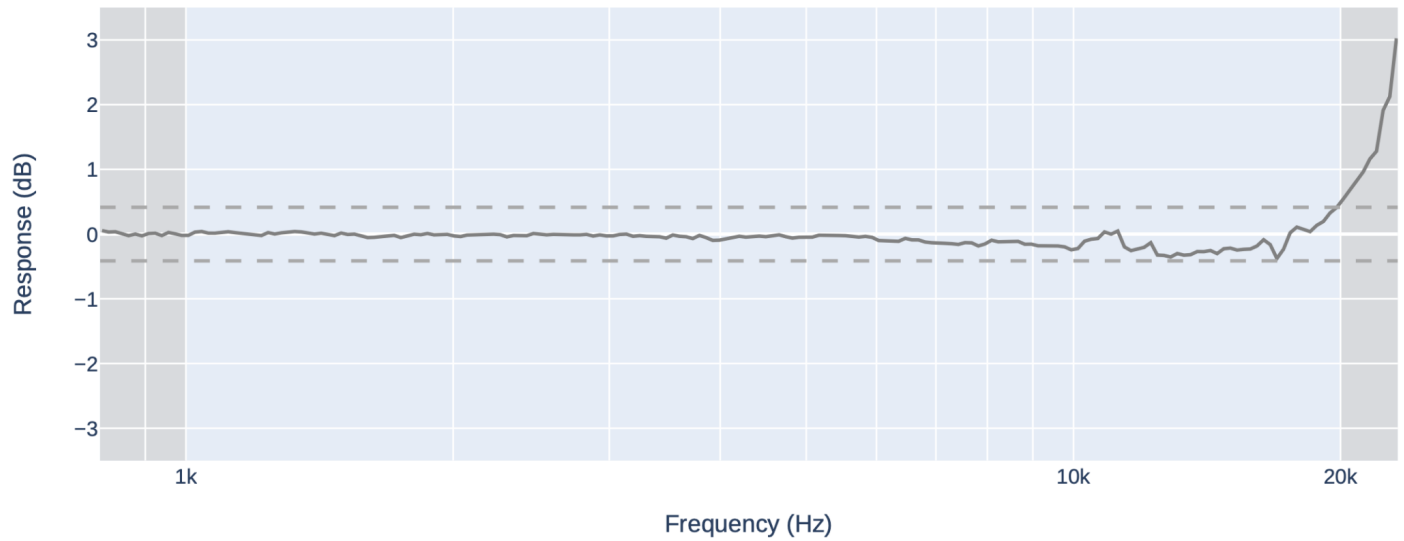
Environmental

Temperature range	
Operating (head)	20 to 155 °C
Operating (controller)	0 to 40 °C
Temperature deviation	10% at 80°C
Max. Shock Acceleration	1500g (0.5 ms)

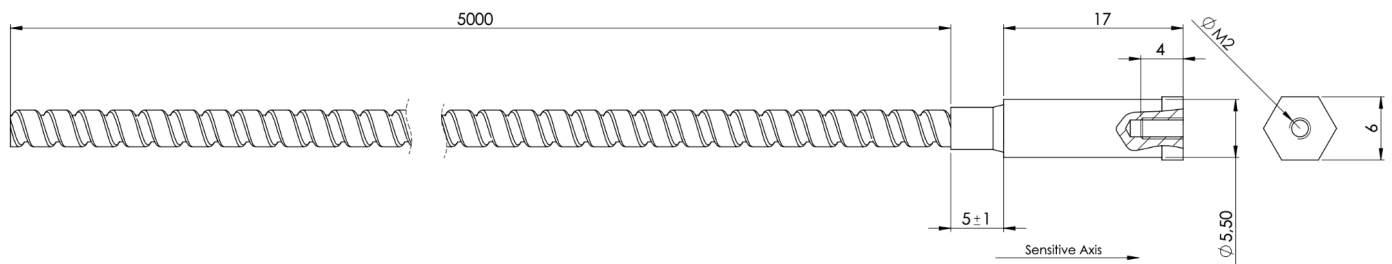
Physical

Sensor head dimensions	22x6x6 (mm)
Sensor head weight	5 g
Max torque	0.45 Nm
Integral cable dimensions	5m x ø5 mm

Typical frequency response



Dimensions



Ordering information

Sensor P/N: 100630
 Edge Controller P/N: 100534

Other ordering options available soon.