MiniMyotis 8-Channel Unit

High-Bandwidth Multi-sensor Analog Signal Conditioner



Key features

- 8-Channel Simultaneous Monitoring: Independent conditioning for up to 4 sensors in a single compact enclosure.
- Advanced Noise-Eater Function: Integrated opto-electronic noise reduction providing up to 20dB reduction at low frequencies and 10dB at high frequencies.
- High Frequency Response: Wide bandwidth up to 3 MHz, suitable for ultra-fast acoustic and pressure transients.
- Dual Output Modes: Supports both AC coupling for dynamic signals and DC coupling for static measurements.

DESCRIPTION

The **MiniMyotis 8ch** is a high-performance analog signal conditioner designed to interface with up to four Phonoptics fiber optic sensors simultaneously. This compact unit integrates a high-stability light source and an advanced dual-photodiode architecture for each channel: one for sensing and one for real-time light source noise reduction.
It is specifically optimized for high-dynamic measurements, converting optical signals into industry-standard voltage outputs for microphones (Evotis), dynamic pressure sensors (Alpheus), and vibration sensors.

BENEFITS AND APPLICATIONS

Signal Conditioner Performance

- **Multi-Channel Efficiency:** Simultaneous conditioning of up to 8 sensors in a single, space-saving enclosure.
- **Active Noise Reduction:** Integrated "Noise-eater" technology provides up to 20dB of noise reduction at low frequencies and 10dB at high frequencies.
- **Ultra-Wide Bandwidth:** Supports high-dynamic measurements with a frequency response up to 3 MHz.
- **Dual Output Versatility:** Offers both AC (±1.65V) for dynamic signals and DC (0-4.5V) for absolute measurements.
- **Lightweight & Compact:** Designed with a focus on essential specifications for easy integration into industrial racks or benchtop setups.

Fiber Optic Sensor Advantages

- **EMI/RFI Immunity:** Completely passive sensing technology, immune to electromagnetic interference and radio frequencies.
- **Galvanic Isolation:** Safe for use in high-voltage environments or areas with significant electrical noise.
- **Versatile Compatibility:** Fully compatible with Phonoptics' range of microphones, pressure sensors, and tachometers.
- **Harsh Environment Ready:** Ideal for monitoring in conditions where traditional electronic sensors fail.

Target Applications

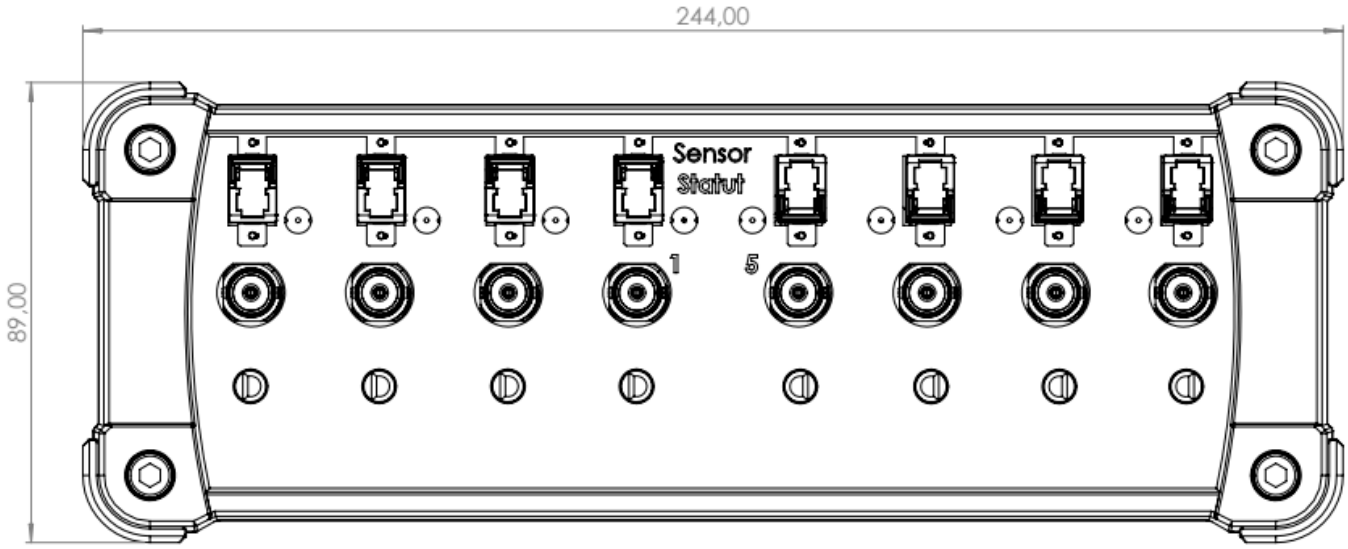
- **Acoustic Monitoring:** High-fidelity sound capture using the Myotis optical microphone.
- **Turbomachinery & Aerospace:** High-speed dynamic pressure sensing for Alpheus sensors.
- **Industrial Maintenance:** Vibration monitoring and tachometry for predictive maintenance.
- **R&D Laboratories:** High-bandwidth signal acquisition for experimental physics and fluid dynamics.

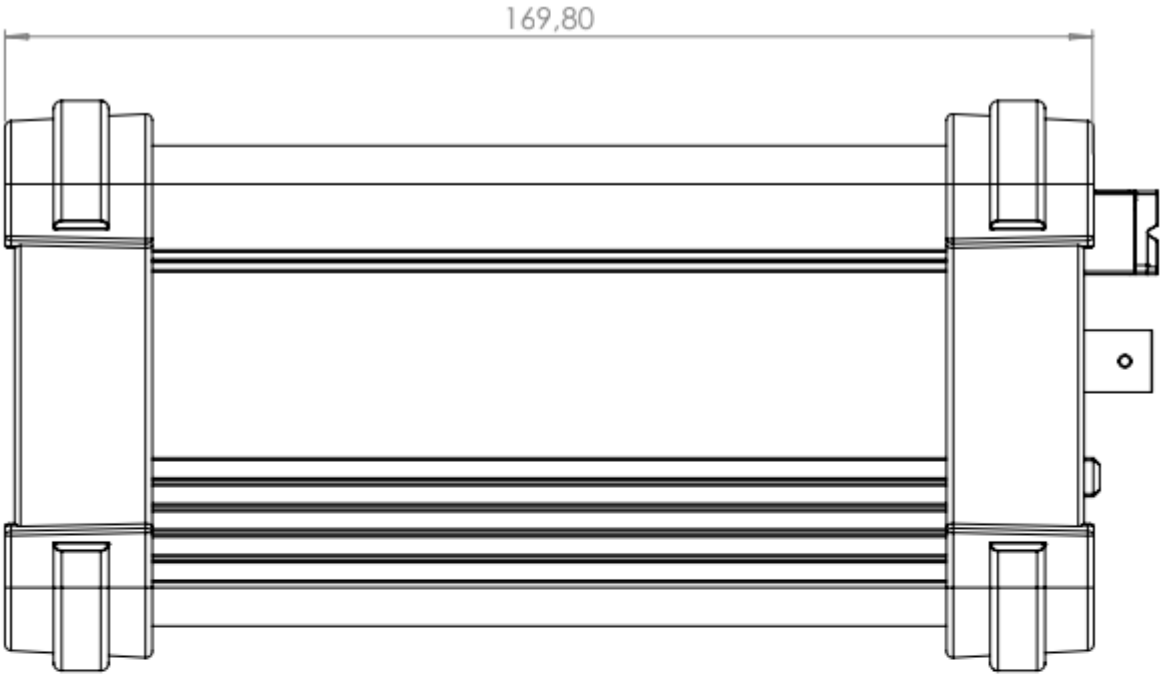
General specifications

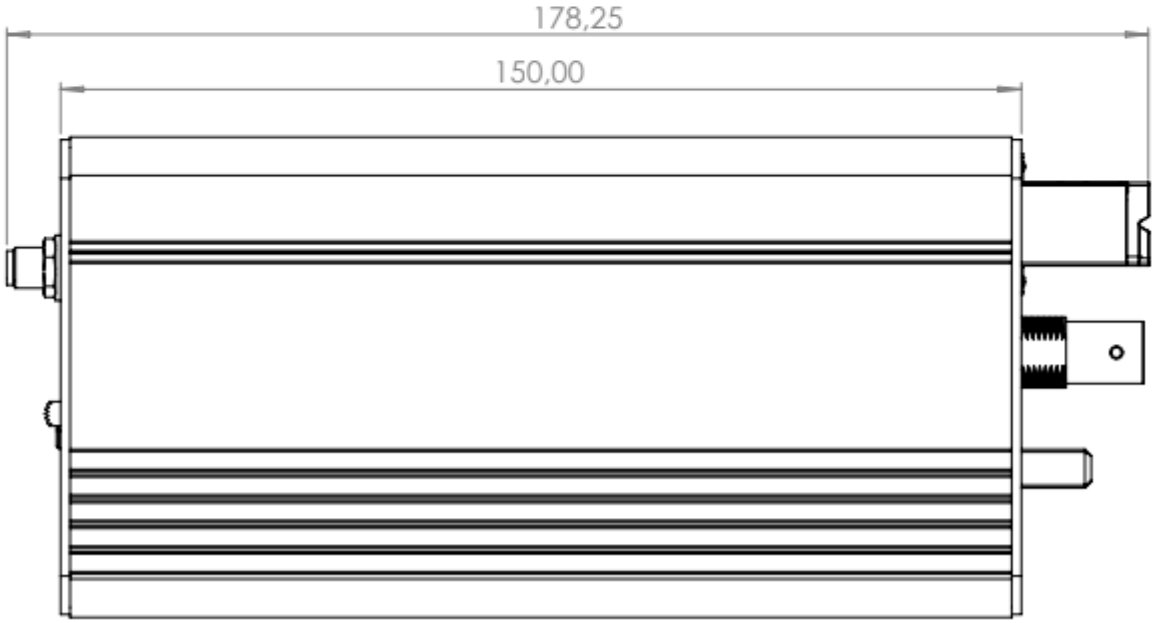
OPTICAL INPUT	Number of Channels	8 Independent Channels
	Connector Type	E2000/APC (LSH)
	Sensor Compatibility	Evotis, Alpheus & more
	Light Source	1310 nm (Integrated)
	Measuring Range	30 µW
MEASUREMENT PERFORMANCE	Bandwidth (-3dB)	3 MHz
	Low Noise Bandwidth	300 kHz
	High-pass Frequency	DC output / 100Hz AC output
ANALOG OUTPUT	Connector Type	BNC
	Output Impedance	50 Ohm
	AC Voltage Output	AC ± 1.65 V
	DC Voltage Output	DC 0 - 4.5 V
POWER SUPPLY	Input Voltage	5 V
	Rated Power	2Watt
	Supply Connector	USB Type C
ENVIRONMENTAL	Operating Temperature	0 to 70° C
	Storage Temperature	-10 to 70° C
	Enclosure Rating	Indoor / Laboratory Use IP20
	Size	244x89x178mm
	Weight	1760g
LASER SAFETY	Laser class	Class I




8
7
6
5
DC out
0-4.5V
4
3
2
1
Jack
3.5
USB-C
ON
OFF


244,00
89,00
Sensor
Statut
1
5


169,80


178,25
150,00