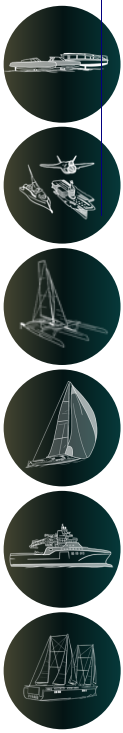
EXOCET FO Interrogator

LUNA TECHNOLOGY BY PIXEL SUR MER

DIVE INTO THE HEART OF STRUCTURES

The Exocet FO interrogator is a key component of our structural monitoring solution based on fiber optic Bragg grating networks. Custom-designed, it combines precision, reliability, and robustness to support your projects in the most demanding environments.
The result of engineering dedicated to performance and efficiency, this Exocet meets the specific needs of the most advanced markets, where lightness, low power consumption, and resistance to extreme conditions are essential requirements.



MAIN FEATURES

TRANSMITTER
of a light source

CONVERTER
of signal

ANALYZER
of spectrum

THE EXOCET INTERROGATOR OFFER

Interrogateur EXOCET SBI 155 - 1460 - 1620 nm

Delivered with:

- Enlight user software
- A carry waterproof case
- Ethernet cable and power supply
- User guide and Quick Start manual

OPTIONAL COMPLEMENTARY PRODUCTS

- Exocet Blue
- Exocet Voice

OPTIONAL COMPLEMENTARY SERVICES

- Feasibility study
- Custom solution architecture
- Implementation and deployment of the FO solution

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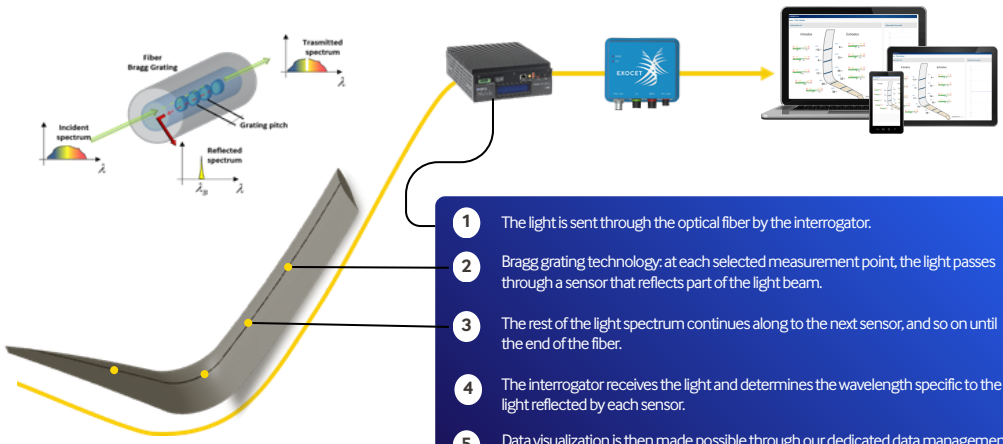
HOW DOES IT WORK ?



1. The light is sent through the optical fiber by the interrogator.
2. Bragg grating technology: at each selected measurement point, the light passes through a sensor that reflects part of the light beam.
3. The rest of the light spectrum continues along to the next sensor, and so on until the end of the fiber.
4. The interrogator receives the light and determines the wavelength specific to the light reflected by each sensor.
5. Data visualization is then made possible through our dedicated data management unit, the Exocet Blue.

WHY CHOOSE THE EXOCET INTERROGATOR ?

- **Power:** features the widest bandwidth on the market, allowing up to 100 strain measurement points distributed across 4 interrogation channels.
- **Robustness:** proven performance during sea measurement campaigns on fast-response RIBs, as well as in offshore racing competitions (Vendée Globe, Route du Rhum, Arkea Ultim Challenge).
- **Lightweight:** a compact interrogator with a corrosion-resistant aluminum housing.
- **Energy efficiency:** low power consumption per measurement point.

SPECIFICATIONS

TECHNICAL SPECIFICATIONS

- Number of channels: 4 channels
- Spectral range: 1460–1620 nm
- Wavelength resolution: 1 pm (≈1.2 με and ≈0.1°C)
- Sampling frequency: up to 100 Hz
- Optical connector type: LC-APC
- Average number of sensors per channel: 20 FBGs
- Acquisition connection type: Ethernet (TCP/IP protocol)

OPERATING CONDITIONS

- Temperature: -20 to 60°C
- Maximum humidity rate: 80%

MECHANICAL SPECIFICATIONS

- Dimensions: 290 × 210 × 80 mm
- Weight: 2.48 kg

ALIMENTATION

- Power supply voltage: 9–36 VDC
- Power consumption: average 20 W

APPLICATIONS

- **MEASURE** strain and temperature directly on your composite or metallic structure.
- **VALIDATE** the manufacturing process and detect early deviations.
- **RECALIBRATE** your numerical models dedicated to structural sizing.
- **MONITOR** in-service loads, prevent failures and optimize maintenance intervals.
- **INTEGRATED** with onboard monitoring or alarm systems, it enables early detection of structural stress and help prevent critical failures.

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