

UNDERWATER ACOUSTICS

DORI underwater acoustic recorder

A range of high-performance autonomous underwater acoustic recorders

High acoustic performance, large storage capacity and low power are the three key words of the Abyssens **DORI** range. With more than 110 dB of dynamic range, listening up to 200 kHz and up to 16 TB of storage, there is a model for every need: occasional short listening or long-term monitoring, coastal or deep sea, at an optimised price.

The whole underwater soundscape at your doorstep: two frequency ranges cover biological sounds, from snapping shrimps to the vocalisations of marine mammals, as well as human sounds, from ship-radiated noise to offshore works. Thanks to a self-noise below sea state zero and a high dynamic range, ambient noise can be monitored together with high-level sources.

KEY FEATURES

- 01 High dynamic range:** 110 dB
- 02 Raw data:** .wav files on 24 bits
- 03 Wide band:** hearing frequency up to 200 kHz
- 04 High capacity:** storage up to 16 TB
- 05 Very low self-noise:** below sea state zero
- 06 Software settings:** configurable analog amplification gain and analog high-pass filter
- 07 Long-term deployments:** continuous recording up to 6.9 months
- 08 WiFi configuration:** without opening the recorder
- 09 Clean and secure access:** to SD cards and energy, without contact with the electronics
- 10 Remote update:** of the recorder software



DORI recorder with mooring brackets

PURCHASE INCLUDES

- Hydrophone
- One set of alkaline cells, or rechargeable battery with charger
- Storage (micro SD cards)
- Pressure relief valve
- DaViS software
- Accessory kit

Options: remote hydrophone, temperature sensor, protective cage, mooring brackets, transport case, vacuum kit.

DORI ACOUSTIC RECORDER

A modular range

4

models: XS, S, M, L

3

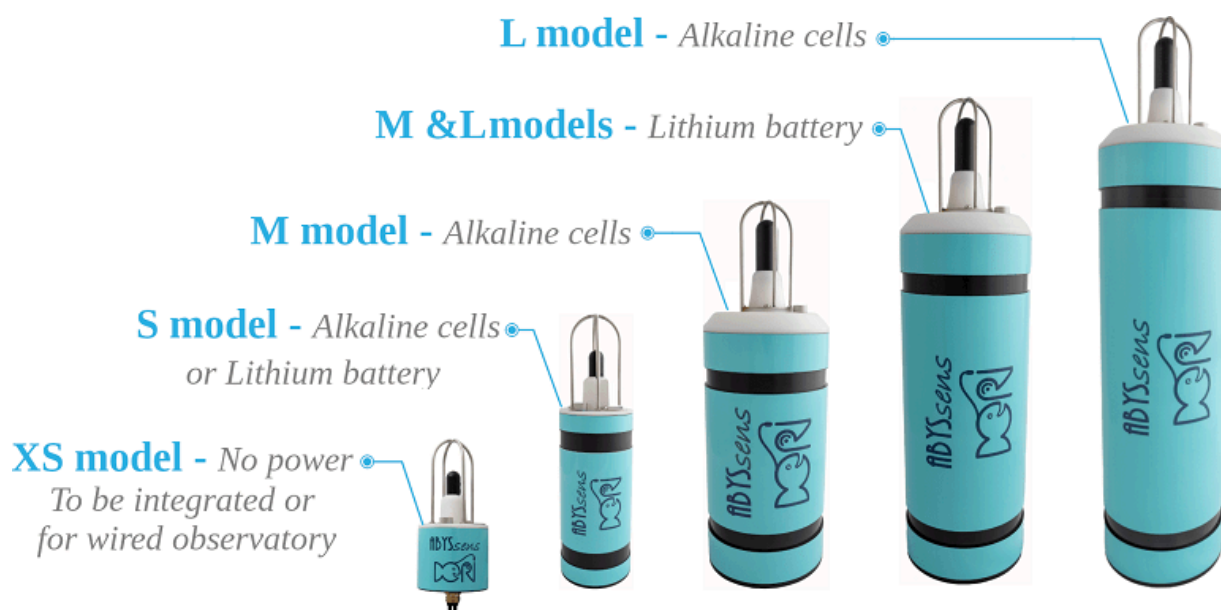
power approaches

2

frequency versions

2

options: remote
hydrophone, temperature



CHOOSING YOUR MODEL

Model: XS, S, M or L

Reflects the autonomy of the device, in line with the available energy and the maximum storage capacity: S for short deployments (15 days), M for medium deployments (3 months), L for long deployments (6 months).

Internal power: b or c

Air-transportable rechargeable lithium battery (b) or alkaline C and D cells (c).

XS version

Powered by an external source, with no internal battery. Very compact, it is designed to be integrated aboard ROVs, AUVs or gliders, or used as a wired observatory (cable on request).

Frequency range

LF: HTI-96-MIN low-noise hydrophone, 2 Hz – 30 kHz. HF: HTI-99-UHF hydrophone, 2 Hz – 250 kHz, allowing click detection from marine mammals including the harbour porpoise.

EASY, EFFICIENT, RELIABLE

Clean and safe access

The opening gives protected access to the SD cards and to the battery or cells, without any contact with the electronics: fast changes on the boat and direct download at your computer's maximum speed.

Safe design

Pressure relief valve on all systems; optional vacuum kit to test watertightness before deployment.

No cables, no magnets

Field configuration over WiFi from a smartphone or laptop. To start, turn the selector to the record position: the last configuration is launched automatically.

DaViS software

Post-processing visualisation: spectrogram, Sound Pressure Level (SPL) over time, power spectral density, third-octave band levels and audio listening. Free, for Windows, supplied with every recorder.

DORI ACOUSTIC RECORDER

Technical specifications

	XS	S	M	L
Reference (base)	DORI_recorder_XS	DORI_recorder_Sb DORI_recorder_Sc	DORI_recorder_Mb DORI_recorder_Mc	DORI_recorder_Lb DORI_recorder_Lc
ACOUSTICS				
ADC	24 bits			
Dynamic range	110 dB			
Analog high-pass filter	10 Hz or 370 Hz (software configurable)			
Analog amplification gain	0 dB or 12 dB (software configurable)			
Sampling rates	LF: 31.25 / 62.5 / 125 kSps HF: 31.25 / 62.5 / 125 / 250 / 360.36 / 400 kSps			
RTC accuracy	1 ppm			
HYDROPHONE				
Low frequency [LF]	HTI-96-MIN low noise · analog bandwidth 2 Hz – 30 kHz			
High frequency [HF]	HTI-99-UHF low noise · analog bandwidth 2 Hz – 250 kHz			
Sensitivity (LF & HF)	Standard: –185 dB re 1 V/μPa, other on request			
USER CONFIGURATION				
Recording mode	Continuous or duty cycling			
Scheduled mode	Immediate or scheduled start			
Storage	Raw data (.wav) with selectable file duration			
Configuration	WiFi, without opening the recorder			
MEMORY (INTERNAL MICRO SD CARDS)				
Maximum storage	4 TB		10 TB [HF] 4 TB [LF]	16 TB [HF] 10 TB [LF]
POWER				
Internal power	None, external power only	Rechargeable lithium battery or 10 alkaline C cells	Rechargeable lithium battery or 24 alkaline D cells	Rechargeable lithium battery or 48 alkaline D cells
AUTONOMY FOR CONTINUOUS RECORDING				
Battery version	–	11 days	2.9 months	5.6 months
Alkaline cells version	–	17 days	3.4 months	6.9 months
Details	See the Abyssens online configurator or the autonomy tab of each product			

DORI ACOUSTIC RECORDER

Technical specifications (continued)

	XS	S	M	L
MECHANICAL				
Diameter	90 mm		145 mm	
Length LF*	150 mm (without connector)	277 mm	Battery: 490 mm Cells: 392 mm	Battery: 490 mm Cells: 576 mm
Battery version weight	0.7 kg	1.5 kg	6.5 kg	9.0 kg
Cells version weight (with cells)	–	1.9 kg	7.1 kg	12.0 kg
Pressure relief valve	Included			
Maximum operating depth	300 m		250 m	
AVAILABLE OPTIONS				
Hydrophone connection	Integrated, or remote with SubConn connector			
Temperature sensor	Accuracy: ±0.1 °C (between –5 and 50 °C)			
Protective cage	Hydrophone shock protection; increases the LF length by 45 mm			
Mooring brackets	Allow insertion into a mooring line			
Transport case	414 × 345 × 174 mm		Cells: 502 × 415 × 246 mm Battery: 687 × 528 × 276 mm	687 × 528 × 276 mm
Vacuum kit	Compatible with all DORI recorders; allows a watertightness test			

* Length with integrated LF hydrophone; HF: +23 mm; remote hydrophone: –42 mm. The XS model has no internal battery: 0.7 kg in all cases.



Transport case



Remote hydrophone option



Start selector and cage

Recorders designed and manufactured by Abyssens. Specifications may change; contact EquipOcean for the configuration suited to your project.