

MARPORT SEINE SENSORS

QUICK REFERENCE GUIDE

Purpose



The Seine sensor is mounted on the lead line of a purse seine in a robust protective steel case. It relays data back to the wheelhouse from the moment the purse seine is shot away and during the fishing operation. It has an omnidirectional uplink signal, which ensures that there is no loss of signal during the fishing operation.

There are different Seine sensors:

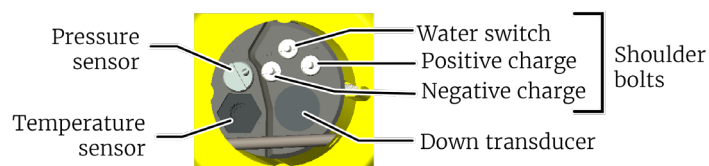
- Seine sensor with depth.
- Seine sensor with depth and temperature.
- Seine sensor with depth, height and temperature.
- Seine Explorer with depth, height, temperature and echogram.

During the shot, depending on your type of Seine sensor, you can see the depth of water above the lead line, the distance from the lead line to the seabed (height) and an echogram of the area below the lead line. On the last models, there is also an echogram of the contents of the purse seine during its descent. Measuring the depth at rapid time intervals provides the user with an accurate descent rate of the lead line.

When purse seining in shallow water, Marport's Seine sensors are essential to ensure the gear is kept at a safe distance from the seabed. This way, you can avoid damage to the gear.

Seine sensors with depth and options can send depth and temperature data to a Scanmar system. There is also a version of Seine sensors with depth and temperature that is compatible with Simrad PI systems.

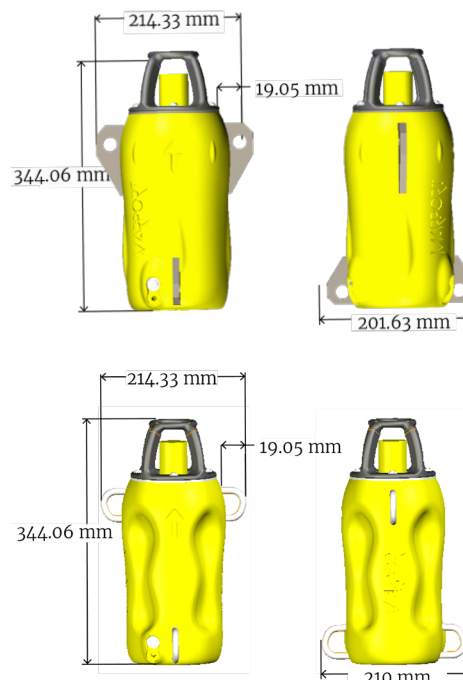
Main Parts



⚠ Caution:

- Do not insert foreign objects into pressure sensor opening or try to open it.
- Do not remove the shoulder bolts from the outside of the sensor. It may damage the components.

Dimensions



Firmware

- **Seine sensor with depth:** Depth FIRM010
- **Seine sensor with depth and temperature:** Depth FIRM011
- **Seine sensor with depth, height and temperature:** Height FIRM020
- **Seine Explorer with depth, height, temperature, battery and echogram:**

Name of firmware	NBTE V2	NBTE V3
Number of firmware	FIRM126	FIRM128
Autorange feature	yes	yes
Target strength on echograms	no	yes

Beamwidth

Beamwidth for uplink pings is omnidirectional.

Beamwidths for down pings:

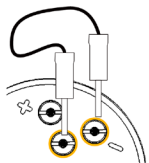
Beamwidth	@ 125 kHz	@ 160 kHz	@ 200 kHz
-3dB	26°	24°	22°

Beamwidth for side pings (if applicable):

@360 kHz	
-3dB	-13°

Sensor Configuration

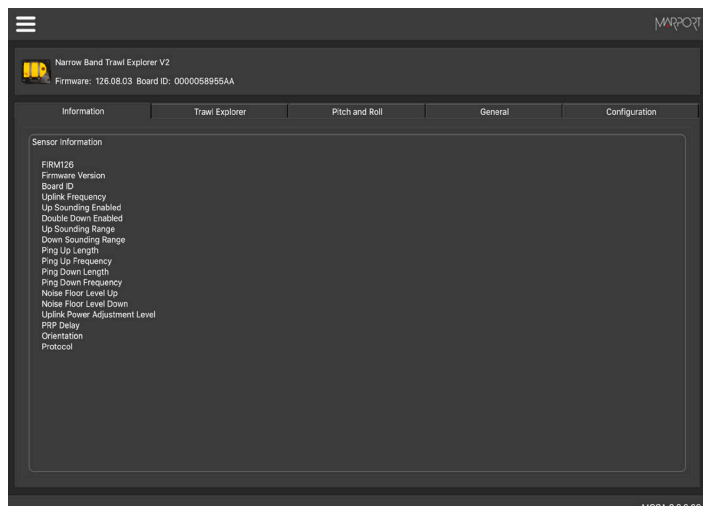
Sensors can be fully configured from the vessel or from the office with Marport Mosa2 configuring tool, using a wireless connection or the Configuration Cable product on any Mac Os device.



Wireless connection: to activate the sensor outside sea water, use a jumper to connect and disconnect the negative charge and the water switch.



- With Mosa2 configuring tool, you can:
- Configure all settings for your sensor
 - Export the sensor settings



Note: Only advanced users or Marport technicians should configure the sensor. For further information, refer to Seine sensor user guide.

System Configuration

Firmware		Mx version	Scala version
Seine sensor with depth (FIRM010)		all	all
Seine sensor with depth and temp (FIRM011)		all	all
Seine sensor with depth, height and temp (FIRM020)		04.02.02 and later	01.04.05 and later
Seine Explorer	NBTE V2 (FIRM126)	03.01.23 and later	all
	NBTE V3 (FIRM128)	04.02.28 and later	01.02.05 and later



Add your Seine sensor to the receiver with Marport Scala2 software.

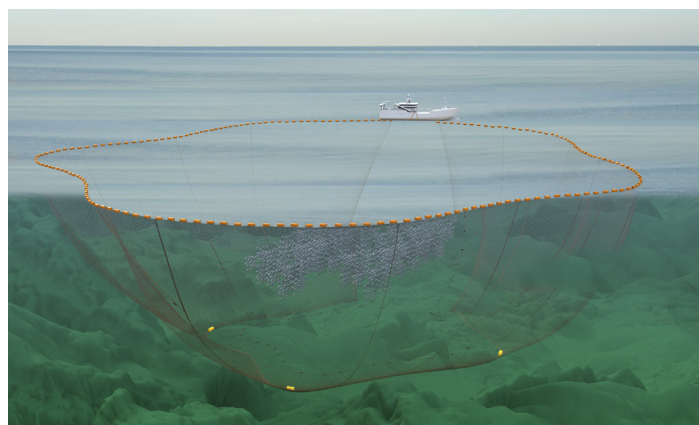
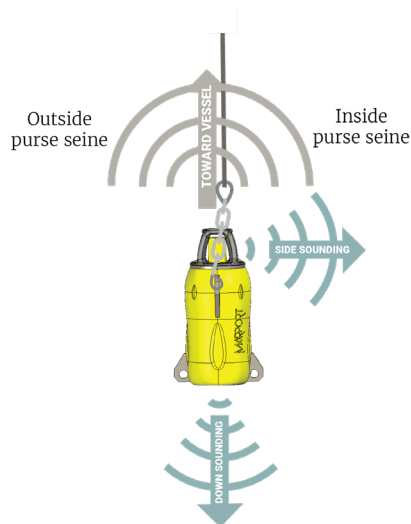
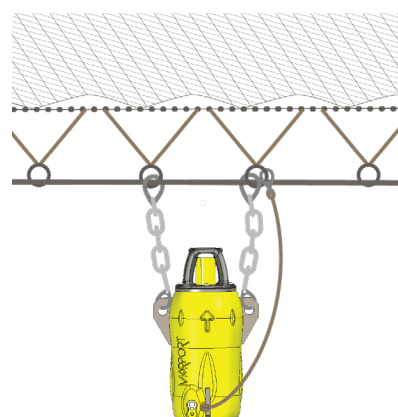
When adding the sensor to the receiver:

- Make sure that your sensor configuration (Mosa2) and receiver configuration (Scala2) are identical, especially the uplink frequency of the sensor.
- Make sure there is enough distance between the sensor frequency and other sensor frequencies.

For further information, refer to Seine sensor user guide.

Installing

1. Attach two separate chains on the 2 front attachment lugs of the sensor using snap hooks.
2. Attach the chains to the lead line with one snap hook. The yellow transducer must points toward the surface when purse seining and the bottom of the sensor must hang freely to be always aligned with the seabed.
3. Attach a safety wire from one back attachment lug to a pursing ring (not on the lead line).
4. Ideally, you can place three sensors at different locations on the lead line of the purse seine: one on a quarter of the length, one in the middle and one on three-quarters of the length.
5. If the net stays on the deck for a long time after hauling, dry the end cap of the sensor to make sure it does not continue to operate.



Display

Sensor data such as echogram, depth, temperature, are displayed on Scal2 software.

You can customize their display types:

- Text
- History Plot
- Dial
- Gauge

Seine sensors have different features to help you monitor your purse seine. These features depend on your type of sensor and version.

Seine sensor with depth and other options

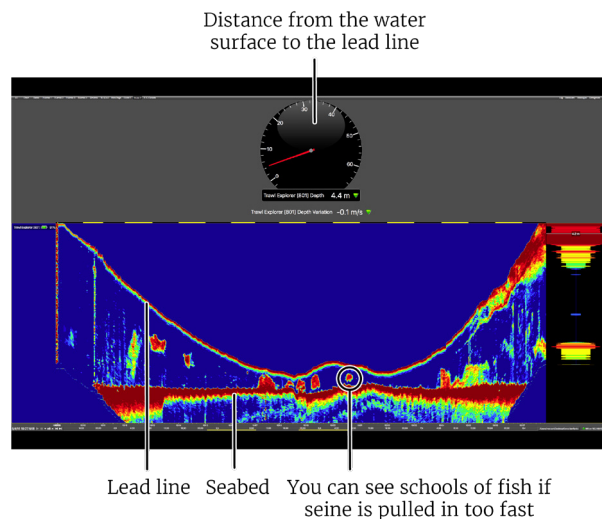
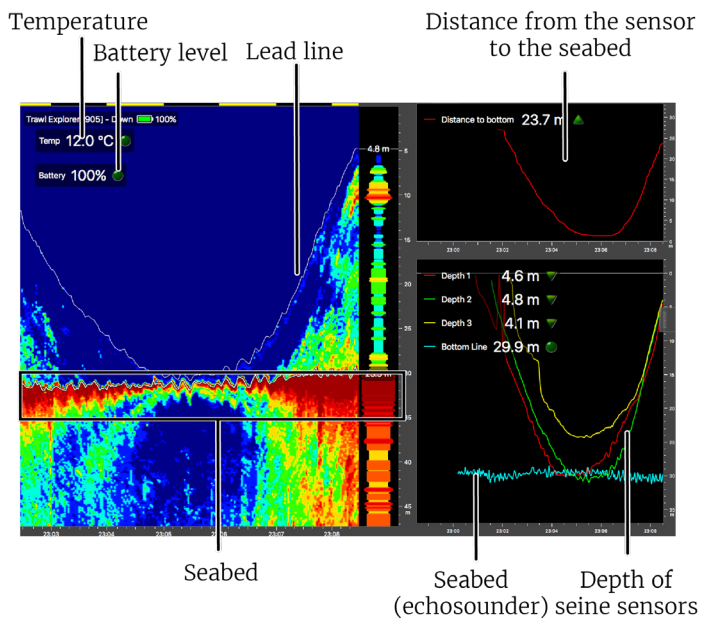
- **Depth:** Distance from the lead line to the water surface.
- **Height:** Distance from the lead line to the seabed.
- **Temperature**

Seine Explorer

- **Target strength:** (V3) Target strength of individual targets is displayed on the echogram when you hover over it with your mouse. It helps you identify fish.
- **Autorange:** The range of the sounding can adapt automatically to the bottom detected. This enables you to have better echogram image quality when the lead line is close to the bottom, because the range will become smaller (the smaller the range, the better the image quality).
- **TVG:** Pings sent by the sensor are attenuated in the water. It means the deeper the target is, the more attenuated signals will be received and sent back. TVG (time variable gain) is here to compensate this effect by using a lower gain level when signals travel toward a target at a small distance and higher gain level when signals travel toward deeper targets. The end result is to compensate sounding attenuation and therefore to show a same target strength for a same target at different depths.

For a Seine Explorer, it is recommended to set TVG at 20 log for better target strength values of the bottom and schools of fish.

Below are examples of data displayed by Seine sensors.



On this picture, you can see rate of descent of the lead line.

Sensor Daily Use



The sensor automatically starts when in sea water. It switches to wireless connection mode when out of water. When in wireless mode, the sensor turns off after 10 minutes if there is no user action.



Rinse the sensor with fresh water between uses, especially the negative, positive charges and water switch (see illustration p.1). You can do it when the sensor is in running mode out of water. Dry the charging bolt afterwards.



The operational life time can be approximately up to 45 hours for a Seine Explorer and 744 hours for a Seine sensor, depending on the power settings and options.

Seine sensors have Lithium-Ion batteries. Charge them with Marport Basic Sensor Charger or Multi-Charger.

Maintenance

External

- Check that all attachment equipment are not worn or torn. Replace when appropriate.
- Make sure that the sensor is clean. Remove debris with a piece of wood or screwdriver. Wash away mud or debris with warm water but do not use highly abrasive materials.

⚠ Be careful with the sensor. Sensors and components are sensitive to mechanical shocks and contamination.

Internal

Only an approved Marport dealer can access the internal unit. Warranty will become void if anyone other than an approved dealer tries to do internal maintenance duties on sensors.

Dealers, please refer to Seine sensor service manual for more detailed maintenance instructions.

Marport recommends you to return sensors to an approved Marport dealer every 2 years for maintenance.

⚠ To ensure proper and safe use of this equipment, carefully read and follow the instructions in the Seine sensor user guide.

Offices

France

Marport France SAS
8, rue Maurice Le Léon
56100 Lorient, France
supportfrance@marport.com

Iceland

Marport EHF
Tónahvarf 7
203 Kopavogur, Iceland
supporticeland@marport.com

Norway

Marport Norge A/S
Breivika Industrivei 69,
6018 Ålesund, Norway
supportnorge@marport.com

South Africa

Marport South Africa
Cape Town, Western Cape,
11 Paarden Eiland Road,
Paarden Eiland, 7405
csanter@marport.com

United Kingdom

Marport UK Ltd
32 Wilson Street
Peterhead, AB42 1UD, United Kingdom
gyoungson@marport.com

USA

Marport Americas Inc. USA
12123 Harbour Reach Drive
Mukilteo, WA 98275 USA
supportusa@marport.com

Spain

Marport Spain SRL
Camino Chouzo 1
36208 Vigo (Pontevedra) Spain
supportspain@marport.com

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