

Datasheet

Modem 6 Sub-Mini (Subsea)



The Modem 6 range, based on existing 6G® equipment, provides a reliable and cost-effective method of wirelessly transferring underwater sensor data in real-time.

The Modem 6 Sub-Mini is a compact and easy-to-mount instrument, suitable for transmission of data from a wide range of sensors including: current profilers, temperatures, depth and custom instrumentation.

Type 8377-1111 is depth rated to 1,000 m and has an omni-directional transducer designed for excellent horizontal and shallow water communication.

Type 8377-4112 is depth rated to 4,000 m and has a directional transducer.

Modem 6 is a flexible range of instruments, supporting specific communication settings for a variety of link types such as low latency data, fire and forget, acknowledged and large data uploads. A 512 kB modem buffer stores data when a modem link is not active.

All Modem 6 products utilise Sonardyne Wideband® signal processing and standard 6G control language. They can be programmed using the supplied software and a serial link or any third-party terminal software.

This technology is field proven and provides unprecedented levels of robustness and flexibility in challenging acoustic environments.

Data transfer rates range from 9,000 down to 200 bps depending on the environment.

Advanced communication protocols and intelligent data packet stitching ensure latency is minimised and data is delivered error free.

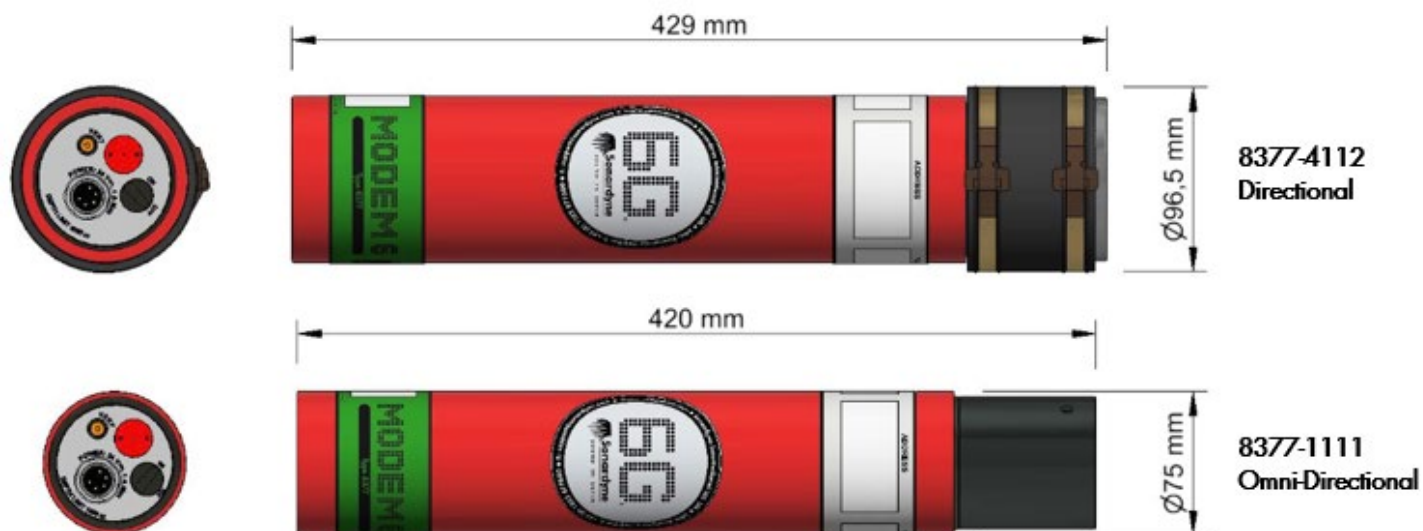
For safety, a pressure relief valve is incorporated, and an external on/off switch saves the rechargeable battery when not in use.

Key Features

- Sonardyne Wideband telemetry provides up to 9,000 bps actual acoustic data rate
- Compatible with all Modem 6 instruments
- Full two-way Sonardyne Wideband 2 interrogation and reply – Mitigates interference and multi-path issues
- Incorporates field proven communication technology used within critical subsea applications
- More than 500 unique Sonardyne addresses
- Robust performance in noisy and reverberant environments
- Rechargeable NiMH battery
- External on/off switch for saving battery when not in use
- Rugged, easy to mount housing

Specifications

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Feature	Type 8377-1111	Type 8377-4112
Depth Rating	1,000 m	4,000 m
Operating Frequency	MF (21–32.5 kHz)	MF (21–32.5 kHz)
Transceiver Beam Shape	Omni-directional	Directional
Data Rate (Maximum)	9,000 bps	9,000 bps
Serial Port (RS232)	2,400–115,200 baud	2,400–115,200 baud
Data Buffer/Storage	512 kB	512 kB
Range ¹	1–1.5 km	3–4 km
Transmit Source Level (dB re. 1 μ Pa @ 1 m)	181 dB	187 dB
Receive Sensitivity (dB re 1 μ Pa)	<85 dB	<80 dB
Power Supply	Rechargeable NiMH battery or external 24 V	Rechargeable NiMH battery or external 24 V
Battery Charge (0-100%)	5 hours	5 hours
Quiescent Life (Battery)	>35 days	>35 days
Connector 5-Way (Standard)	Subconn MCBH5M	Subconn MCBH5M
Mechanical Construction	Anodised aluminium alloy	Anodised aluminium alloy
Operating Temperature	-5 to 40°C	-5 to 40°C
Storage Temperature	-20 to 55°C	-20 to 55°C
Dimensions (Length x Diameter)	420 x 75 mm	429 x 97 mm
Weight in Air/Water ²	3.2/1.3 kg	5.5/3.2 kg
Battery Charger	8370-011-01	8370-011-01

Pin	Description
1	RS232 comms in (RX)
2	0 V
3	RS232 comms out (TX)
4	External power 24 V
5	n/a

¹ Depends on ambient noise level and ray bending due to SVP.

² Estimated weights.