

## Preliminary Datasheet

### Modem 6 Standard



#### Description

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

The Type 8307 Modem 6 Standard is a subsurface deployed instrument suitable for transmitting data from a wide range of sensors including: current profilers, temperatures, depth and custom instrumentation.

The Type 8307 is based on the field proven mechanics of Compatt 6. The large capacity battery allows the modem to be deployed for long periods.

Battery power can be routed externally to power external devices.

The modem is supplied with a 5,000 m depth rating as standard in hard anodised aluminium alloy with protective polyurethane sleeve.

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

For users wishing to integrate Modem 6 into their own instrument package, a selection of OEM kits (PCB and remote transducer) are available.

The 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, question & answer 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.

This technology is field proven and provides unprecedented levels of

robustness and flexibility in challenging acoustic environments. Advanced communication protocols and intelligent data packet stitching ensure latency is minimised and data is delivered error free.

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

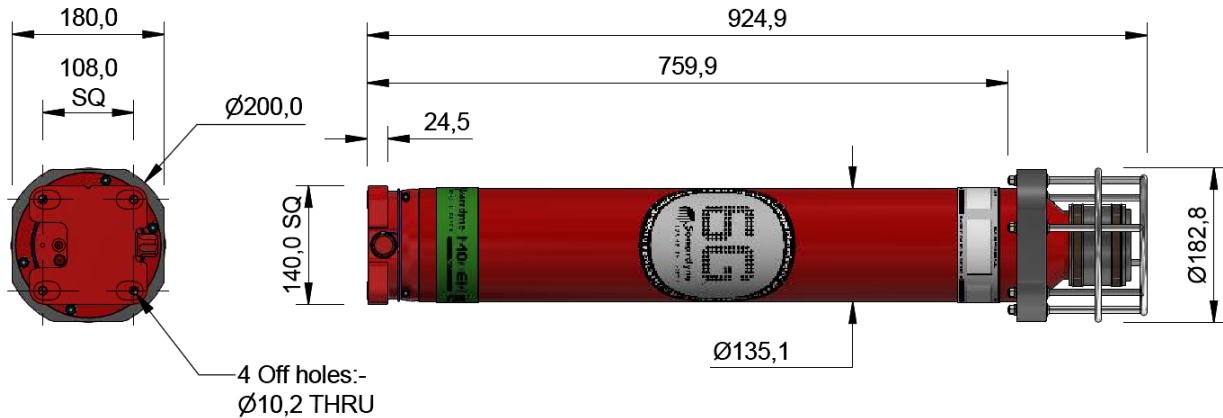
With the capability to achieve ranges in excess of 5 km, greater distances are also possible (20+ km) using Sonardyne's repeater functionality.

#### Key Features

- Sonardyne Wideband® telemetry provides up to 9,000 bps true user 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
- Power output to external device controlled by acoustic command
- Optional RS485 connectivity
- Upgradeable to full Compatt 6 functionality

# Preliminary Specifications

## Modem 6 Standard



5,000 MF directional (without release) shown (8307-5213)

Feature	Type 8307-3111	Type 8307-3113	Type 8307-3115	Type 8307-5213
Depth Rating	3,000 Metres	3,000 Metres	3,000 Metres	5,000 Metres
Operating Frequency	MF (21–32.5 kHz)	MF (21–32.5 kHz)	LMF (14–19 kHz)	MF (21–32.5 kHz)
Transducer Beam Shape	Omni-directional	Directional	Omni-directional	Directional
Transmit Source Level (dB re 1 µPa @ 1 m)	187–196 dB (4 levels)	190–202 dB (4 levels)	187–196 dB (4 levels)	190–202 dB (4 Levels)
Tone Equivalent Energy (TEE)*	193–202 dB	196–208 dB	193–202 dB	80–120 dB (7 Levels)
Receive Sensitivity (dB re 1 µPa)	90–120 dB (7 Levels)	80–120 dB (7 Levels)	80–120 dB (7 Levels)	80–120 dB (7 Levels)
Number of Unique Addresses	>500			
<b>Wideband 1 &amp; 2</b>				
Battery Life (Listening)	Alkaline	833		
	Lithium	1390		
External Power input	24 V			
Power for External Sensors	12 V			
Safe Working Load (4:1)	250 kg			
Operating Temperature	-5 to 40°C			
Storage Temperature	-20 to 55°C			
Maximum Dimensions (without release)	955 x 200 mm	925 x 200 mm	925 x 200 mm	925 x 200 mm
Length x Diameter				
Weight in Air/Water (Alkaline Battery)**	23.8/11.8 kg			

\*TEE – WBv2+ signals are 4x the duration of Sonardyne tone signals (WBv1 & WBv2 are 2x). The TEE figure shows the operational performance when comparing wideband and tone systems.

\*\*Estimated weights.