

LoRa Alliance™ Certified

Beach temperature buoy



What is LoRa/LoRaWAN?
LoRaWAN is a protocol and LoRa it's physical layer for Internet-of-Things, developed by the non-profit LoRa Alliance. The system enables open communication with thousands of units in the same network. The unique part is encrypted radio communication with extremely long range and battery lifetime, independant on mobile operators.
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PROPERTIES

- IP68 outdoor 20 year* fixed battery, submersible and strong
- 10-15km range *
- Includes up to 24 logged values in each telegram
- Certified LoRaWAN
- Configuration Over-The-Air after commissioning
- Supports both OTAA and ABP
- Suitable for outdoor use 0...+70 °C
- Wireless communication at 868 MHz

BENEFITS

- Can handle salt water, strong winds and strong UV-light
- Both for public or private networks
- Unsinkable (not filled with air)
- Activation with magnet - confirmed by LED
- Modbus-support (using Picogateway)
- AES128 encryption
- Servicefriendly (possible to open)
- Sturdy fixture for anchor line

TECHNICAL DATA

Area of use

The unsinkable beach temperature buoy sends telegrams over LoRaWAN. The timestamped telegrams include up to 24 temperatures. The buoy is suitable for both sweet and salt water and everywhere where the temperature is essential. Encryption in 2 steps using AES128. Certified LoRaWAN.

Plug & play-installation

An included sturdy shackle is fixed to the anchor line. The sensor is activated by a magnet (LED confirmation) and is fixed to the buoy. The lid is fixed with screws and the unit is ready to use. The sensor is measuring at 0.5m depth in the water. In the autumn, the buoy should be removed if there is risk of freezing. It can handle low temperatures but no ice.

Great programming possibilities

The unit can be programmed with any log period and any sending period with redundancy to the server (standard 30min values every 3 hours with redundancy).

Two way communication with possible Over-The-Air reprogramming. Encrypted in 2 steps with AES128. Certified LoRaWAN.

Network configuration

Supports LoRaWAN-standard (OTAA or ABP).

Standard LoRaWAN rejoin request.

Random delay of telegram to avoid collisions.

Advanced mechanisms for maximum send reliability.

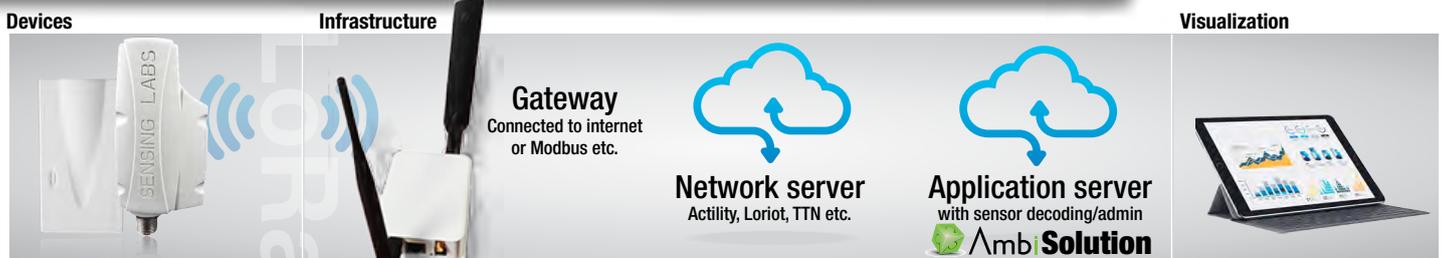
(redundancy and recreation of lost telegrams).

Data	AB1208 (IP68)
Length, Width, Height	700x140x140 mm
Weight	1 kg
Ambient temp	0...+70 °C
RF-sensitivity	-137 dBm
RF-power	+14 dBm (25 mW)
Radio frequency	868 MHz
EMC-directive	EN 301 489-3 v2.1.1, EN 301 489-1 v2.2.0
Radio-directive	EN 300220-2 v3.1.1
Magnetic field	EN 62479
Security directive	IEC 60950-1
Authentication alternative	OTAA (standard) optional ABP



Image: Launched active AB1208 Bath temp buoy

SYSTEM DESCRIPTION



AB1208 (IP68)

Battery lifetime (y)	10min	30min	1h	4h	12h	24h
SF7	17,7	>20	>20	>20	>20	>20
SF8	13,7	>20	>20	>20	>20	>20
SF9	9,5	17,6	>20	>20	>20	>20
SF10	6,0	12,9	18,2	>20	>20	>20
SF11	3,6	8,7	13,6	>20	>20	>20
SF12	2,1	5,5	9,3	19,4	>20	>20

Ambiductor focus on the following areas:

- Energy meters
- Water meters
- Oil meters and meters for industrial fluids
- Smart metering and data collection
- LoRa products

Ambiductor is an engineering company with many years of experience in measurement technology, automation and remote reading. With us, you experience a high level of service and a wide product range to solve all possible applications.

Notes:

Disclaimer!

"If there is any inconsistency between this version and the document in it's original language, the original document will prevail."

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