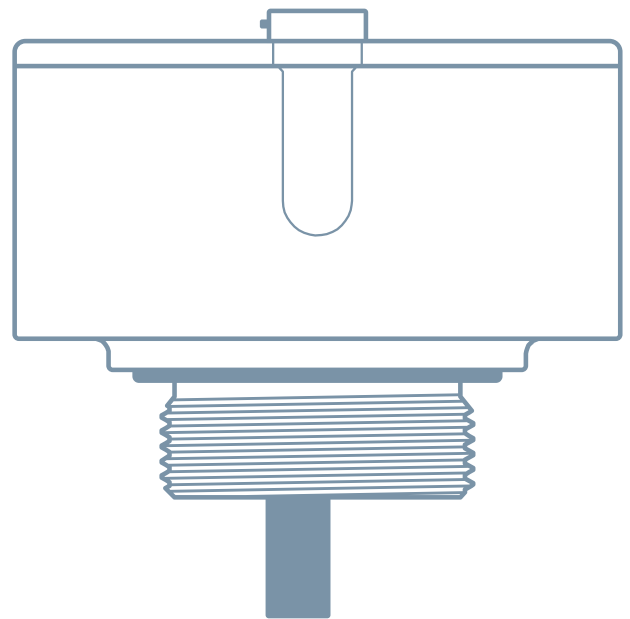
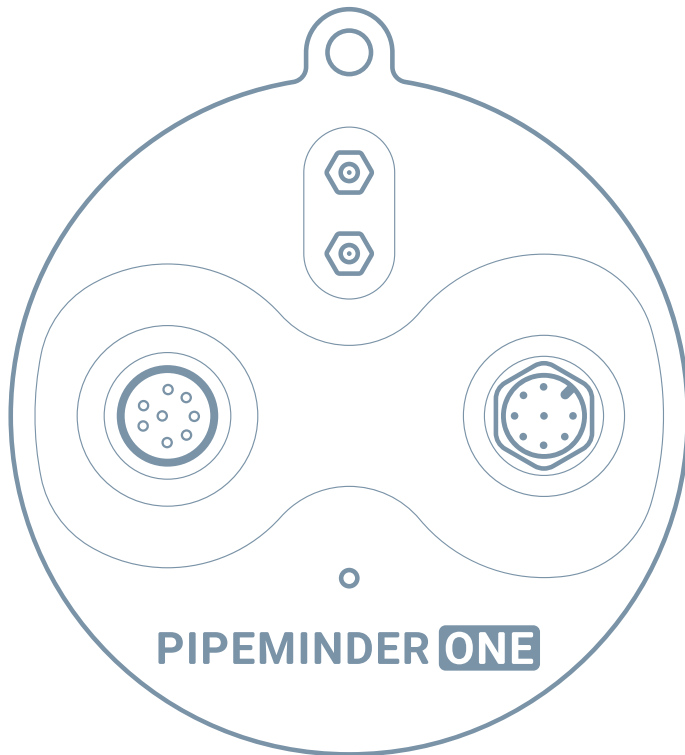


PIPEMINDER ONE

DEPLOYMENT GUIDE

(ACOUSTIC SENSOR VERSION)



DEPLOYMENT REQUIREMENTS

- **Pipeline Connection**

When installing the sensor head, care should be taken **not to damage** the protruding hydrophone. The required **adaptor must first be connected** to the pipeline, and the sensor head then connected to the adaptor. A **direct connection to the pipeline** is preferred, typically via a tapping saddle and gate valve. Alternatively connect via a short lateral, less than 5 meters in length, and 50mm or more in diameter.

- **Freezing Temperatures**

Deep pipelines / chambers are often found in regions where ground freezes to a significant depth. Avoid installing the device in a location where it may freeze, as **expansion of freezing water can damage the pressure sensor**.

- **Cellular Signal**

It is recommended to use a cellular signal tester to survey potential site locations prior to deployment. See the **cellular signal guide** for help troubleshooting signal issues.

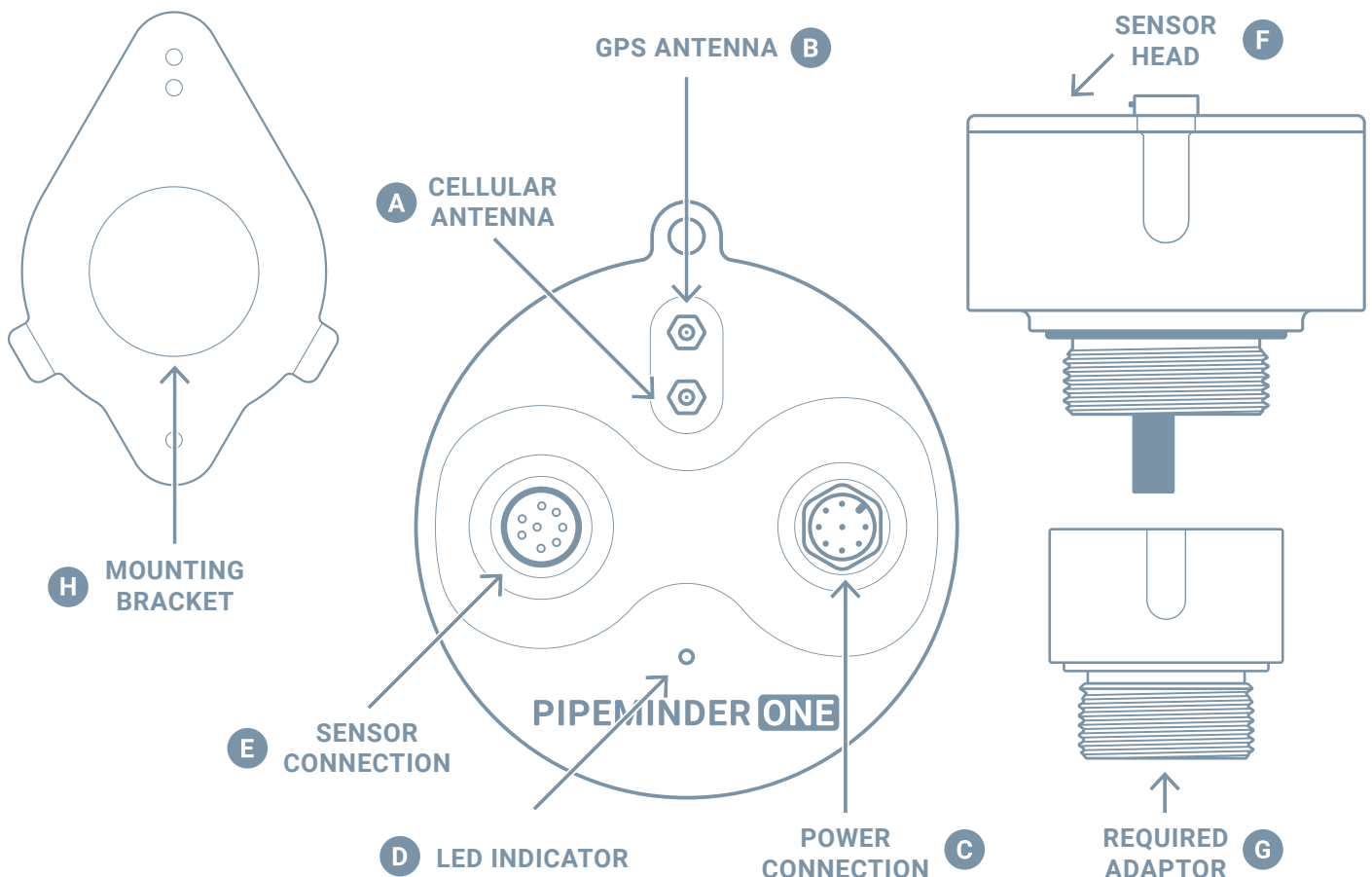
- **Safe Usage**

Please read all safety measures and instructions listed in the product manual.

Use only electrical attachments and accessories supplied by Syrinix.

Do not place devices, accessories or batteries on or near a heat source.

Apply care handling devices / batteries - if dropped or damaged please contact Syrinix.



DEPLOYMENT INSTRUCTIONS

1. Install the sensor head on the pipeline, using the required adaptor **F** **G**

Do NOT remove the protective cover or connect the sensor cable at this stage. Expel any trapped air using the bleed screw on the top of the sensor head.

2. Position the GPS antenna with a permanently clear view of the sky, then **B**
connect it to the GPS socket on the device

*Ensure the connections are **clean and dry** to avoid water damage.*

3. Connect the cellular antenna to the antenna socket **A**

*Ensure the connections are **clean and dry** to avoid water damage.*

4. Connect the battery / power source to the power socket **C**

*Ensure the connections are **clean and dry**.*

5. The LED light will flash orange until the device is ready to deploy

This could take up to 5 minutes – keep the device above ground at this stage.

6. Once ready the LED will turn a solid green colour, indicating a network connection has been established and the device is ready

*For the next 15 minutes, the LED will display **green** when connected to the cellular network, or **orange** if the network connection is lost. This feedback can help you to position the antenna and check the connection remains during chamber installation. For enhanced deployment and signal data view the device status on **RADAR**.*

During this time you should continue on with the final deployment steps.

*If **red LED flashes** are observed this may infer potential hardware / network faults.*

7. Connect the sensor cable to both the sensor head and the device **F** **E**

*The sensor **may** be disconnected / reconnected to the device as required.*

8. Secure the device in place using the supplied mounting bracket **H**

Fit the top and bottom screw holes before securing the device through the top loop.

9. After re-fitting any chamber lids / cases, it is recommended to check RADAR to ensure cellular connection hasn't been lost or blocked

*See the **cellular signal guide** for help troubleshooting signal issues.*

DEPLOYMENT LED STATUS **D**

Flashing Orange

Device is starting up, **keep above ground**

Solid Green

Device is **running and connected** to cellular network

Solid Orange

Device is running but cellular network **connection has been lost**

Flashing Red

Something is **wrong** with the device or network

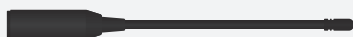
PIPEMINDER ONE CELLULAR SIGNAL GUIDE

Chamber and antenna selection can have an impact on a devices ability to achieve a reliable network connection. The following information should be considered when planning a deployment, or when struggling to achieve a network connection.

ANTENNA SELECTION

The antennas below are suitable for use with **PIPEMINDER-ONE** devices

Standard Omnidirectional



These antennas work well above ground or in chambers under composite / concrete lids. They can work under metal lids **if** the signal in the area is strong.

Magnetic Chamber



These are suitable for chambers where **signal is too weak** for a standard antenna or where **metal lids** are used. Magnetically mount to the top or underside of the chamber lid.

Blade



These work well in buildings or above ground but are generally **not** suitable for use in chambers. They include a **length of cable** so can be located further from the device.

CHAMBERS

- Good above ground signal is **required** for in-chamber signal to be achieved
- Concrete or composite lids allow better signal penetration
- Metal lids reduce the signal strength in the chamber - but **small holes** (>25mm diameter), normally found for lifting handles, can help with signal penetration
- Position antennas towards the top of the chamber, **around 100mm** from the underside of the lid - where possible, position **near any holes** in the chamber lid
- **Avoid** placing antennas within close proximity of **large objects** that may interfere with the signal
- The standard omnidirectional antenna is sensitive to the sides (**not the top**) so positioning it **horizontally** usually provides better results

