

PIPEMINDER ONE

DEPLOYMENT GUIDE

(STANDARD VERSION)



Syrinix
A Badger Meter® Brand

DEPLOYMENT REQUIREMENTS

- **Pipeline Connection**

The pressure connection between the device and pipe should be kept to a minimum distance. A **single, short, flexible** hose can be used (**0.5m max**) but **do not** connect multiple hoses in series, as long distances of narrow tubing can attenuate transient events present in the pipe.

- **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.

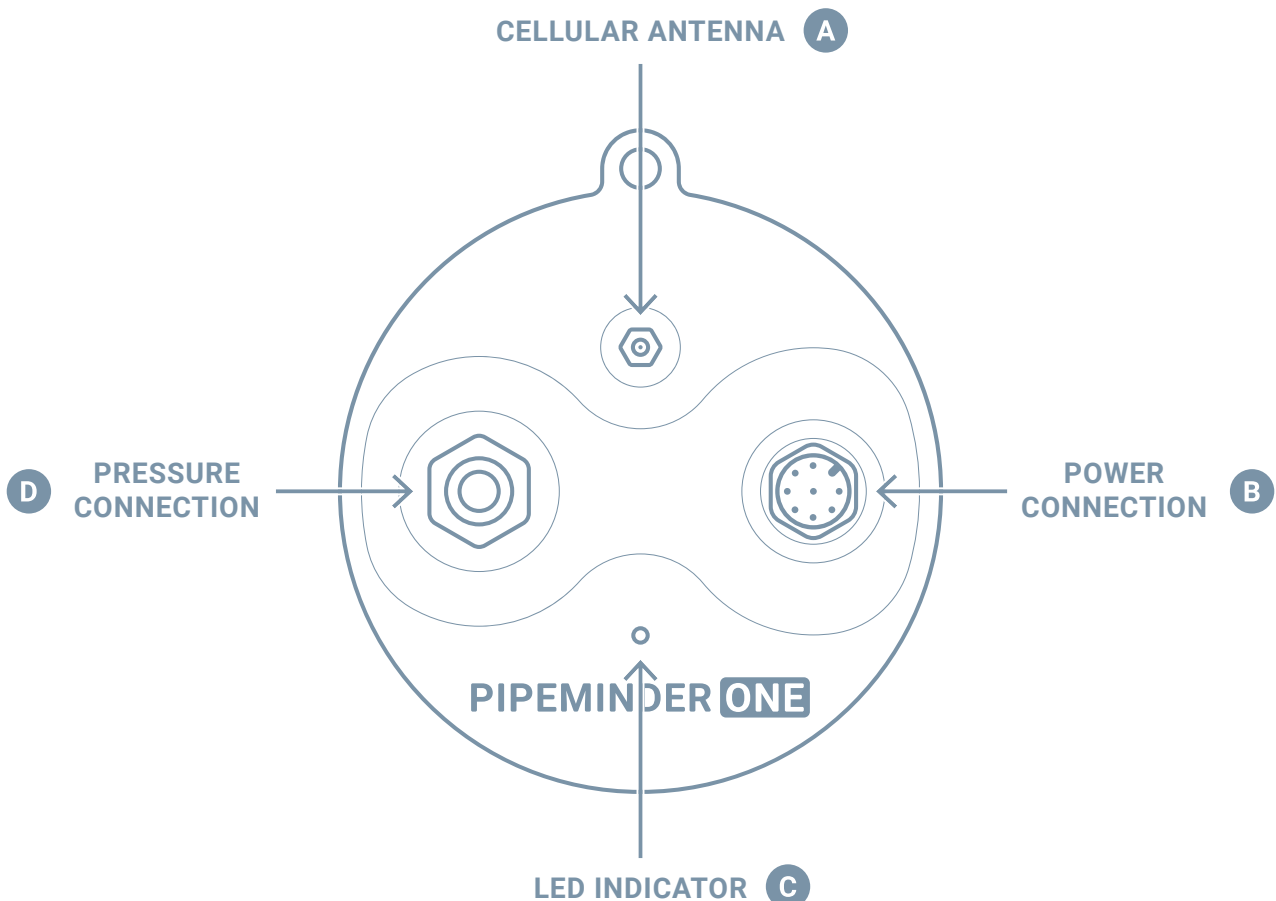
- **Safe Usage**

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. **Position the device with its connections facing up, with clear view of sky**
2. **Connect the cellular antenna to the antenna socket** **A**
*Ensure the connections are **clean and dry** to avoid water damage.*
3. **Connect the battery / power source to the power socket** **B**
*Ensure the connections are **clean and dry**.*
4. **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.*
5. **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.*
6. **Connect the pressure port to the pipe – use the coiled hose where required** **D**
*Ensure that **all air is expelled** by partially inserting the device fitting into the hose fitting - positioned with the male connector pointing up - and slightly opening the pipe valve to allow some flow. Once all air is expelled, complete the connection.*
7. **Where required hang the device and any batteries by their cords**
Devices can also be secured using optional mounting brackets.
8. **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 **C**

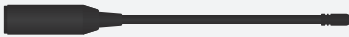
Flashing Orange	Device is starting up, keep above ground
Solid Green	Device is running and connected to cellular network
Solid Orange	Device is running but cellular network connection has been lost
Flashing Red	Something is wrong with the device or network

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

