

Mounting Options for the pHionics D-phi Series™



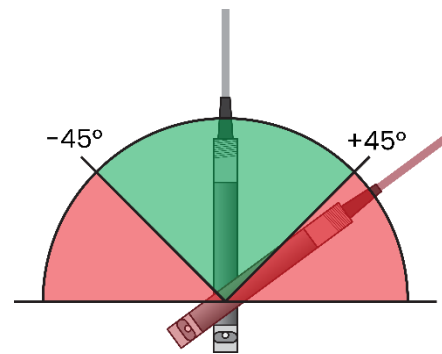
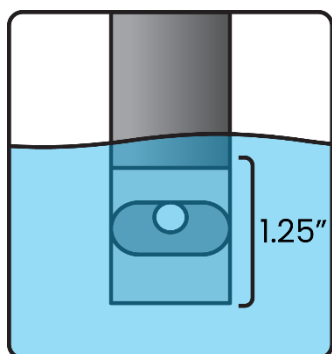
There are many options available to mount D-phi (pronounced “d-fi” or “diffy”) Series pH/ORP sensors due to their built-in mounting threads, durable housing, and Kevlar-reinforced cable. This document covers a few of the most common methods. If you have any questions about mounting methods for your application, please reach out to pHionics customer service at support@phionics.com.

Mounting Considerations

- Select the proper D-phi Series model for your application:
 - The **D-phi-s** is for submersion or standpipe mounting with a ¾” NPT thread and straight strain relief connector on the cable end.
 - The **D-phi-i** is for inline mounting with a 1” NPT thread and a 90° cable strain relief connector on the cable end.
- Max temperature of 155°F (70°C)
- Max pressure of 100 psi

Special precautions must be taken for applications involving high temperatures and pressures. It is the user’s responsibility to understand and avoid potential hazards when dealing with these types of applications.

- Pipes should be 1 ½” or larger to provide sufficient flow around the sensor.
- Mounting angle of -45° to +45° from vertical (see lower right diagram)
- Sample must contact housing (1.25” submersion depth minimum)

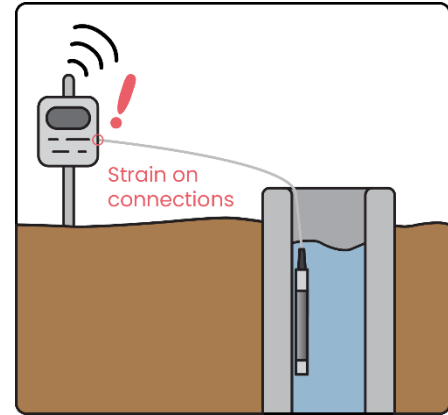


Common Mounting Methods

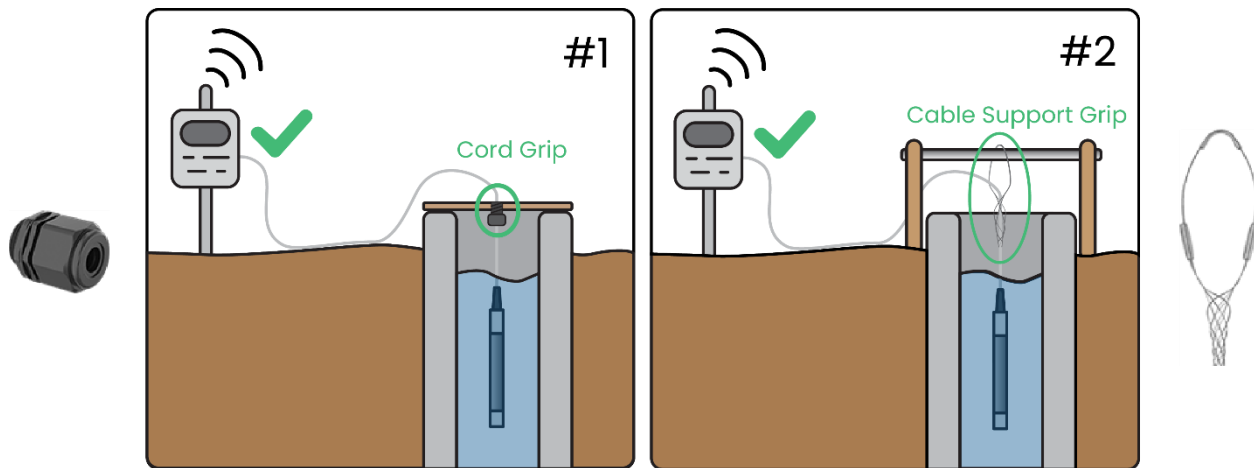
Suspension

With Kevlar-reinforced cables, pHionics sensors can be freely suspended up to 100 ft. (33 m) without concerns of stretching or damage.

We recommend securing the cable to relieve strain at the receiver, as this eliminates the possibility of the wires being pulled out. Two options for doing so are provided below:



1. Drill a hole into the cover of the well/borehole and install a **cord grip** to relieve



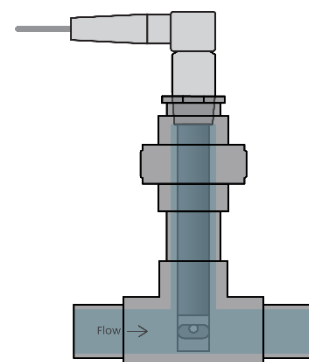
cable strain.

2. Loop a **cable support grip** around a support beam above the hole. Gravity causes the support grip to tighten around the cable and support the sensor.

In-line

The D-phi-i model has a 1" NPT thread on the back end of the sensor for easy inline mounting. It also has a wrench flat to tighten the sensor, along with a 90° strain relief connector to lengthen the life of the cable.

[Click here to see a detailed example of an inline mounting setup using a union to simplify access.](#)



Standpipe

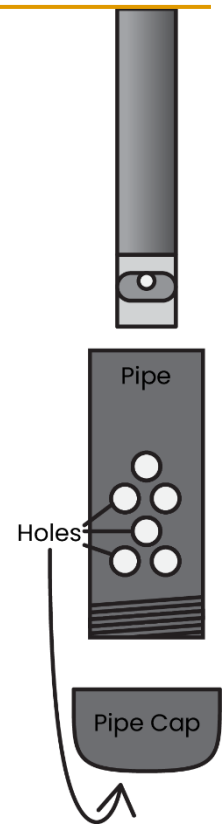
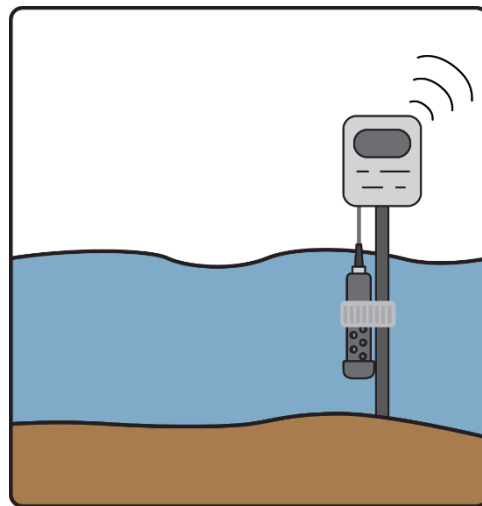
This style of mounting involves placing the sensor at the end of a pipe, then either dipping or permanently fixing the sensor to a certain height in the sample solution. The D-phi-s has a built-in $\frac{3}{4}$ " NPT thread and wrench flat to easily mount the sensor at the end of a pipe.

[Click here to see an example setup of standpipe mounting.](#)



Stilling Well

Stilling wells are pipes with holes drilled in the sides and bottom for water flow. The cap can either support the sensor at the bottom or be placed at the top of the pipe with a hole drilled through it for the cable. They can be mounted on poles in rivers, lakes, and on ocean docks, or to the side of wells and tanks with brackets. This method allows for easy removal and replacement of sensors at a variety of depths.



Please contact support@phionics.com for any questions or feedback on this resource.