



WeatherTRAK Omni Directional Antenna

- Installation Guide

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(800) 362-8774 support.hydropoint.com

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Installation Guide



4G/3G Omni Directional
Antenna

Features:

- Mounts upright on poles 1.5–2.0 inches in diameter with L-bracket and U-bolt. Bolts Included; pole sold separately
- N-female connector
- 50-ohm impedance
- +3.5–4.5 dBi gain
- Made from UV-resistant PVC

Choosing a Location for the Antenna

- The key to the overall robustness of the communication link is the height and placement of the antenna. In general, communication modules with a higher antenna placement will have a better communication link. An adjustment of as little as 2 feet in antenna placement can resolve some noise problems.
- If the signal level is low (below 5) there may be a line-of-site issue with the antenna. A signal level above 10 is strongly preferred. The antenna may need to be redirected or increased in height.
- When using an external antenna, placement of that antenna is critical to a solid data link. Other antennas in close proximity are a potential source of interference.
- Ensure as much vertical separation as possible between all antennas. HydroPoint recommends 10' of vertical separation from other high power antennas.

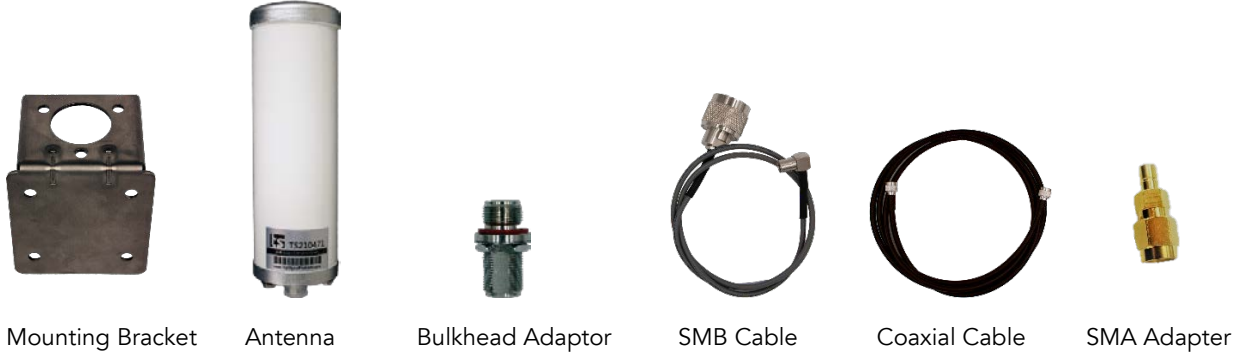
Antenna and Cable Guidelines

- Always use LMR400 low loss cables or better. HydroPoint offers omni-directional antennas with cable lengths of 25, 50, 75, and 100 foot.
- During installation, ensure all antenna cable connections are secure without over tightening.
- When coax connections will be exposed to the elements, take special care to weatherproof each connection.

Installing an Omni-Directional Antenna

⚠ Caution: Before beginning, disconnect the irrigation controller from AC power.

Included Parts



Required Tools and Materials

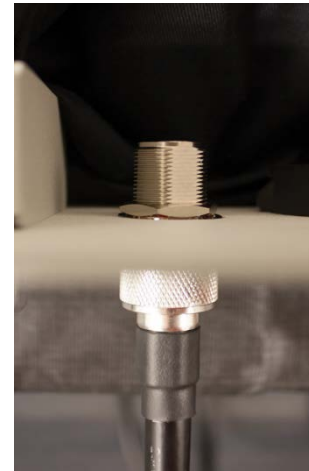
- Power drill with 5/8" drill bit
- Phillips head screwdriver
- Pliers
- Zip ties
- Safety Glasses

Antenna Installation Steps

1. Prepare the enclosure for the bulkhead adapter.
 - a. Ensure that the irrigation controller has been disconnected from AC power.
 - b. Drill a 5/8" hole through the wall of the irrigation controller enclosure.

Note: When working with a controller in a wall-mount enclosure, HydroPoint recommends that you drill the hole through the bottom of the enclosure.

2. Attach the bulkhead adaptor to the irrigation controller enclosure.
 - a. Remove the hex nut, and lock washer from the bulkhead adaptor and set them carefully aside.
 - b. Make sure that the o-ring remains in place on the adapter.
 - c. Working from the inside of the irrigation controller enclosure, slide the bulkhead adapter through the pre-drilled 5/8" hole with the long end to the outside.
 - d. Working from the outside of the irrigation controller enclosure, slide the lock washer onto the adapter, and then thread the hex nut onto the adapter.
 - e. Using pliers, firmly tighten the hex nut.



3. Attach the antenna onto the mounting plate.
 - a. Remove the screws, flat washers, and split washers from the base of the antenna and carefully set them aside. Keep the plastic cap on the antenna until you are ready to connect the antenna cable.
 - b. Place one flat washer between the antenna and mounting plate aligned with one of the holes.
 - c. Slide one split washer onto the screw then thread it through the mounting plate and into the base of the antenna making sure the flat washer remains in place.
 - d. Tighten the screw just enough to keep it in place.
 - e. Repeat steps b.-d. with the remaining washers and screws.
 - f. Firmly tighten all screws. The finished installation will resemble the photo on the right.

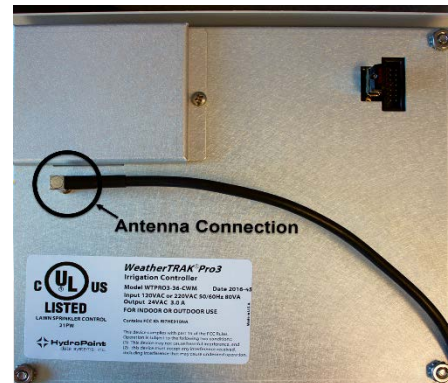


4. Attach the SMB cable between the command module and the bulkhead adapter.
 - a. Remove the pop-up screws from the command module and turn it over.



Remove 4 corner pop-up screws and flip over

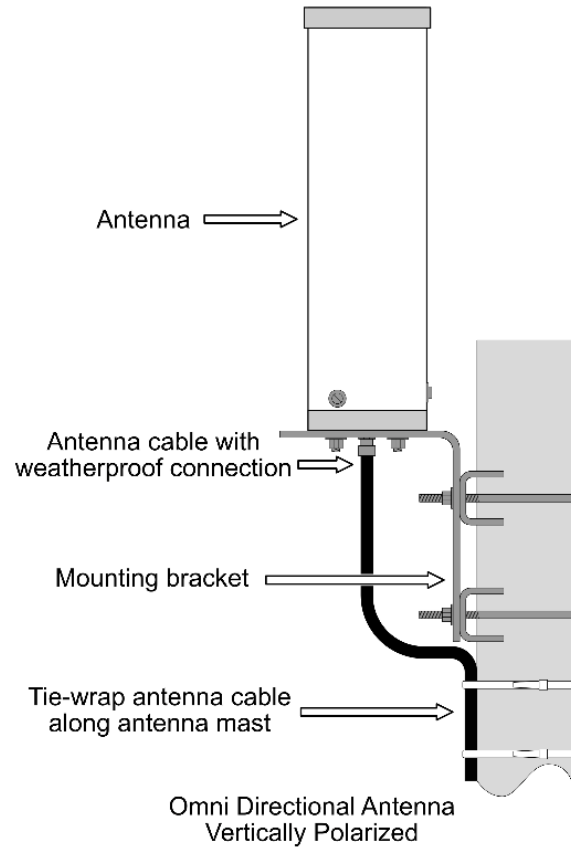
- b. Remove existing antenna cable from the back of the command module. Zip tie the cable and move it aside, making sure it does not interfere with valve wires.
 - c. Press the SMB connector to the antenna connection port on the back of the command module.
 - d. For LC, attach SMA adapter to SMB connector on SMB Cable and screw on the SMA antenna port.
 - e. Thread the other end of the SMB cable onto the bulkhead adapter inside the enclosure. Securely tighten this connector.
 - f. Replace the command module and tighten the pop-up screws.
 - g. Attach one end of the coaxial cable to the bulkhead adapter that extends out of the irrigation controller enclosure. Firmly tighten this connection.
5. Mount the antenna vertically on a mast or tower. HydroPoint recommends mounting the antenna to a metal pipe that is driven into the earth, which creates a good earth ground for the antenna. See illustration A for an example.
- a. Remove the plastic cap from the connector on the bottom of the antenna, and then attach the coaxial cable to the antenna.
 - b. Seal the exposed connections with shrink tubing or weatherproof tape.
 - c. Provide strain relief on all connections.
 - d. Secure the antenna cable to the mast or tower with tie wraps.
 - e. Reconnect irrigation controller to AC power. The current date and time should display in the RUN menu. To view signal strength, press the COMM button. If the signal strength is acceptable, the word "OK" will display in the VIEW PHASE INTEGRITY screen.



Omni Directional Antenna Installation Guide

Note: The illustration below shows one example of antenna installation. Other installation methods are acceptable provided that they meet all criteria outlined in the following steps.

Illustration A





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