

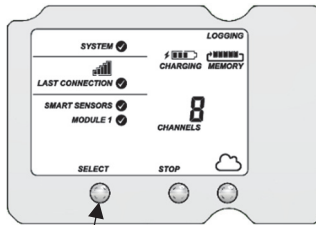
RXW Pulse Input Sensor (RXW-UCx-xxx) Quick Start

Adding a Mote to the HOBONet® Wireless Sensor Network

Important: Keep the mote near the station while completing these steps.

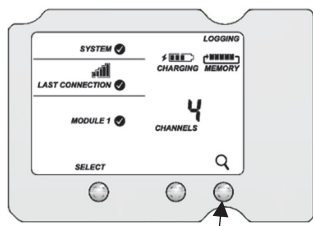
If you are setting up a new station, follow the instructions in the station quick start before setting up this mote (go to www.onsetcomp.com/manuals/24500-rx2105-and-rx2106-manual for RX2105 and RX2106 stations or www.onsetcomp.com/manuals/rx3000-qsg for RX3000 stations).

1



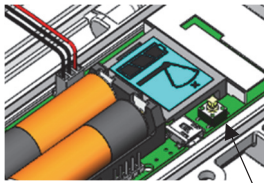
Press the Select button on the station to switch to the module with the manager (module 2 on RX2105 or RX2106 stations).

2



Press the Search button. The magnifying glass icon will blink while the station is in search mode waiting for motes to join the network.

3



Open the mote door and install the rechargeable batteries. Press this button on the mote for 3 seconds.

4

Watch the mote LCD during the process of joining the network:

a.



This signal strength icon blinks while searching for a network.

b.



Once a network is found, the icon will stop flashing and the bars will cycle from left to right.

c.



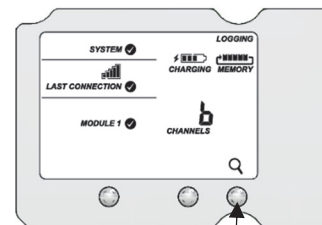
This network connection "x" icon blinks while the mote completes the registration process, which may take up to five minutes.

d.



Once the mote has finished joining the network, the "x" icon is removed and the channel count on the station LCD increases by two (one for the pulse input sensor and one for the mote battery).

5



Press the Search button on the station again to stop the search for motes.

6



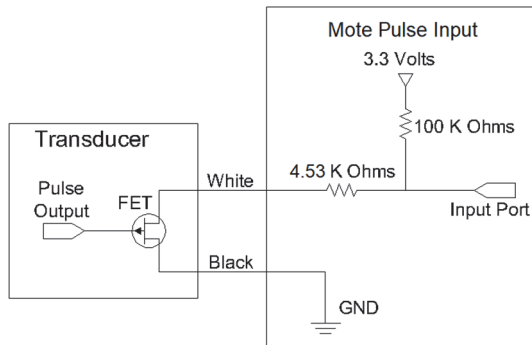
Go to www.hobolink.com to monitor mote status and health. See the HOBOLink Help for details.

Mounting and Positioning the Mote

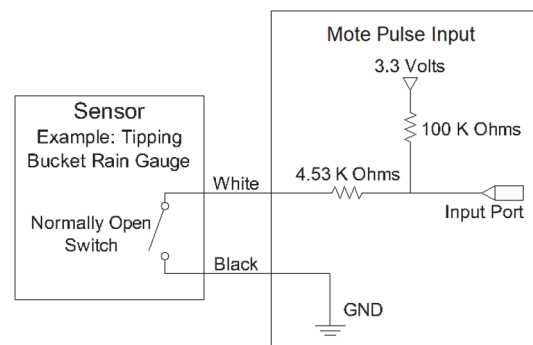
- Close the mote and use a padlock to keep it secure.
- Mount the mote vertically using cable ties or screws.
- Position the mote towards the sun, making sure the solar panel is oriented so that it receives optimal sunlight throughout each season. It may be necessary to periodically adjust the mote position as the path of the sunlight changes throughout the year or if tree and leaf growth alters the amount of sunlight reaching the solar panel.
- Make sure the mote is mounted a minimum of 1.8 m (6 feet) from the ground or vegetation to help maximize distance and signal strength.
- Consider using plastic poles such as PVC to mount the mote as certain types of metal could decrease the signal strength.
- Place the mote so there is full line of sight with the next mote. Use a repeater if there is an obstruction between motes.
- There should not be more than five motes in any direction from a repeater or the manager. Data from sensor motes travels or "hops" across the network and may not reach the station if the mote is more than five hops away.

Input Connections

The pulse input sensor has two input connections. The white wire (+) is powered at 3.3 V through a 100 K Ω resistor. This power is supplied from the mote battery. The black wire (-) is connected to the mote's ground connection. The input cable can be connected directly to screw terminals on the sensor or to sensor cables with the included wire nuts.



Wiring for RXW-UCC Pulse Input



Wiring for RXW-UCD Pulse Input

Connection Using Wire Nuts

Important: If using wire nuts, make sure the connection is protected from the elements.

1. Strip 1 cm (0.39 in.) of insulation from the end of wires, taking care not to nick the metal conductors.
2. Twist the stripped wires together clockwise and then screw on the wire nut clockwise.
3. Check the connection by gently pulling on the wires to verify a solid mechanical connection. Always strain-relief the connection to make sure that the connection is not broken by being jerked or repeatedly worked back and forth.

Pulse Input Sensor Mounting Guidelines

- Coil and secure excess cable with cable ties.
- If cable is on the ground, use a conduit to protect against such things as animals, lawn mowers, and exposure to chemicals.
- When making a connection to a third-party sensor, take time to make sure that the connection is reliable and protected from rain, dirt, and direct exposure to the elements. Refer to the manufacturer's product documentation for additional information on system configuration.



For specifications, complete mounting guidelines, and other details about this mote, refer to the full product manual. Scan the code at left or go to www.onsetcomp.com/support/manuals/23966-rxw-ucx-manual.