



# RDU 1000 - Remote Display Unit Installation Manual





## ***Wireless Submetering & Water Leak Detection Systems***

Dear Valued Customer,

We are pleased that you chose to buy one of our products, and want you to be just as pleased with owning it. Before installing your new H2O Degree product, please read the information on the following pages carefully.

We believe that you will find the H2O Degree product easy to install and to use for submetering, water flood & leak detection and utility management.

To be sure that you are 100% satisfied with your products, we provide technical and sales support Monday through Friday, 8:00 am to 4:30 pm, EST: (215) 788-8485. You may also reach us via e-mail at [info@h2odegree.com](mailto:info@h2odegree.com).

If you have questions, we can handle them quickly and effectively with a telephone call. Please let us try to help you BEFORE you remove your product. And to help us help you, we ask that you have all relevant information on hand when you call (model or part numbers, nature of difficulty, etc.)

Be sure to forward this manual to the owner after installation is complete, so that they may use it as a reference guide when using their H2O Degree product.

**H2O Degree**

**[www.H2ODegree.com](http://www.H2ODegree.com) • [Info@H2ODegree.com](mailto:Info@H2ODegree.com) • (215) 788-8485**

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## **Overview**

The H2O Degree RDU1000 units are remote displays that count pulses which are output from an electronic meter register and totaled on the unit's LCD screen.

There are three versions of the H2O Degree RDU1000:

RDU1000C - Cold water meter remote display

RDU1000HC - Dual display for both hot and cold water meters

RDU1000G - Gas meter remote display

In order for the H2O Degree RDU1000 unit to function with either a pulse register or pulse switch for an optimal use of the equipment, the installation and programming procedures outlined in this manual **MUST** be followed.

## **Required Materials**

The following materials are required for the installation/programming of the H2O Degree RDU1000:

- Phillips screwdriver
- RDU1000 unit (to be installed)
- Wire Strippers
- Two (2) mounting screws

## **Wiring the RDU1000**

To wire the RDU1000 unit, first remove the rear cover by removing the four (4) case screws located at each corner:



This exposes the back of the circuit board, where all connections will be made. Also at this time, the rear of the casing can be mounted to the surface where the unit will be located via the two screw holes on the top left and bottom right of the casing.

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## Wiring the RDU1000

To make the connections, please reference the register and AMR (optional) manufacturer's instructions on the input/output of the device. The two three-wire connections that will be made shortly include the pulse wire, the tamper wire (optional), and the common return for the register (the ground), and if an AMR system will be used in conjunction with the H2O Degree RDU1000, the AMR clock in, AMR data or pulse out, and the AMR common (ground).

If you are using a Pulse Switch device obtained through H2O Degree, the configuration for the Pulse Switch are as follows:

- **GREEN:** Pulse Wire
- **RED:** Tamper Wire
- **BLACK:** Common (Ground)

Please reference this diagram explaining the connections to the terminals in the RDU1000 unit.

Terminal Block starting from the left:

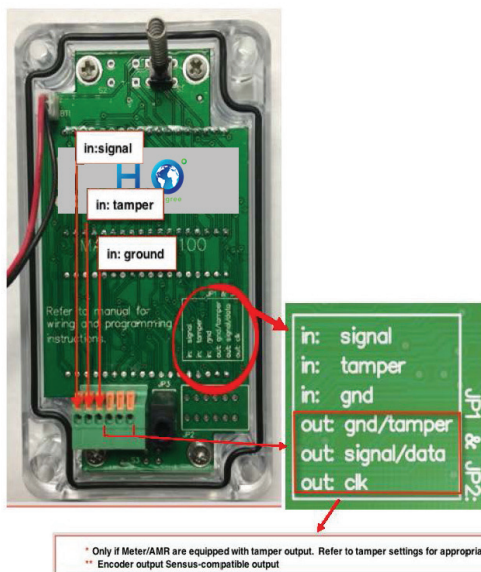
IN: Signal

IN: Ground - These are used for the pulse inputs from the meter

OUT: Ground

OUT: Signal - These are used for the pulse output from the RDU to our radio L/M54230

\* Polarity sensitive from the RDU to the radio L/M54230. Follow terminal designations for signal and ground.



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## **RDU1000 Programming**

H2O Degree RDU1000 units are shipped pre-programmed from the factory based on your ordering specifications. For programming questions contact factory at (215) 788-8485.

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## Menu Display Reference Guide

The following are the menus as displayed on the H2O Degree RDU1000 as well as a brief explanation as to the function. To scroll up and down through the menus, press up and down.



### READING

This is where the current reading on the meter register is entered. The unit will count from this point. To input the reading, press Enter, then up and down to change the values of the blinking digit. Press Enter to move to the next digit and return to the main menu.



### OUT TYPE

Depending on the AMR system installed, if any, this will be selected in this menu. The options are none, encoder or pulse.



### ID NUM

This is where the unique ID number used with the AMR system is entered. This is the number transmitted as the ID when "encoder" output is selected. To input the ID, press **Enter**, then **up** and **down** to change the values of the blinking digit. Press **Enter** to move to the next digit and return to the main menu.



### TAMPER

If enabled and properly wired, this menu will allow you to set the tamper detection. The options are both, case, cable or all off. When the tamper wire is installed via the input from the meter register, and the tamper detection is set to on, an "X" will be displayed on the left of the LCD if the wire is cut or case is opened.

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## Menu Display Reference Guide



### **K FACTOR**

The “K Factor” is the value of each pulse per whichever measurement in which the unit will be displayed on the LCD. Please refer to the meter register manufacturer’s documentation on this value. However, if you are using a Pulse Switch device obtained through H2O Degree, the value will be .5, or .5 times the amount you would like displayed on the LCD unless otherwise stated. This means that for every sweep of the needle in the meter register, there will be two pulses generated. Pay close attention to the decimal point when entering this value.

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## LIMITED WARRANTY

Subject to the exclusions listed below, H2O Degree will either repair or replace (at its option) any product that it manufactures and which contains a defect in material or workmanship.

The following exclusions apply:

1. This Limited Warranty is effective for the time periods outlined by H2O Degree. The Warranty is valid from the date of manufacture when installed in accordance with manufacturer's instructions by qualified personnel.
2. H2O Degree must be notified of the defect within ninety (90) days after the defect becomes apparent or known.
3. Buyer's remedies shall be limited to repair or replacement of the product or component which failed to conform to H2O Degree's express warranty set forth above.
4. Buyer shall be responsible for all freight costs and shall bear all risk of loss or damage to returned goods while in transit.
5. This Limited Warranty does not cover installation, removal, reinstallation or labor costs and excludes normal wear and tear. Buyer shall provide labor for the removal of the defective component or item and installation of its replacement at no charge to H2O Degree.
6. This Limited Warranty does not cover any product if: (i) a product is altered or modified from its original manufactured condition, (ii) any repairs, alterations or other work has been performed by the Buyer or others on such item, other than work performed with H2O Degree's authorization and according to its approved procedures; (iii) the alleged defect is a result of abuse, misuse, improper maintenance, improper installation, accident or the negligence of any party; (iv) damaged as a result of events beyond H2O Degree's control or other force majeure events or (v) used in conjunction with equipment, components, accessories, parts or materials not supplied or approved by H2O Degree.
7. This Limited Warranty is limited to the obligation to repair and/or replace the manufactured product. This is the sole and exclusive remedy for breach of any warranty. IN NO EVENT SHALL H2O DEGREE BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL OR PUNITIVE DAMAGES (INCLUDING ANY DAMAGE FOR LOST PROFITS) ARISING OUT OF OR IN CONNECTION WITH FURNISHING OF PRODUCTS, PARTS OR SERVICES, SALE OF OR OTHERWISE, WHETHER BASED IN CONTRACT, WARRANTY, TORT, INCLUDING WITHOUT LIMITATION, NEGLIGENCE, OR ANY OTHER LEGAL OR EQUITABLE THEORY.
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### QUESTIONS?

**Contact H2O Degree's submetering experts BEFORE uninstalling your product  
at (215) 788-8485.**