

# Water 4.0 module

## Installation instructions

### IL42-5050B

## GENERAL

This leaflet contains instructions for the Honeywell Water 4.0 module for use on water meters to provide readings to the EnergyAxis® and SynergyNet systems. For proper installation and maximum life of the modules, use the following procedures.

The Honeywell Water 4.0 module can be installed as a wall or pipe mount. Honeywell also provides a pit mount version of the Water 4.0 module. The wall mount is mounted to a mostly flat surface such as a wall or other surface. See “Wall mount” on page 2 for specific instructions. The pipe mount consists of hardware to mount the module to a pipe. See “Pipe mount” on page 3 for specific instructions.

Familiarize yourself with the location and identification of the terminals on your water meter registers before any installation procedure.

## RADIO COMMUNICATIONS PERFORMANCE & MOUNTING

The Honeywell Water 4.0 module is designed to provide excellent radio communications performance when it is mounted such that the front surface arrows point up. Alternate mounting orientations may impair radio communications performance.

All Water modules are shipped with their radio in a deep sleep mode. To activate the radio and program the register interface, use Honeywell’s Installer software.

## CONNECTION INSTRUCTIONS

The Honeywell Water 4.0 module register connections are as follows:

| Function               | Module cable color | Register terminal color |        |        |         |         |
|------------------------|--------------------|-------------------------|--------|--------|---------|---------|
|                        |                    | Honeywell               | Badger | Sensus | Mueller | Neptune |
| Data                   | Green              | Green                   | Green  | Green  | Green   | Red     |
| Power (or power/clock) | Red                | Red                     | Red    | Red    | Red     | Black   |
| Common (ground)        | Black              | Black                   | Black  | Black  | Black   | Green   |

For pulse (incremental) encoders, use the following register connections:

| Function        | Module cable color | Badger<br>(3-wire) | Badger<br>(2-wire) | Honeywell<br>AMCO digital |
|-----------------|--------------------|--------------------|--------------------|---------------------------|
| Common (ground) | Black              | Black              | Black              | Red                       |
| Pulse output    | Green              | Red                | Red                | Black                     |
| Tamper          | Red                | Green/Bare         | —                  | Green                     |

## REMOTE INSTALLATION INSTRUCTIONS

### WALL MOUNT

The Honeywell Water 4.0 module can be mounted on a wall close to the water meter. To assist placing the enclosure on the hanging screw, the enclosure has hash marks that will help you properly align the module.

The cable from the Honeywell Water 4.0 module and the water meter register should not exceed 100 feet (30 meters).

- 1 Remove the remote mount cover from the Honeywell Water 4.0 module.



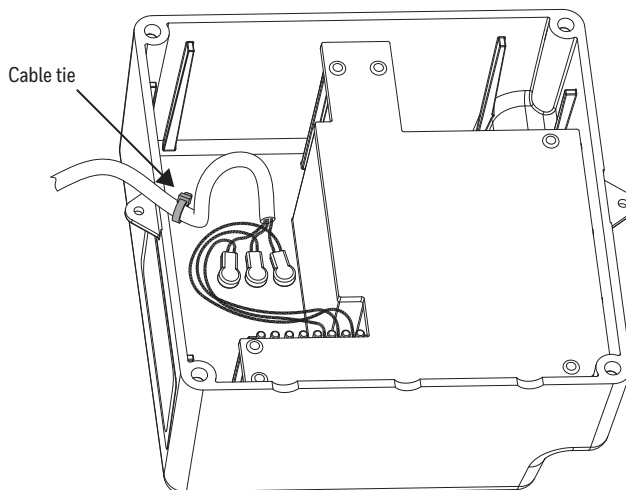
#### CAUTION

Be sure to connect the cables correctly. Failing to properly connect the cables may prevent the module from installing correctly. For information on proper connections, see “Connection instructions” on page 1.

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- 2 For proper operation of the module, connect the cables as described in “Connection instructions” on page 1.
  - If you do not have an inline connector, splice the cables from the Honeywell Water 4.0 module to the water meter register cable using weatherproof gel caps (for example, 3M style UY2 IDC). Be sure to follow the manufacturer’s directions for wire preparation when using gel caps.

Insert the cable back into the Honeywell Water 4.0 module, making sure to provide strain relief for the cable. Be sure to securely fashion the cable by using the cable tie, as illustrated in the next figure.

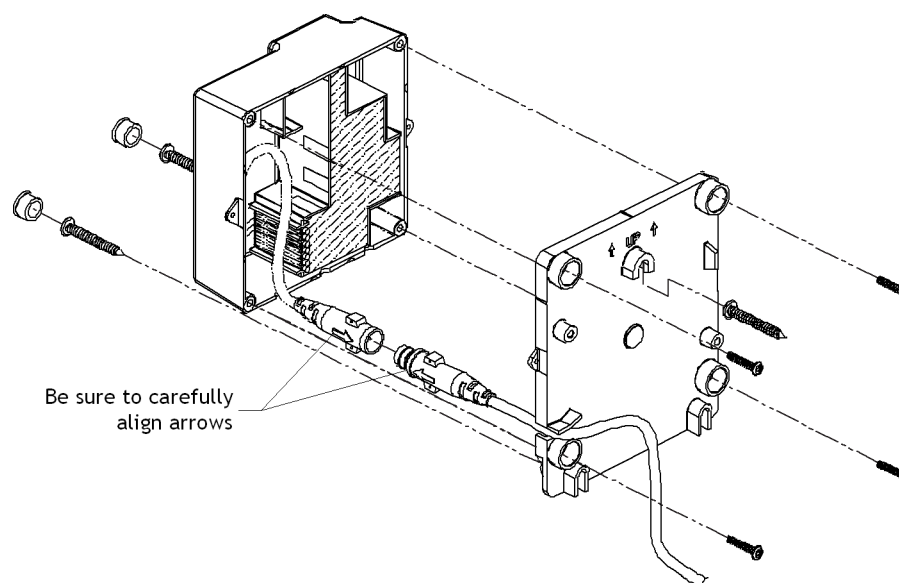


#### CAUTION

Be sure that the arrows are as closely aligned as possible before mating. Failing to properly align the arrows may result in damage to the connector, requiring a replacement of either the connector or the module itself.

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- If you have an inline connector, align the arrows on both connector ends. Press firmly to fully mate the connectors (see next figure).



- 3 Reattach the remote mount cover to the Honeywell Water 4.0 module.
- 4 Hang the Honeywell Water 4.0 module on the hanger screw, making sure it is level.
- 5 Screw 2 screws into the 2 bottom supporting screw mounts.
- 6 Using the table in “Connection instructions” on page 1, connect the appropriate wires to the correct terminals on the water meter register. Typically, the connection is made by placing the wire under the screw terminal and tightening down securely. See the product documentation for your water meter register for more information.
- 7 When you have completed the installation, secure the Honeywell Water 4.0 enclosure by inserting the tamper plugs into bottom supporting screw mounts.

## PIPE MOUNT

The Honeywell Water 4.0 module can be mounted on a pipe close to the water meter. The pipe mounting option uses a hose clamp and mounting bracket to attach the Honeywell Water 4.0 module to a pipe.

The cable from the Honeywell Water 4.0 module to the water meter register should not exceed 100 feet (30 meters).

- 1 Remove the remote mount cover from the Honeywell Water 4.0 module.
- 2 Align the mounting bracket to the remote mount cover and secure the mounting bracket with screws.

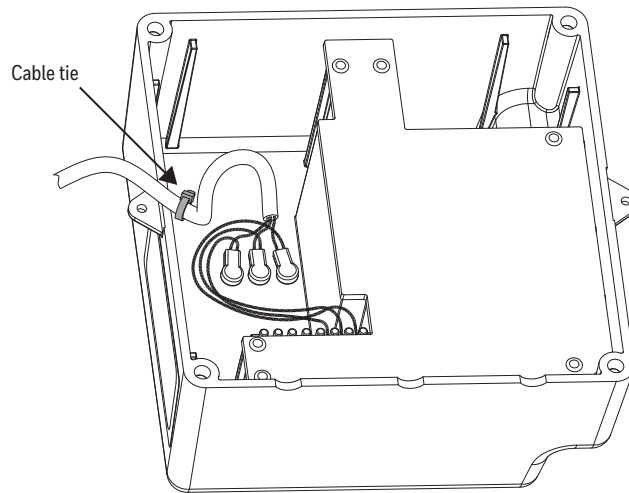


## CAUTION

Be sure to connect the cables correctly. Failing to properly connect the cables may prevent the module from installing correctly. For information on proper connections, see “Connection instructions” on page 1.

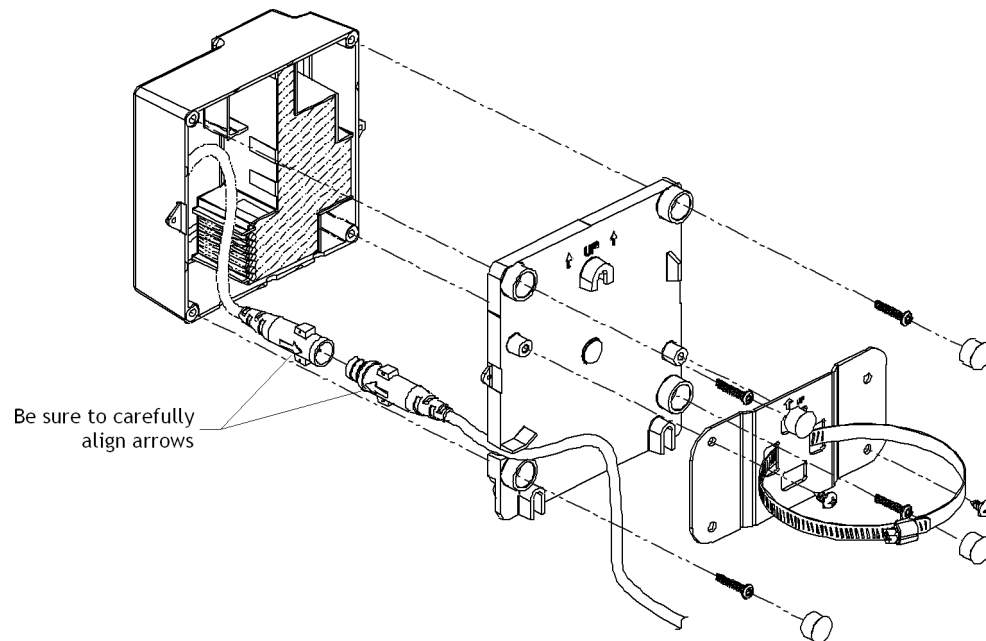
- 3 For proper operation of the module, connect the cables as described in “Connection instructions” on page 1.
  - If you do not have an inline connector, splice the cables from the Honeywell Water 4.0 module to the water meter register cable using weatherproof gel caps (for example, 3M style UY2 IDC). Be sure to follow the manufacturer’s directions for wire preparation when using gel caps.

Insert the cable back into the Honeywell Water 4.0 module, making sure to provide strain relief for the cable. Be sure to securely fashion the cable by using the cable tie, as illustrated in the next figure.

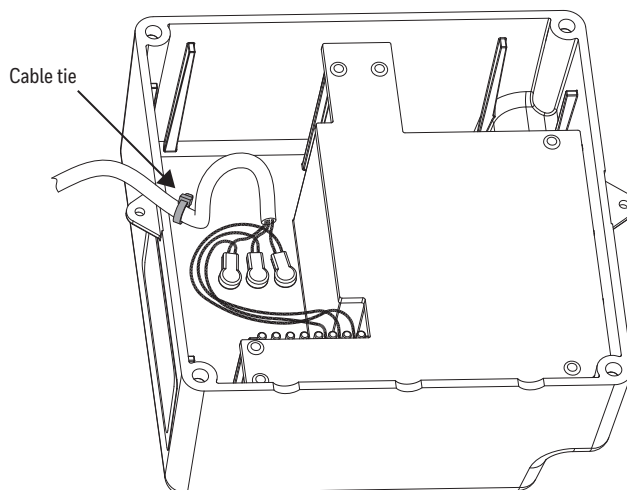
**CAUTION**

Be sure that the arrows are as closely aligned as possible before mating. Failing to properly align the arrows may result in damage to the connector, requiring a replacement of either the connector or the module itself.

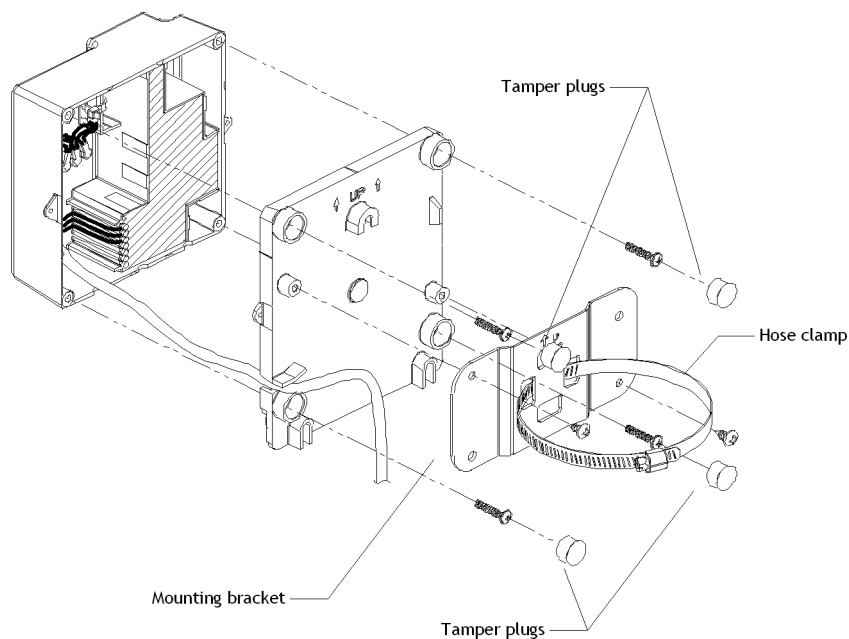
- If you have an inline connector, align the arrows on both connector ends. Press firmly to fully mate the connectors (see next figure).



- 4 Insert the cable back into the Honeywell Water 4.0 module, making sure to provide strain relief for the cable. Be sure to securely fashion the cable by using the cable tie as illustrated in the next figure.

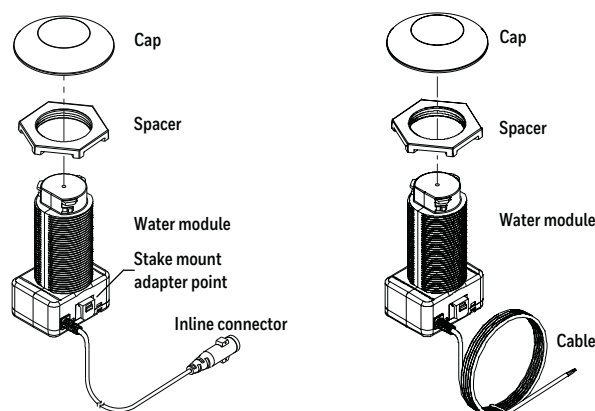


- 5 Reattach the remote mount cover to the Honeywell Water 4.0 module.
- 6 Thread the pipe hose clamp through the slot of the mounting bracket
- 7 Mount and secure the Honeywell Water 4.0 module to the pipe.
- 8 Using the table in "Connection instructions" on page 1, connect the appropriate wires to the correct terminals on the water meter register. Typically, the connection is made by placing the wire under the screw terminal and tightening down securely. See the product documentation for your water meter register for more information.
- 9 When you have completed the installation, secure the Honeywell Water 4.0 enclosure by inserting the tamper plugs into tamper plug mounts.



## PIT INSTALLATION INSTRUCTIONS

For water pit lid mount configurations, the water pit module is mounted through a hole in the lid. The water module is designed to fit a standard (1-7/8 inch diameter) hole in the lid. The lid should be RF-friendly.



Use the following procedure to attach the module to the pit lid.

- 1 If attached, unscrew the cap from the water module. The dome-like cap twists and locks onto the top of the module.
- 2 Thread the spacer nut onto the threaded portion of the water module. The flat surface of the nut should face up (that is, toward the direction where the cap will mount onto the cylinder).
- 3 Adjust the spacer nut as necessary to account for the thickness of the pit lid. The twist lock end of the threaded cylinder must protrude above the pit lid such that the cap can be installed on the module.
- 4 Insert the water module's threaded cylinder through the pit lid hole from the inside the lid.
- 5 Twist the cap until it locks onto the cylinder. This will attach the water module to the pit lid.
- 6 Tighten the spacer nut to secure the module to the pit lid.

If you are using a composite pit lid that has a shelf, slide the water module onto the shelf. Otherwise, use the same procedure for attaching the module to the pit lid.

## ELECTRICAL CONNECTIONS

The module has either an in-line connector or a length of cable with unterminated wires.

The in-line connector mates to a similar in-line connector from the water meter register/encoder assembly. To install:

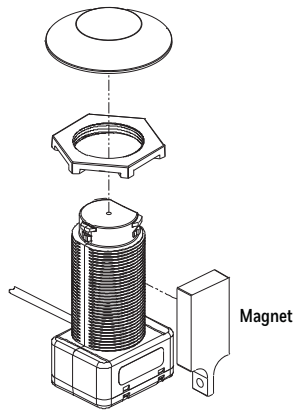
- 1 Align the arrows on both connectors and press firmly to fully mate the connectors.
- 2 Check to make sure the connectors are fully mated (the two ends of the connectors are flush).
- 3 If they are not fully connected, press together again until they are fully connected.

The connector system is an air & water tight system, and the connectors may need to be pressed together multiple times to remove the air pockets from the connectors. Do not disconnect the two connectors in between the multiple times you press them fully together.

Modules with unterminated wires are often terminated & sealed by the water meter vendor. If the wires are not pre-terminated and sealed: splice the wires from the water pit module to the wires from the register/encoder using weatherproof gel caps (for example, 3M style 314 IDC). Follow the manufacturer's directions for wire preparation when using gel caps. For proper operation of the module, connect the wires as described in "Connection instructions" on page 1.

## PROGRAM THE MODULE

See the Connexo FieldSense Installer documentation for instructions on activating the water module. When prompted to activate the module, place a magnet in front of the module as illustrated in the following figure.



**FCC & Innovation, Science and Economic Development Canada compliance**

The radio module is inserted into the housing of the device at manufacture. It has no user serviceable parts.

**User Information (Part 15.105):** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient or relocate the receiving antenna
- increase the separation between the equipment and the receiver
- connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- consult the dealer or an experienced radio/TV technician for help

If you experience trouble with this equipment, please use the Return Material Request (RMR) feature available at the Online Customer Services at [www.elstersolutions.com](http://www.elstersolutions.com). Do not attempt to repair this equipment itself unless you are replacing the entire module.

**Compliance Statement (FCC Part 15.19 and ISED Canada):** This device complies with Part 15 of the FCC Rules and with ISED Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: 1) This device may not cause harmful interference, and 2) This device must accept any interference received, including interference that may cause undesired operation.

**Énoncé de Conformité:** Cet appareil est conforme à la Partie 15 des règles de la FCC et aux CNR d'ISED Canada applicables aux appareils radio exempts de licence. L'utilisation de cet appareil est soumise aux deux conditions suivantes : (1) Cet appareil ne doit pas provoquer d'interférences nocives et (2) cet appareil doit accepter toutes les interférences reçues notamment celles pouvant provoquer un fonctionnement intempestif de l'appareil.

**Warning (Part 15.21):** Changes or modifications not expressly approved by Honeywell could void the user's authority to operate the equipment.

**RF Radiation Safety Guidelines:** This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated to provide a separation distance of at least 28 cm from all persons.

**Directives de Sécurité de Radiofréquence:** Cet équipement est conforme aux limites d'exposition aux radiations définies par la Commission Fédérale des Communications (FCC) pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance d'au moins 28 cm de séparation de toutes personnes.

**Collocation Statement:** This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

**Déclaration de Co-localisation:** Cet émetteur ne doit pas être co-localisé ou opérant en conjonction avec aucune autre antenne ou transmetteur.

**ISED Canada ICES-003 Compliance Label:** CAN ICES-3 (B)/NMB-3(B)

**Disposal information**

This product contains electronics components which should be disposed of in accordance with applicable regulations.

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