

## EA\_Water 2.0/3.0 modules

### Installation instructions

#### General

This leaflet contains instructions for Elster's EA\_Water 2.0/3.0 module for use on water meters to provide readings to the EnergyAxis® System. For proper installation and maximum life of the modules, use the following procedures.

The EA\_Water 2.0/3.0 module can be installed as an integral, wall, or pipe mount. Elster also provides a pit mount version of the EA\_Water 3.0 module. The integral mount consists of the module being mounted directly to the water meter. See "Integral mount" on page 2 for specific instructions. 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 4 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 and mounting

The EA\_Water 2.0/3.0 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.

**Note:** All EA\_Water modules are shipped with their radio in a deep sleep mode. To activate the radio and program the register interface, use Elster's EA\_Installer or EA\_InstallerPlus software.

#### Connection instructions

The EA\_Water 2.0/3.0 module register connections are as follows:

Function	Module cable color	Register terminal color				
		Elster AMCO	Badger	Sensus	Hersey	Neptune
Data	Green	Red	Green	Green	Green	Red
Power (or power/clock)	Red	Green	Red	Red	Red	Black
Common (ground)	Black	Black	Black	Black	Black	Green

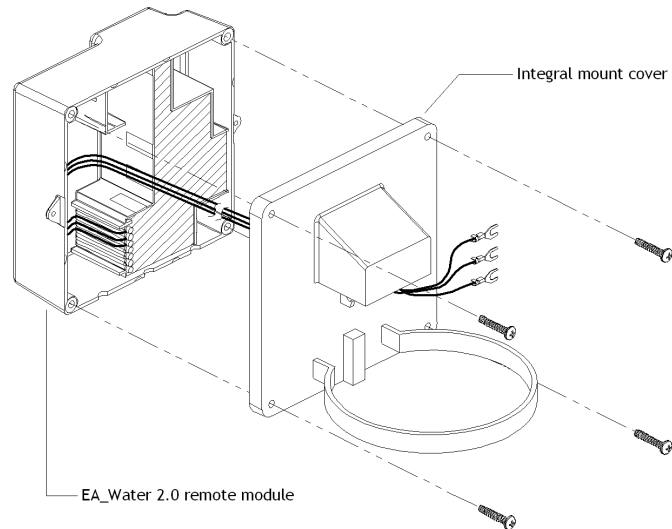
For pulse (incremental) encoders, use the following register connections:

Function	Module cable color	Badger (3 wire)	Badger (2 wire)	Elster AMCO Digital
Common (ground)	Black	Black	Black	Red
Pulse output	Green	Red	Red	Black
Tamper	Red	Green/Bare	--	Green

## Remote installation instructions

### Integral mount

The EA\_Water 2.0/3.0 module is shipped fully assembled and ready to install. You will need to mount the EA\_Water 2.0/3.0 module directly onto the water meter register. The integral mount cover has a hoop that fits around the water meter register.



1. Align the hoop EA\_Water 2.0/3.0 module over the water meter register so that the EA\_Water 2.0/3.0 module wires are able to connect to the water meter terminals.
2. Securely attach the EA\_Water 2.0/3.0 module over the water meter register.
3. 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.

### Wall mount

The EA\_Water 2.0/3.0 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 EA\_Water 2.0/3.0 module and the water meter register should not exceed 100 feet (30 meters).

1. Remove the remote mount cover from the EA\_Water 2.0/3.0 module.

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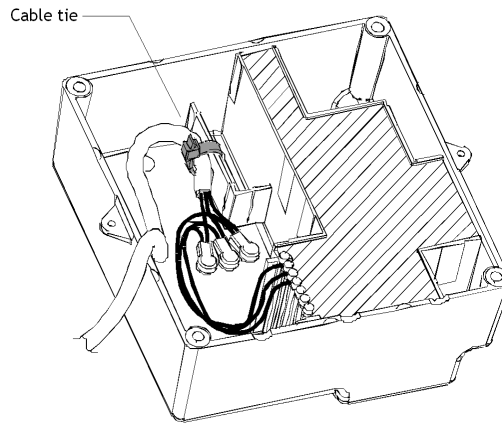

**CAUTION**

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

2. For proper operation of the module, connect the cables as described in "Connection instructions" on page 1.
  - a. If you do not have an inline connector, splice the cables from the EA\_Water 2.0/3.0 module to the water meter register cable using weatherproof gel caps (for example, 3M style 314 IDC). Be sure to follow the manufacturer's directions for wire preparation when using gel caps.

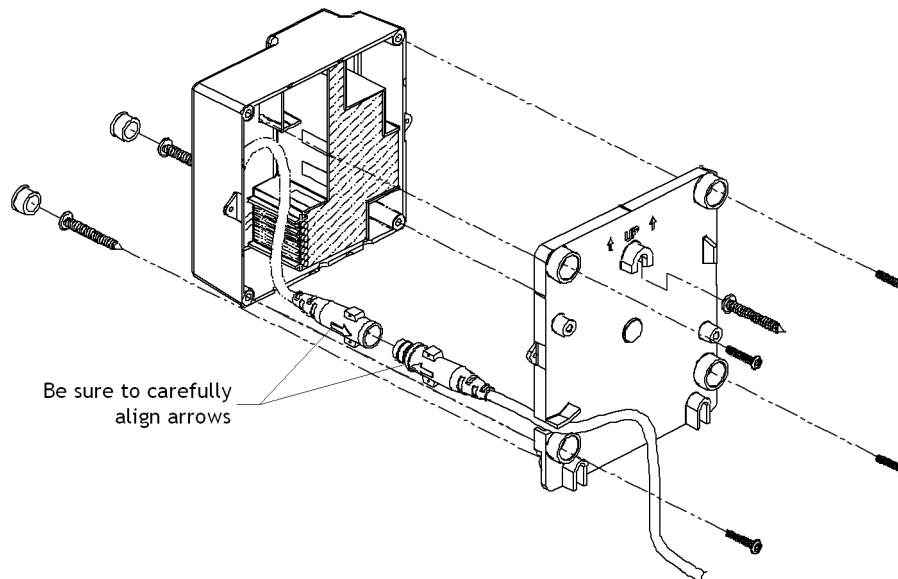
Insert the cable back into the EA\_Water 2.0/3.0 module, making sure to provide strain relief for the cable. Be sure to securely fashion the cable by using the cable tie, as illustrated in the next figure.



**⚠ CAUTION**

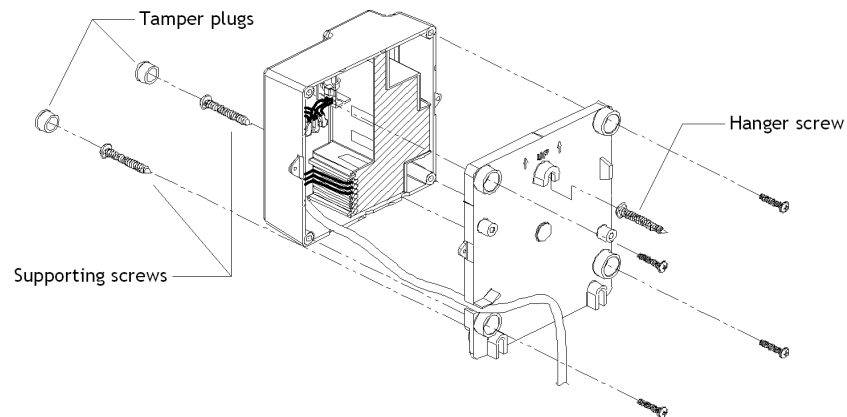
Be sure that the arrows are as closely aligned as possible before mating. Failing to properly align the arrows may result in damage to the connector, requiring a replacement of either the connector or the module itself.

- b. 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 EA\_Water 2.0/3.0 module.
4. Hang the EA\_Water 2.0/3.0 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 EA\_Water 2.0/3.0 enclosure by inserting the tamper plugs into bottom supporting screw mounts.



### Pipe mount

The EA\_Water 2.0/3.0 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 EA\_Water 2.0/3.0 module to a pipe.

The cable from the EA\_Water 2.0/3.0 module to the water meter register should not exceed 100 feet (30 meters).

1. Remove the remote mount cover from the EA\_Water 2.0/3.0 module.
2. Align the mounting bracket to the remote mount cover and secure the mounting bracket with screws.

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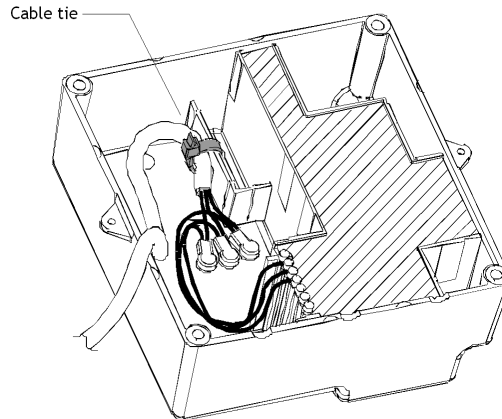
**⚠ CAUTION**

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

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3. For proper operation of the module, connect the cables as described in "Connection instructions" on page 1.
  - a. If you do not have an inline connector, splice the cables from the EA\_Water 2.0/3.0 module to the water meter register cable using weatherproof gel caps (for example, 3M style 314 IDC). Be sure to follow the manufacturer's directions for wire preparation when using gel caps.

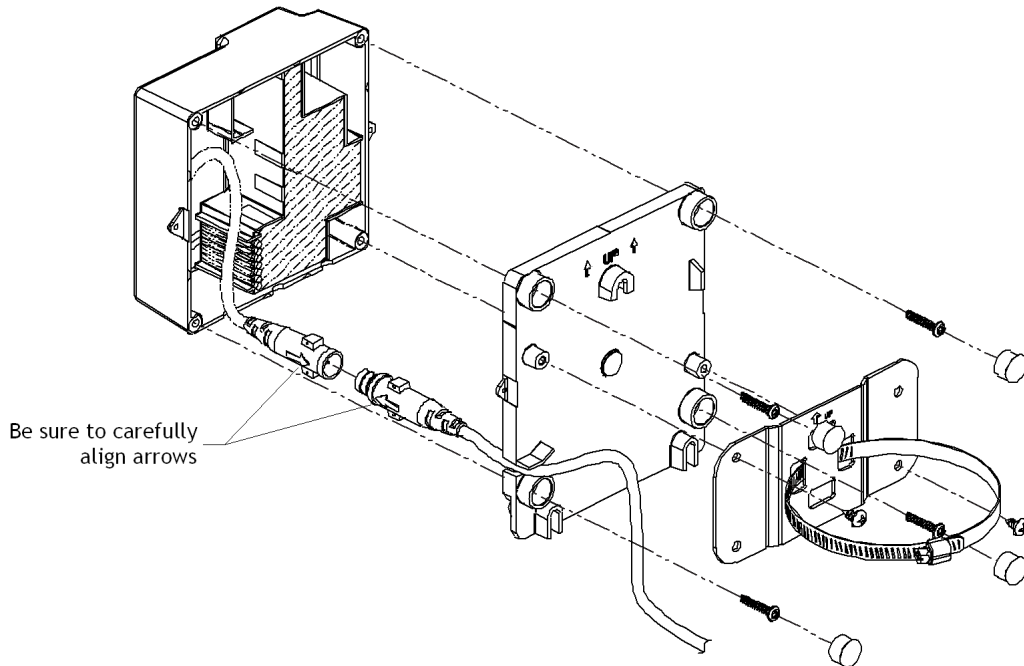
Insert the cable back into the EA\_Water 2.0/3.0 module, making sure to provide strain relief for the cable. Be sure to securely fashion the cable by using the cable tie, as illustrated in the next figure.



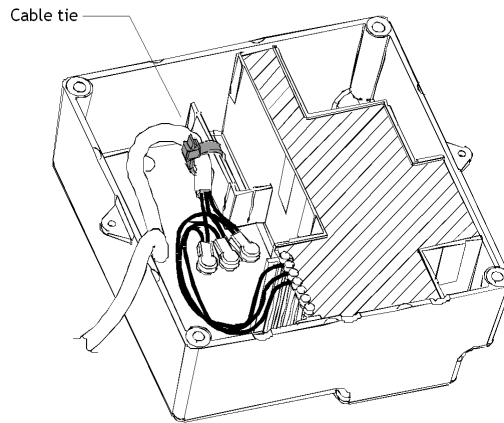
**⚠ CAUTION**

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.

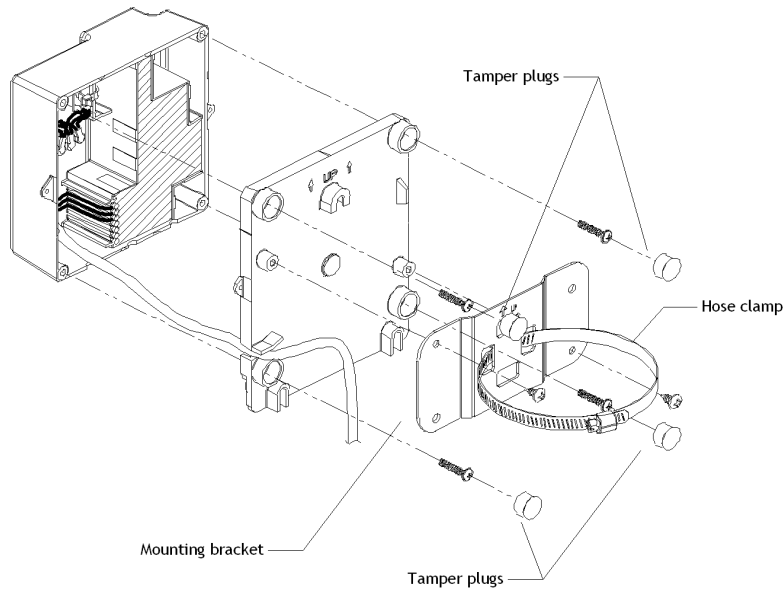
- b. If you have an inline connector, align the arrows on both connector ends. Press firmly to fully mate the connectors (see next figure).



- 4. Insert the cable back into the EA\_Water 2.0/3.0 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 EA\_Water 2.0/3.0 module.
6. Thread the pipe hose clamp through the slot of the mounting bracket
7. Mount and secure the EA\_Water 2.0/3.0 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 EA\_Water 2.0/3.0 enclosure by inserting the tamper plugs into tamper plug mounts.



## Notes

#### FCC and Industry Canada Compliance

**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, 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 (Part 15.19):** This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. 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.

**Compliance Statement (RSS standards):** This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

**Énoncé de conformité:** Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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

**RF Radiation Safety Guidelines per Part 2 of FCC Rules and Regulations:** The meter should be installed in a location where there will be a separation greater than 20 cm from locations occupied by humans.

**Industry Canada Statement:** The term "IC" before the certification/registration number only signifies that the Industry Canada technical specifications were met.

**Collocation Statement:** Collocation of simultaneously-transmitting (co-transmitting) antennas within 20 cm of each other in a final product is not allowed. Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada.

Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

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