

## English (US)

### Installation and operating instructions

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#### 1. Location

The system is intended for indoor use only in areas safe from droplets and splashes. Maximum ambient temperature is 104 °F (40 °C).

To fulfill the "California water heater regulations 2017 - Title 24", install a temperature sensor HWR-D in proximity to the pump. If the system is to be operated without the temperature sensor, skip this installation step.

#### 2. Tools

You will need the following to install the temperature sensor HWR-D:

- Phillips PH1 screwdriver.

#### 3. Installing the product

**Note:** Use thermal compound (heat-

conducting grease) between the temperature sensor and the pipe system. Thermal compound is not included. Use only one temperature sensor per system. Follow these steps to install the temperature sensor: 1. Remove the lid of the temperature sensor case. 2. Remove the pull-tab from the end of the AA lithium battery in the sensor case. The temperature sensor will start up. 3. Mount the temperature sensor on a straight section of pipe. Apply thermal compound (heat conducting grease, not included) to the back of the sensor case as shown in fig. 3. Position the temperature sensor to have the best possible contact with the pipe surface. Loosely position the pipe clamp strip around the end of the temperature sensor. 4. Tighten the pipe clamp strip. Keep the clamp on the opposite side of the pipe from the temperature sensor.

a. To pair the pump and the temperature sensor: Press and hold the connect button on the pump for 2 seconds. The blue connect symbol on the pump will flash. Then press and hold the connect button on the temperature sensor for more than 2 seconds. The temperature sensor's internal LED will flash. After successful pairing of the pump and the temperature sensor, the blue connect symbol will be on continu-

ously for 5 seconds on both devices. If the pairing fails, the connect symbol will flash red for 5 seconds on the pump. If pairing fails, retry the pairing procedure. 5. Replace the lid of the temperature sensor case. 6. Tighten the two end screws on the temperature sensor case. For best performance, fully tighten the screws but do not overtighten.



Fig. 1 Removing the screws from the lid

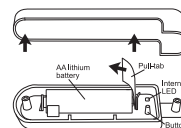


Fig. 2 Removing the lid and pull-tab



Fig. 3 Apply a small area of thermal compound (not included) to the back of the sensor case where shown

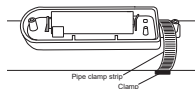


Fig. 4 Positioning the clamp



Fig. 5 Replacing the lid and screws

#### 4. Control functions

The internal LED is located on the temperature sensor beneath the lid. You must remove the lid in order to pair the devices. The LED's modes are as follows:

**Internal LED, flashing blue** - The symbol flashes blue when the temperature sensor is ready for pairing with the pump.

**Internal LED, blue** - The symbol lights blue for 5 seconds when pairing between the temperature sensor and the pump has succeeded.

#### Internal LED, flashing red (5 seconds) during installation

- The symbol flashes red for 5 seconds, when pairing between the temperature sensor and the pump has failed. Restart of the installation procedure is recommended.

#### 4. Approvals



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#### FCC sections

##### Section 15.19 (a) 3

This device complies with Part 15 of the FCC Rules. 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.

#### Section 15.21

Any changes or modifications to this equipment not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

#### Section 15.105 (b)

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

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equipment and receiver.

- Connect the equipment to 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.

This equipment should be installed and operated keeping the radiator at least 8 in (20 cm) or more away from person's body.

#### Canadian ISED information

This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the IC radio frequency (RF) Exposure rules.

Cet équipement est conforme aux limites d'exposition aux rayonnements définies par la norme FCC / IC pour un environnement non contrôlé et est conforme aux directives d'exposition de la FCC en matière de radiofréquences et la norme RSS-102, des règles d'exposition aux radiofréquences (RF) de l'IC. Cet équipement doit être installé et utilisé en maintenant le radiateur à au moins 8 in (20 cm) du corps de la personne.

This device (Temperature Sensor HWR-D) contains license-exempt transmitter(s)/receiver(s) that comply

with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions: 1. This device may not cause interference. 2. This device must accept any interference, including interference that may cause undesired operation of the device. Innovation, Science and Economic Development Canada ICES-003 Compliance Label: CAN ICES-3(B)/NMB-3(B).

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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; 2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d' compromettre le fonctionnement. Étiquette de conformité à la NMB-003 d'Innovation, Sciences et Développement économique Canada : CAN ICES-3(B)/-3(B).

This device (Temperature Sensor HWR-D) complies with Industry Canada RSS-247 and license-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.

Ce dispositif est conforme à l'annexe CNR-247 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

#### 6. Servicing the product

##### 6.1 Battery replacement



## WARNING

#### Biological hazard

Death or serious personal injury

- Keep batteries out of reach of small children, the elderly, and pets. Batteries can cause permanent injury if ingested or placed in the nose, mouth, or ears.



## CAUTION

#### Corrosive substance

Moderate to minor personal injury and risk of property damage

- Replace the temperature sensor if battery leakage occurs.



## CAUTION

#### Flammable material

Moderate to minor personal injury

- Do not attempt to recharge non-rechargeable batteries.
- Ensure that disposal of old batteries is in accordance with local regulations.

Recycle old batteries where possible.

The temperature sensor uses AA 3.6 V lithium-thionyl batteries.

To change the battery in the temperature sensor, follow these steps:

1. Remove the lid of the temperature sensor.

2. Remove the old battery.

3. Insert the new battery.

4. Replace the lid of the temperature sensor.

#### 8. Technical data

Ambient temperature:

34 to 104 °F (1 to 40 °C), non-condensing environments.

#### 9. Disposing of the product

This product or parts of it must be disposed of in an environmentally sound way: 1. Use the public or private waste collection service. 2. If this is not possible, contact the nearest Grundfos representative. See also end-of-life information at [www.grundfos.com/product-recycling](http://www.grundfos.com/product-recycling)

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## GRUNDFOS INSTRUCTIONS

## Temperature sensor HWR-D

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