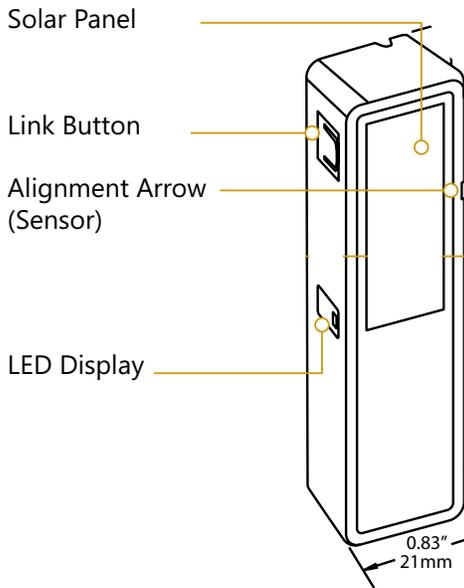


## Remote Temperature Sensor



### Package Contents

- Sensor and magnet
- 4 screws

### Tools Required

- Screwdriver
- Leveling tool
- Light meter

## Product Description

The Verve Remote Temperature Sensor provides energy savings by detecting when a door or window opens or closes.

It is a wireless solar-powered sensor that can be used on its own to detect the open and closed status of entry doors or windows, or it can be linked with occupancy sensors to more accurately track when a room is occupied or vacant.

The sensor is easy to install on door and window frames, and virtually anything indoors that opens and closes.

Features Include:

- Sends wireless message to other devices whenever a door or window opens or closes
- Harvests ambient solar energy to power the sensor and send wireless communication
- Mounts easily on standard doors or windows
- Works with motion sensors to track room occupancy
- Supplemental battery option for extreme low-light conditions

## Specifications

Power Supply	Indoor light energy harvesting (Optional) Supplemental battery
Transmission Range	80 ft. (25 m)
RF Communications	EnOcean 315MHz
Charge Time before Linking	2.7 hours @ 10 lux 3.7 minutes @ 200 lux
Light Required to Sustain Operation	15 lux for 6 actuations/hour 50 lux for 30 actuations/hour 100 lux for 60 actuations/hour
Charge Time for Full Charge	21 hours @ 200 lux (after startup) 42 hours @ 200 lux (cold start)
Operating Life in Darkness (after full charge)	174 hours: heartbeat only 67 hours @ 10 actuations/hour 10 hours @ 100 actuations/hour
EEP (EnOcean Equipment Profile)	D5-00-01
Maximum Sensor Gap	0.25 inch (6.4 mm)
Dimensions (Sensor)	3.15" L x 0.83" W x 0.59" D (80 mm x 21 mm x 15 mm)
Dimensions (Magnet)	3.15" L x 0.47" W x 0.5" D (80 mm x 12 mm x 13 mm)
Weight (Total)	0.97 oz. (27.5 g)
Environment	• Indoor use only • 32° to 131° F (0° to 55° C) • 5% to 95% relative humidity (non-condensing)
Agency Compliance	FCC, IC

## 1. Planning

Take a moment to plan for the sensor's successful operation and optimal communication with other system components.

Remove the sensor from its packaging and place it under a strong light to charge it for installation.

- Ensure the location provides consistent and adequate light
- Install according to the alignment requirements
- Determine which sensor profile is appropriate (when linking with EnOcean-based In-line Switch, Plug-in Switch or HVAC Setback Modules (refer to the "Linking" and "Sensor Profiles" sections) - otherwise; when linking with 3rd party controllers, these profiles aren't relevant

Consider the construction materials, such as metal and concrete, in the space and obstacles that may interfere with RF signals

## 2. Installing

estimated time: 20 minutes



- Based on your requirements, decide where you want to install the sensor and the magnet. For door installations, locate the sensor:
  - On the knob side of the door jamb, away from hinges.
  - At least 1 ft. (30 cm) above the floor to avoid damage.

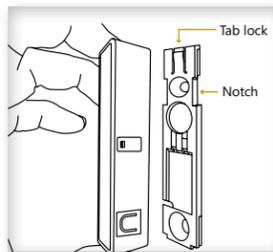
For window installations, make sure the location does not expose the sensor to contact with water.

- Follow the alignment requirements that are described in the Planning section.

**NOTE:** For easy access and handling, it is recommended that the sensor be linked to a transceiver before installing it, see the Linking section.

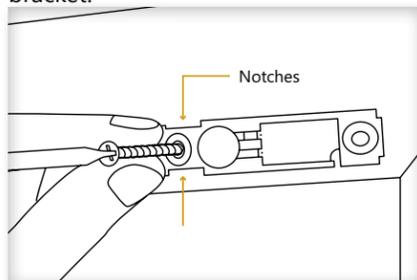
- Install the sensor on the interior side of the fixed frame.

- Remove the mounting bracket from the sensor.



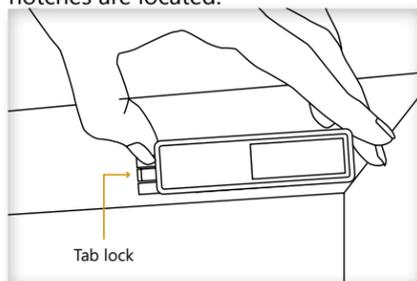
- Position the mounting bracket and mark the two mounting screw drill points.

- Insert the first screw loosely and level the mounting bracket.



- Install the second screw, and then hand-tighten the first screw.

- Snap the sensor onto the mounting bracket where the notches are located.



- Slide the sensor on the bracket until it snaps into place on the tab lock.

## 3. Linking

Two or more EnOcean-based devices can be linked and configured to provide the desired control. There are two basic types of devices in the system; transmitters and transceivers.

- Transmit-only:** Transmitters are simple energy-harvesting devices that send RF messages to communicate a condition, level, or state. Transmitters can only be linked to transceivers. Examples > Self-powered Light Switches, Occupancy Sensors
- Transmit & Receive:** Transceivers are controlling devices that send as well as receive RF messages. They also process relevant control logic, and actuate the appropriate outputs (switching a light on or off for example). Transceivers can be linked with transmitters as well as other transceivers. A transceiver can have up to 30 devices linked to it. Examples > Relays, Gateways

### The Remote Temperature Sensor is a Transmit-only Device.

To link the Remote Temperature Sensor to a transceiver; the transceiver must first be powered, within wireless range, and set to accept links.

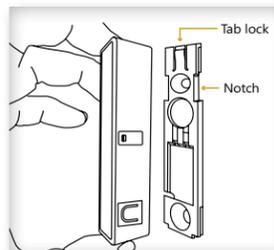
Next, the desired transmitter, or another transceiver, is triggered to send a special link message. The awaiting transceiver receives and stores the link permanently so the devices can interact to provide a variety of intelligent control options.

### To Link or Unlink a Sensor

When a Remote Temperature Sensor is linked, the position of the magnet indicates to the transceiver which type of sensor profile is being used.

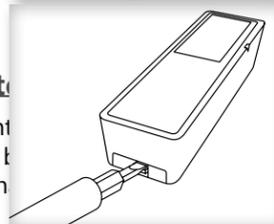
- Set the desired transceiver to Accept a Link.
- Do one of the following according to the desired profile:
  - Entry door for occupancy detection, place the magnet beside the sensor (closed position).
  - Window or patio door for HVAC control, move the magnet way from the sensor (open position).
  - Closet door for single load control, move the magnet away from the sensor (open position).
- Press the Link button on the sensor once.

The Set button on the transceiver will be solid green for 3 seconds. The device is now linked.



### Installing Supplemental Battery

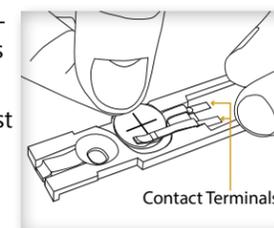
If the sensor is installed where the light is too low or there are days of darkness, it can be used to supplement the solar energy harvested by the CR1216 battery.



- Press the tab lock to release the sensor from the mounting bracket.
- Slide the sensor about 1/2" (1 cm) and remove it from the mounting plate.
- Insert the battery with the positive pole (+) up and slide it between the two contact terminals with your finger.

**WARNING:** Ensure the battery is properly oriented. Improper handling of lithium batteries may result in heat generation, explosion, or fire.

- Replace the sensor on the mounting plate and slide it until it snaps into place.
- Open and close the contact to test for power.
- There should be a faintly audible click and a fast LED blink.



## Troubleshooting

Problem	Solution Checklist
The sensor does not generate a wireless message	<ul style="list-style-type: none"> <li>Verify there is a faintly audible click when the contact is closed and opened</li> <li>Verify the LED blinks once when the contact is closed and opened</li> <li>Verify the solar cell is charged properly</li> <li>Check that the magnet is oriented to the sensor properly</li> <li>Check that the alignment arrows are not spaced more than .25 inch (6.4 mm)</li> </ul>
The linked device does not respond to wireless messages	<ul style="list-style-type: none"> <li>Check for environment or range issues. Tip: Reorienting the sensor may overcome adverse RF conditions</li> <li>Verify the device is linked</li> <li>Check the transceiver connection and the wiring for errors</li> <li>Check if appropriate devices are linked according to good system planning</li> </ul>



902 MHz: Contains: FCC: SZV-STM311U IC: 5713A-STM311U  
315 MHz: Contains: FCC: SZV-STM311C IC: 5713A-STM311C

This device complies with part 15 of the FCC rules and Industry Canada ICES-003. 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.

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

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.

**IMPORTANT!** Tous les changements ou modifications pas expressément approuvés par la partie responsable de la conformité ont pu vider l'autorité de l'utilisateur pour actionner cet équipement.