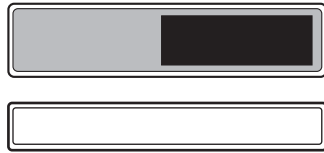


LW Wireless Lodge Watch Installation Sheet

LW-TR DOOR/WINDOW SENSOR
FACTORY LINKED AND READY TO GO



MAGNET

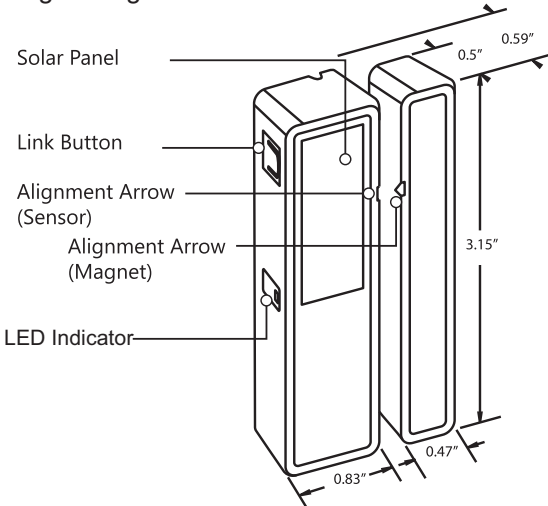
Note: Lodge Watch Receiver Module is for indoor use and installation only. For outdoor installation of the receiver module, make sure you specify our Lodge Watch systems in a water tight enclosure. LW1-WT, LW2-WT, LW3-WT, LW4-WT. Door/Window sensors are only for indoor use. There are no door/window sensors available for outdoor use.

SEQUENCE OF OPERATION:

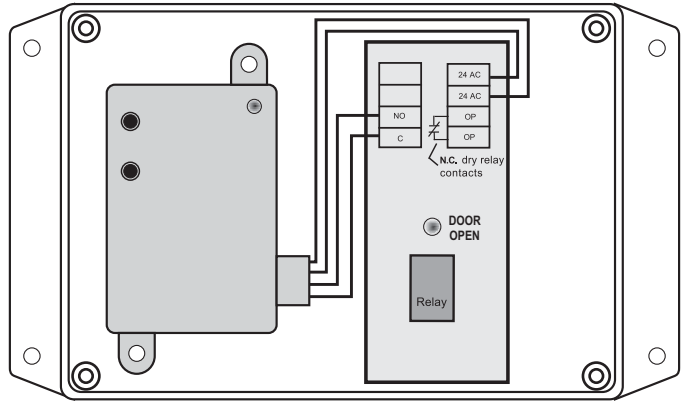
The Lodge Watch is a wireless monitoring and control system designed to reduce energy waste in vacation properties. This is achieved by turning off the HVAC equipment when the doors or windows are left open for more than two minutes. When a door or window is opened a magnet separates from the wireless sensor mounted on the door or window frame. The sensor then sends a signal to the receiver module. If the door or window remain open for more than 2 minutes, the module opens the normally closed "OP" contacts shutting off the HVAC equipment.

LW-TR DOOR/WINDOW SENSOR:

The LW-TR Door/Window Sensor is a wireless solar-powered sensor that is factory linked to the Lodge Watch receiver module and sends a wireless message whenever a door or window opens or closes. The sensor is easy to install on door and window frames. As many as 30 LW-TR Door/Window Sensors can be used with a single Lodge Watch Receiver.



LW LODGE WATCH RECEIVER MODULE



Features include:

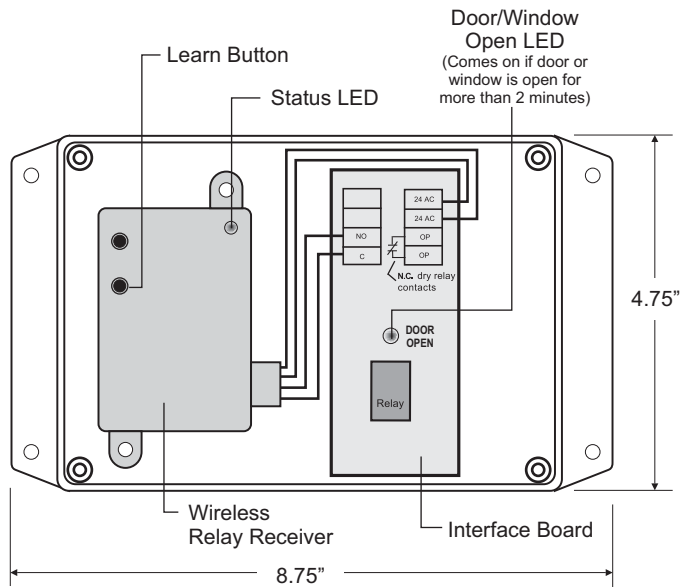
- Sends wireless message to the Lodge Watch receiver whenever a door or window opens or closes.
- Harvests ambient solar energy to power the sensor and send wireless communications.
- Mounts easily on standard doors or windows.
- Supplemental battery option for extreme low-light conditions.

LW-TR SPECIFICATIONS:

Power Supply	Indoor light energy harvesting (Optional) Supplemental battery
Transmission Range	80 ft. (25 m)
RF Communications	EnOcean 902MHz (WDWS-EN3)
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

LODGE WATCH RECEIVER MODULE:

The Lodge Watch Receiver Module contains a wireless relay receiver and interface board that wires to the HVAC equipment. The receiver module is powered by 24 volts AC from the equipment transformer.



LODGE WATCH SPECIFICATIONS:

Wireless Relay Receiver (Indoor Use Only)

- # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
- Expected Relay Life: 10 million cycles minimum mechanical
- Operating Temperature: -30 to 140° F
- Humidity Range: 5 to 95% (noncondensing)
- Red LED: Relay Status / Learn Mode Status (Flashing)
- Approvals: UL Listed, UL916, C-UL
- Agency Compliance: FCCID: SZV-TCM320U
IC: 5713A-TCM320U
- Frequency: 902 MHz
- Receiver Sensitivity: -93 dBm typical
- Conducted Power: 5 mW typical

Interface Board (Indoor Use Only)

- # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
- Expected Relay Life: 10 million cycles minimum mechanical
- Operating Temperature: -30 to 140° F
- Humidity Range: 5 to 95% (noncondensing)
- Green LED: Comes on if door or window are left open for 2 minutes opening OP contacts
- System Input Voltage: 24 VAC

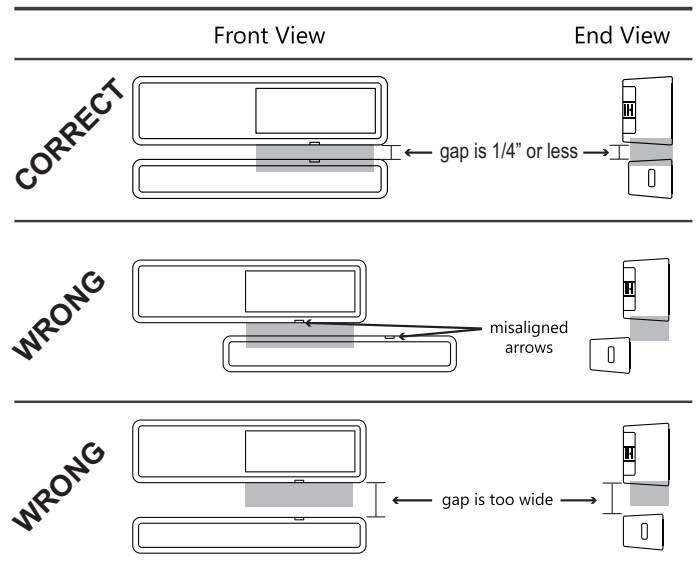
PLANNING:

1. Based on your requirements, decide where 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. above the floor to avoid damage.
 For window installations, make sure the location does not expose the sensor to contact with water.

2. Follow the alignment requirements as described in the Planning section.

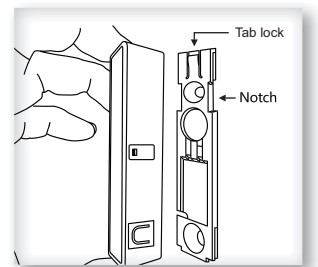
Alignment Guidelines:

The proximity of the magnet to the sensor is important for proper detection. The alignment arrows on the sensor and the magnet must point to each other and the gap between them must not exceed .25 inches in any direction.



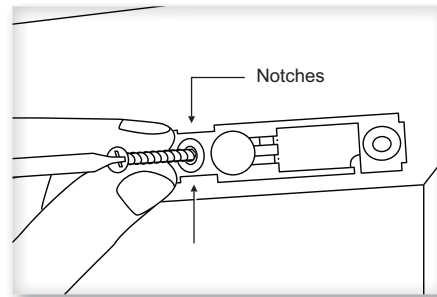
3. Install the sensor on the interior side of the fixed frame.

- A. Remove the mounting bracket from the sensor.



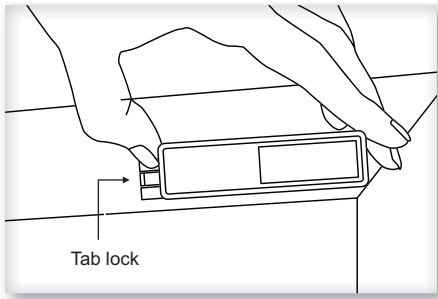
- B. Position the mounting bracket and mark the two mounting screw drill points.

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



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

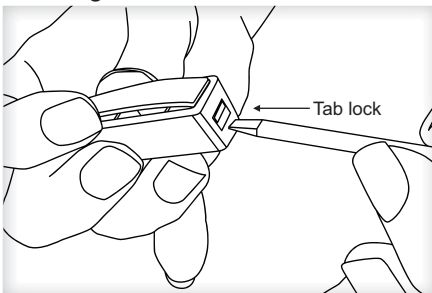
- E. Snap the sensor into the mounting bracket where the notches are located



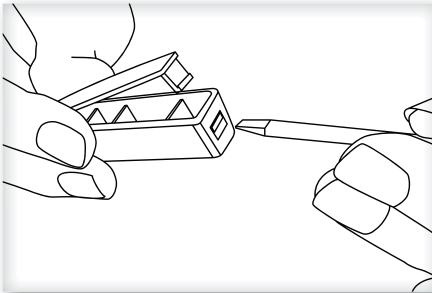
F. Slide the sensor on the bracket until it snaps into place on the tab lock.

4. Install the magnet on the moving part of the door or window.

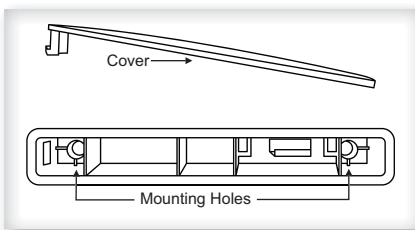
A. Use a screwdriver to press the tab lock and flex the magnet cover to remove it.



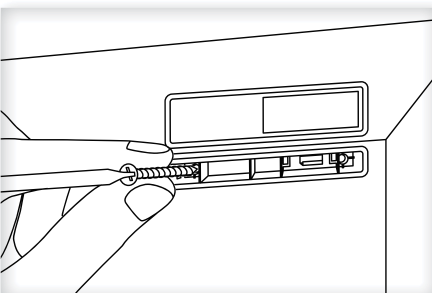
The cover is removed from the magnet body.



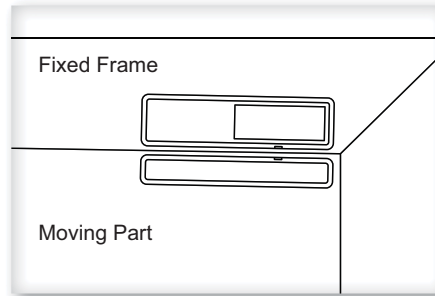
B. The two mounting holes are exposed.



C. Position the magnet with the proper spacing and alignment, and then install it with provided screws.



D. Replace the magnet cover and snap it into place on the tab.



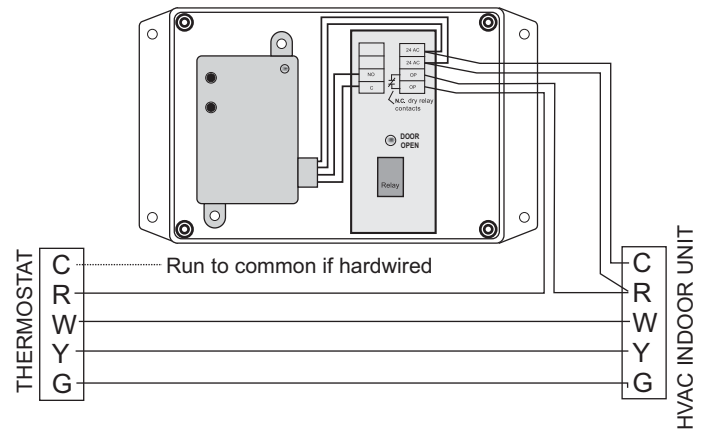
NOTE: For low activity applications, the magnet can be mounted with double-sided tape (not included).

5. Check the alignment arrows and the distance between the sensor and magnet when the door or window is closed.

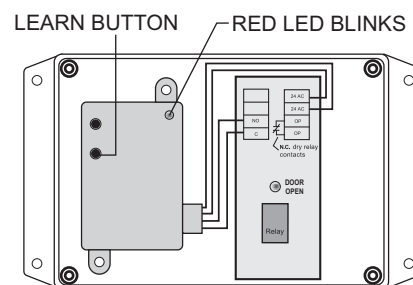
TIP: There is a faintly audible click when the sensor and magnet close and open.

LINKING ADDITIONAL DOOR/WINDOW SENSORS:

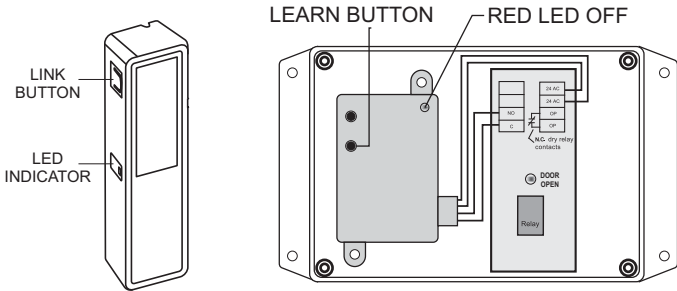
1. Mount the Lodge Watch Receiver on a non-metallic surface near the HVAC unit.
2. Turn off power to the HVAC system and wire as



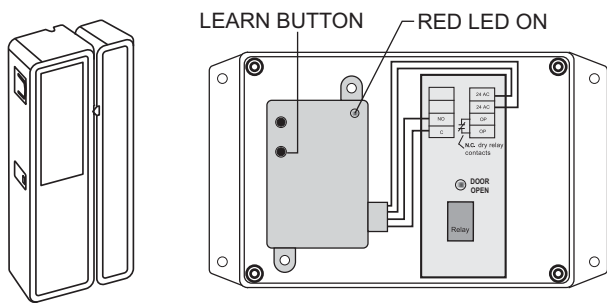
3. Apply power to the HVAC system and put the thermostat in the off position.
4. Take each door/window sensor that will be used and separate the magnet.
5. Press and release the LEARN button on the relay receiver. The red LED begins to blink.



- Press the LINK button on the side of the sensor. The red LED on the relay receiver will light solid for 2 seconds then go out.



- To confirm that the sensor is linked with the receiver, place the magnet next to the sensor. The relay receiver red LED will come on confirming that the sensor is linked.



- Repeat Steps 5 through 7 to link each additional sensor.

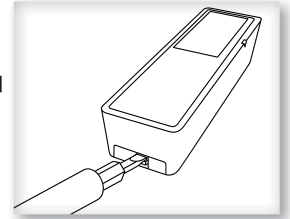
TEST, CHECK AND STARTUP:

- Once all sensors are properly mounted and all windows and doors are closed, place the thermostat in the continuous fan mode.
- Open a door or window to separate the magnet from the sensor.
- The red LED on the relay receiver will go out.
- After 2 minutes, the green LED on the interface board will come on and the air handler will stop running.
- Test each sensor in this manner to confirm communications with the relay receiver.

REPLACING DOOR/WINDOW SENSOR BATTERIES:

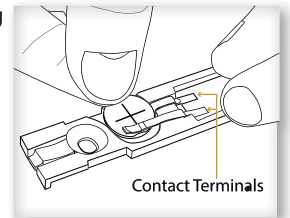
Each door/window sensor has a battery installed which is used to supplement the solar energy harvester. The battery maintains power where light levels are consistently too low. Only use a CR1216 battery replacement.

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



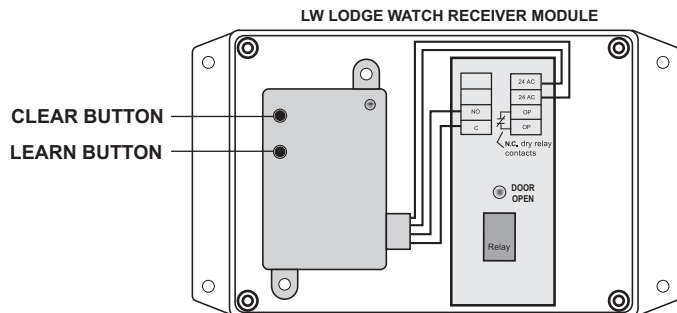
902 MHz: Contains:
FCC: SZV-STM320U
IC: 5713A-STM320U

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.

GLOBAL CLEAR:

The Lodge Watch receiver and all linked door/window sensors can be cleared and the relay will revert to its original factory default setting of Single Contact Mode. This mode will not work with multiple door/window sensors and the Lodge Watch receiver will have to be reconfigured.



To initiate Global Clear, use the following steps:

1. Press and hold the CLEAR button for 3 seconds until the LED begins slowly blinking.
2. Clear mode will time out and exit in 30 seconds.
3. All linked door/window sensors and relay will be reset to factory default.
4. After Global Clear, Lodge Watch receiver will default to Single Contact Mode.

If multiple door/window sensors are linked, use the following steps:

1. Apply power to receiver module.
2. Press and hold LEARN button for 1/2 second. LED will flash slowly.
3. Press and hold LEARN button for 3 seconds until LED pattern changes to FLASH, FLASH, OFF (2 flashes).
4. Press and hold the CLEAR button for 3 seconds until LED links twice indicating Alarm Mode is enabled.
5. When linked with multiple door/window sensors, relay will deactivate if any sensor transmits an OPEN telegram.

NOTE: It is recommended that door/window sensors be linked before relay is configured for Alarm Mode. See Linking Additional Door/Window Sensors.