

# Wiser Energy Solar



Life Is On



by **Schneider** Electric

## Safety Precautions

Electrical equipment should be installed, operated, serviced and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

### DANGER

#### HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, CSA Z462, or NOM 029-STPS.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.
- Beware of potential hazards, and carefully inspect the work area for tools and objects that may have been left inside the equipment.

**Failure to follow these instructions will result in death or serious injury.**

The Wiser Energy System has been tested and certified for use with Square D™ circuit breakers, load centers and combination service entrance devices (CSEDs) as installed per this manual.

For use in non-Square D load centers and CSEDs please consult with the manufacturer for compatibility.

## Legal

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. Operation is subject to the following conditions:

1. It may not cause harmful interference.
2. It must accept any interference received, including interference that may cause undesired operation. If it is not installed and used as per the instructions, it may cause interference which is harmful to wireless communications. There is no guarantee that interference will not occur in a particular installation. If it does cause interference we recommend: reorienting or relocating the receiving antenna, or increasing the separation between the device and the receiver.
3. Patents: <http://sense.com/patents>.

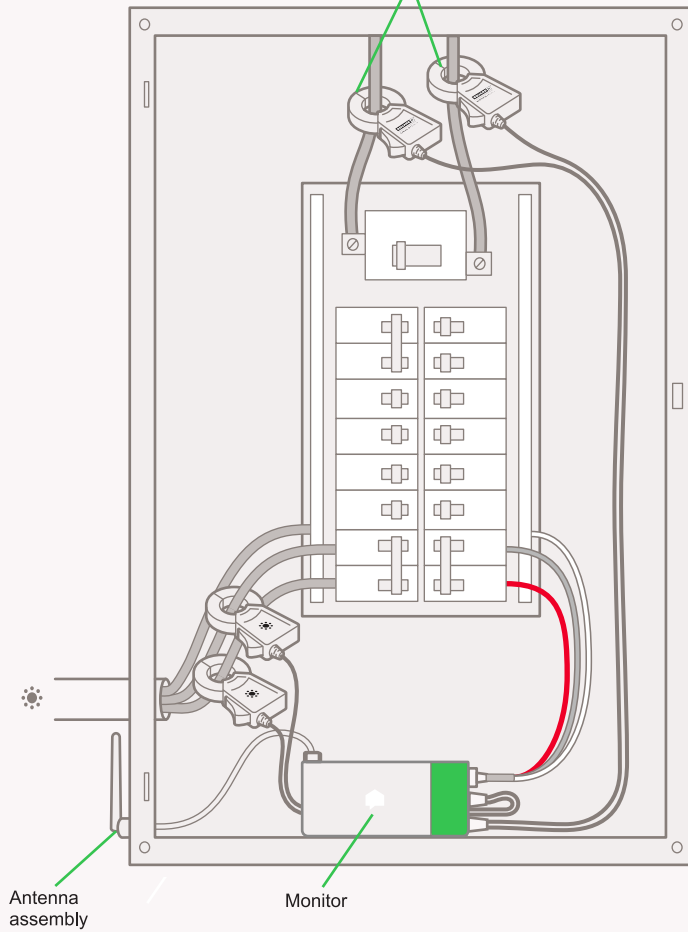
## Questions?

1-888-SQUARED  
Schneider Electric USA, Inc.  
800 Federal Street  
Andover, MA 01810 USA  
[www.schneider-electric.com](http://www.schneider-electric.com)



Intertek 5002148  
Certified to CSA STD C22.2 No. 61010-1  
Conforms to UL STD 61010-1  
Conforms to UL STD 61010-2-032  
Conforms to CAN ICES-3(B)/NMB-3(B)

Installed current sensors



**Note:** The Wiser Energy monitor should be installed by a qualified professional. Before installation, please read and review the safety warning.



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**Technical Specifications:**

This guide is for installations of Wiser Energy solar and solar upgrades. When installing Wiser Energy, solar panels must be generating at least 150 watts in order to calibrate the system correctly. If upgrading to solar, it is best not to remove the existing sensors. Go to <http://sense.com/works> to check compatibility.

Wiser Energy is a home energy monitoring device. It is used to measure the currents and voltage in the service mains. The device monitors two phases of 120 Vac. If installed outside, it must be kept dry and within specified temperature ranges.

**Monitor Specifications:**

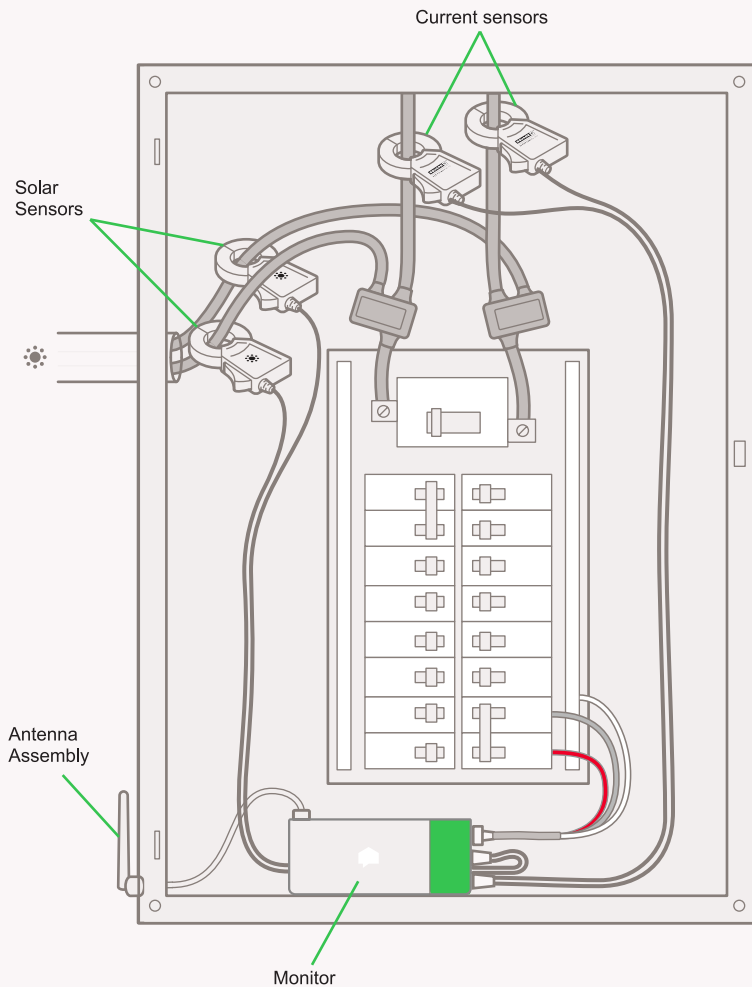
Compatibility: 120 Vac (90–130 V)  
Power Use: < 5 Watts, 0.1 A  
Wi-Fi: 2.4 GHz 802.11 b/g/n  
Size: 5 x 3 x 1 in. (137 x 66 x 32 mm)  
Weight: 200 g (7 oz)

**Current Transformer Specifications:**

CAT III 300 V 200 A Max  
Cable Length: 46 in. (1168 mm) | Inside  
Diameter: 0.95 in. (24 mm)  
May be used on uninsulated conductors

**Climate Specifications:**

RH < 90%; IPx0 Rating  
Temperature: 32–140°F (0–60°C)  
Elevation: < 6561 ft (< 2,000 m)



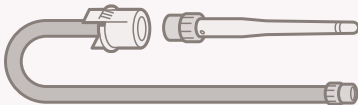
## Wiser Energy Components



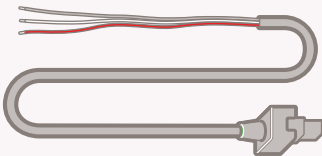
Monitor



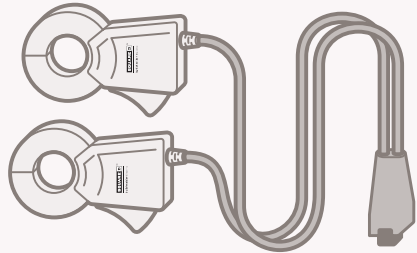
Mounting Bracket (optional)



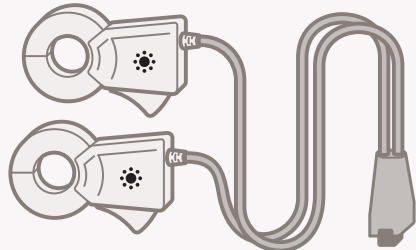
Antenna Assembly



Power Cable



Current Sensors



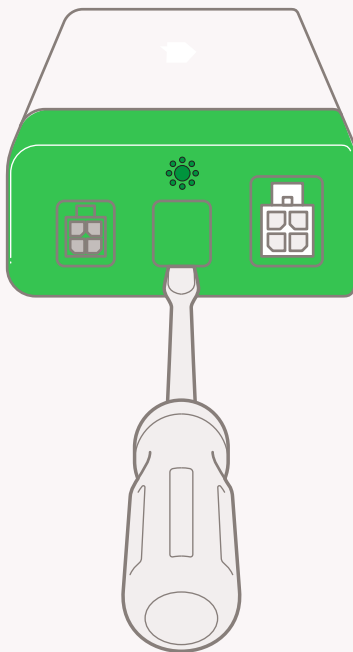
Solar Sensors

Download the Sense application  
Go to <http://sense.com/app>



### 01 Open the middle port

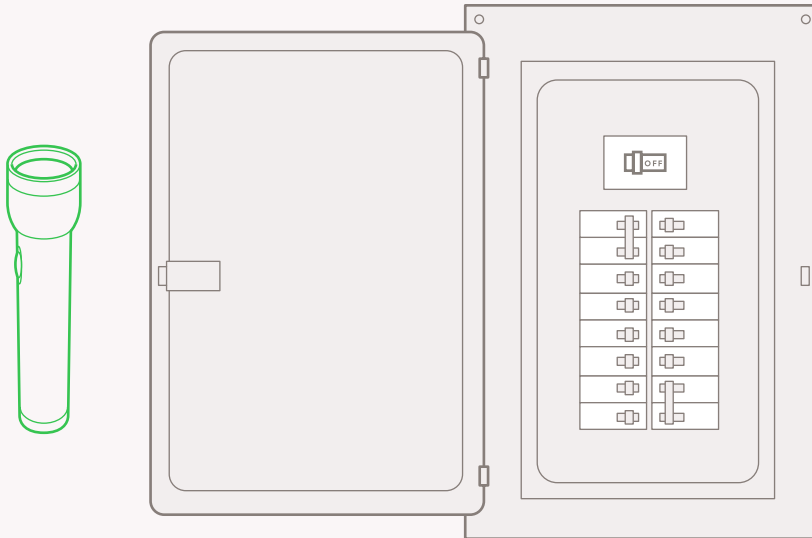
Using a flathead screwdriver, pry open the cap on the middle port of the Wiser Energy monitor. This will be used to connect the solar sensors.



## 02 Turn OFF power

Installation of the Wiser Energy System requires removal of all power. Be sure to provide an alternate light source before beginning the installation procedures. Do not begin the installation procedures until all power is completely removed from the equipment including any alternate power sources.

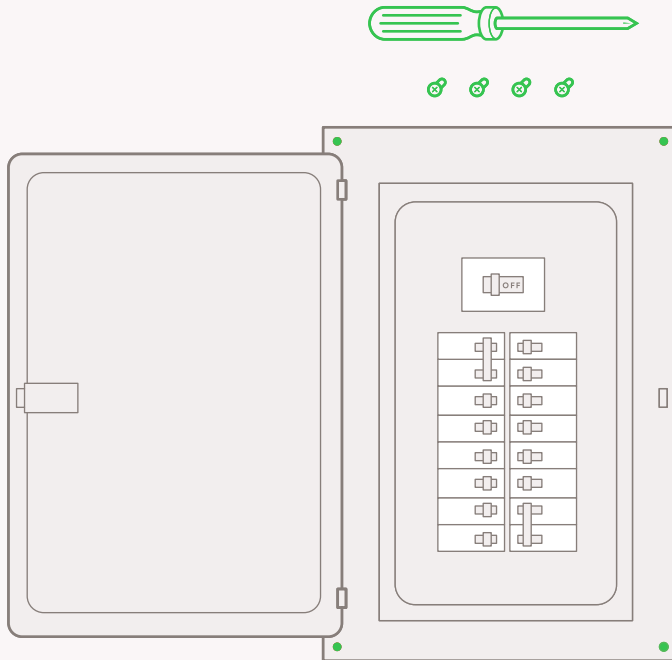
1. Turn OFF the main feeder disconnect that supplies power to the equipment, or if the installation uses the revenue meter for isolation, arrange for the utility provider to remove power. If a main feeder disconnect is not present and the revenue meter cannot be used as an isolation device, contact the utility company for removal of power.
2. Turning OFF only the main circuit breaker is insufficient to remove power completely from the panel. Line side connections will still be live.
3. Apply the appropriate lockouts to the disconnecting means.
4. Turn OFF all alternate power sources connected to the equipment.





### 03 Remove panel cover

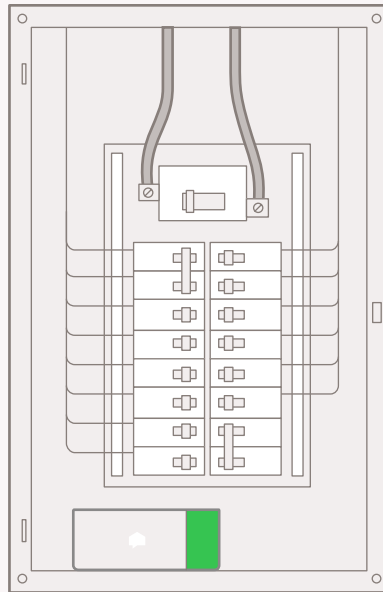
1. Apply appropriate PPE.
2. Remove the cover screws and remove the load center cover.
3. Measure the voltage from each line to neutral and from line to line to confirm that all power is OFF.



#### 04 Find a spot for the Wiser Energy monitor

The Wiser Energy monitor is designed to fit within the main panel in order to monitor a home's energy consumption.

**Note:** If there is no open space available, use an external enclosure following NEC® and local standards.



## 05 Install the antenna

Using the back of a screwdriver, punch out the knockout cover in the electrical panel. Then, insert the antenna.

### DANGER

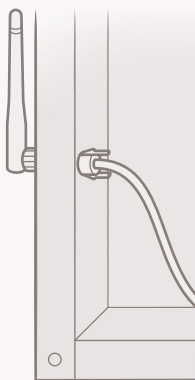
#### HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Maintain 1 in. (25 mm) minimum separation between the monitor and antenna extension assembly to load center parts (bus, stabs, circuit breakers, and power wires).

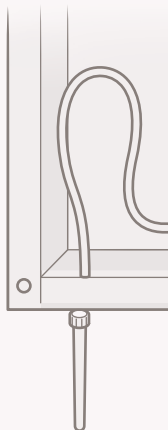
**Failure to follow these instructions will result in death or serious injury.**




Indoor only

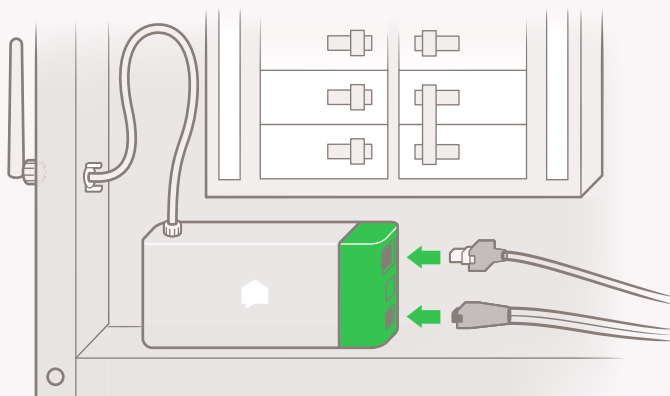


Indoor or outdoor



## 06 Connect

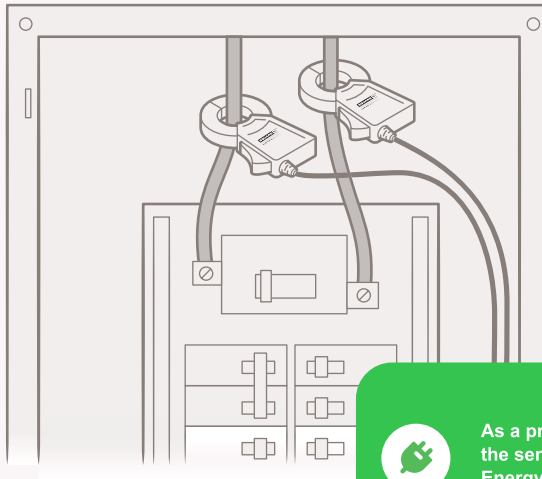
Connect the power cable, antenna, and current sensors to the monitor. The solar current sensors, labeled  should only be used for solar. Insert the main current sensors into the outer port. The middle port is only for solar current sensors.



## 07 Clamp sensors around service mains


As a precaution, first plug the sensors into the Wiser Energy monitor.

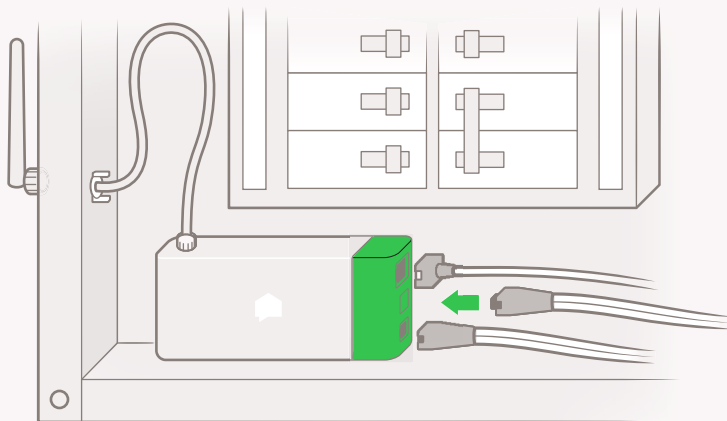
Clamp the current sensors around the service main so that both Wiser Energy labels face the same direction. The direction of the sensors does not matter, as long as they are the same.



As a precaution, first plug the sensors into the Wiser Energy monitor.

## 08 Connect the solar current sensors

Connect the solar sensors, labeled  to the middle port on the monitor.



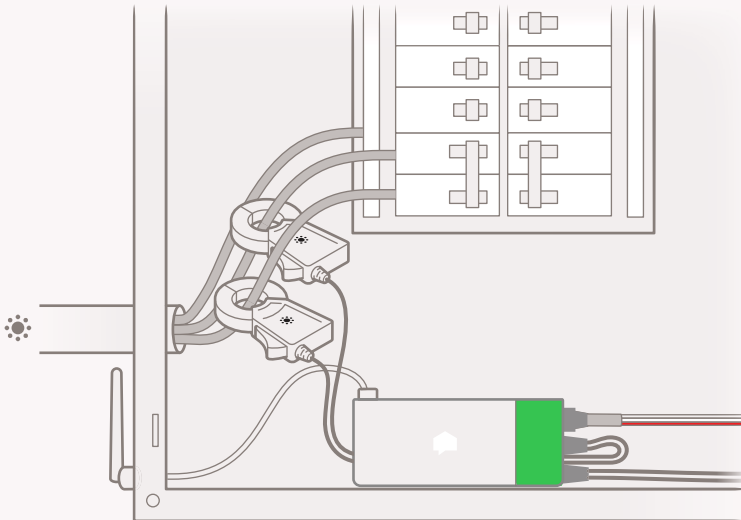
### 09 Clamp the solar sensors

Clamp the solar sensors around the wires to the incoming solar feed so that both labels face the same direction.

The direction of the sensors does not matter, as long as they are the same.

### Upgrading standard setup to solar?

Please skip to step 11.



### 10 Connect the power wires

(compatible with Square D 15–30 A thermal magnetic circuit breakers).

#### Dedicated Circuit Breaker Method

Add a new Square D brand two-pole 15–20 A circuit breaker into the load center. With circuit breaker OFF, connect the black power wire to one circuit breaker terminal and connect the red wire to the other terminal.

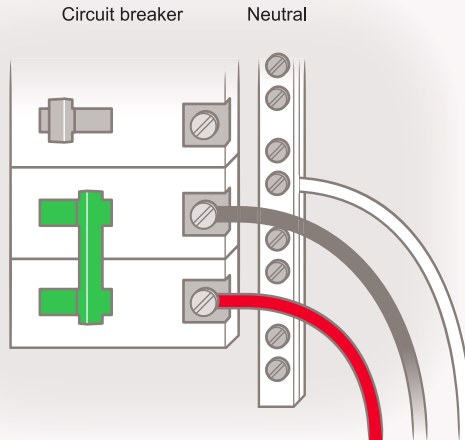
#### Two Wire Rated Lug Method

Existing Square D brand 15–30 A thermal magnetic two-pole circuit breakers in the load center have terminals that can accept two conductors. With the circuit breaker OFF, use half of the clamp plate for load wire and the other half for Wiser Energy power wire.

#### Pigtail Wire Method

With the circuit breaker OFF, create a splice connection to the two-pole circuit breaker following the NEC and circuit breaker manufacturer guidelines for splice connector type and wire size.

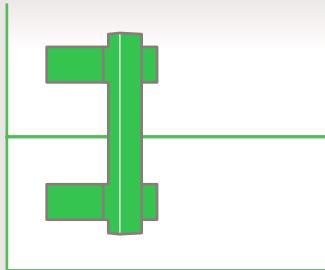
**Note:** For all three methods, attach a white wire to an appropriately sized terminal on the neutral bus bar.





### 11 Close the panel

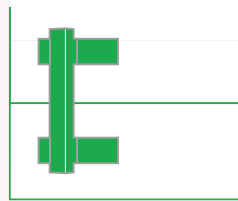
Replace the panel cover carefully to ensure that there is no pressure on the current sensor clamps that would cause them to open. Label the Wiser Energy circuit breaker with the included sticker.



## 12 Turn power ON, wait for chime

Once the panel is closed, restore power to the panel and listen for one minute for one of the following sounds:

Visit <http://help.sense.com> for troubleshooting.



### **Success Chime**

Installation was successful!



### **Repeating Beep**

There is an installation problem. Check cable connections.



### **No Sound**

The Wiser Energy monitor cannot start.  
Check power cable connections.

### 13 Use the application to complete setup

Install the Sense app by visiting <http://sense.com/app>. Click “Get Started” and follow the on-screen instructions. The app will guide you through the Wi-Fi setup and account creation process.

### Upgrading standard setup to solar?

Go to: Settings / Sense Monitor / Setup Solar and follow the solar setup procedure.

