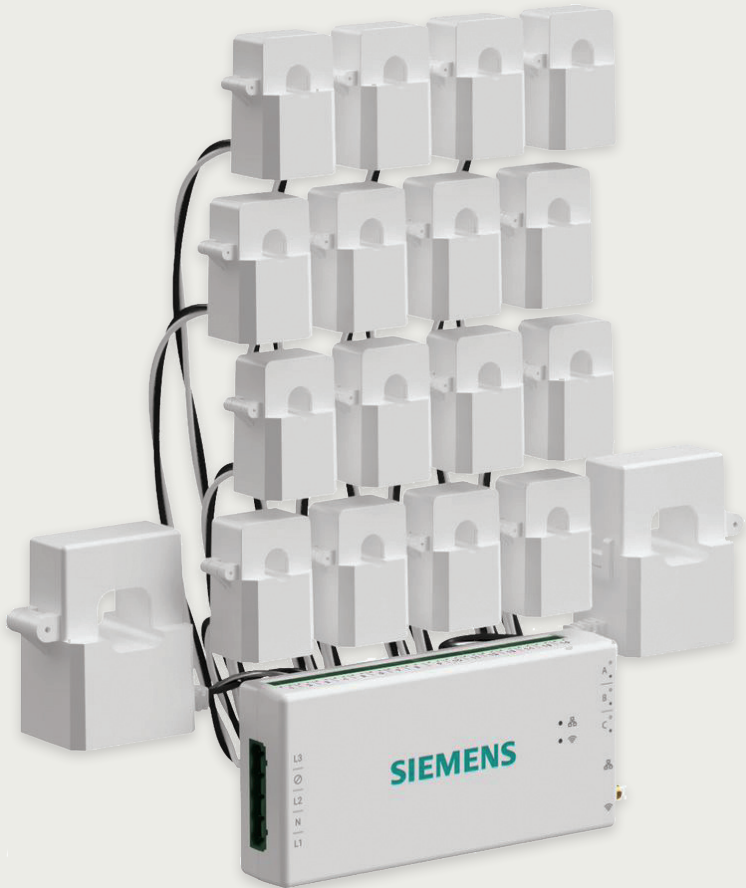


# SIEMENS

INSTALLATION GUIDE

# Inhab™ Energy Smart Home Energy Monitor

[usa.siemens.com/InhabEM](http://usa.siemens.com/InhabEM)




# Safety information



## Safety Alert Symbol

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that accompany this symbol to avoid possible injury or death.

	 <b>DANGER</b>
	Hazardous Voltage will cause death or serious injury.

	 <b>WARNING</b>
	<p>The Siemens Inhab Energy requires installing transformers inside a home's electrical panel and working around dangerous voltage that could lead to injury or death. The installation should be performed by qualified personnel only such as a licensed electrician or other qualified professional in accordance with the regional electrical code where it is being installed.</p> <p>Improper installation or use of the equipment can be dangerous or even fatal. In no event shall Siemens be liable to you or any third party for any damages, either direct or indirect, arising from or related to any personal injury as a result of your failure to follow the safety information and instructions in this Installation Guide.</p>

# Safety information



## WARNING

- Turn off and lock out all power supplying this device before working on this device. Replace all covers before power supplying this device is turned on. Wear protective eyewear and protective gloves before attempting to inspect the Inhab Energy system. Ensure no wiring for voltage measurement, current measurement, power, or data are frayed or have exposed conductors. Ensure there are no cracks, breaks, or other defects in the enclosure of the Inhab Energy or CTs.
- If you believe any of the Siemens Inhab Energy components may have been damaged, do not attempt to use them. Contact support at 1-800-241-4453 immediately.
- Do not use the Siemens Inhab Energy in any manner other than specified in this installation guide, otherwise, the protection provided by the equipment may be impaired.
- Do not attempt to open, disassemble, or repair any of the components of the Siemens Inhab Energy.
- Do not install the Siemens Inhab Energy in environments with explosive gas or vapors; nor in damp or wet environments; nor in direct sunlight; nor where temperatures are consistently below  $-40^{\circ}\text{F}$  ( $-40^{\circ}\text{C}$ ) or above  $122^{\circ}\text{F}$  ( $50^{\circ}\text{C}$ ).
- Ensure the Siemens Inhab Energy does not have power during any handling, including installation and disassembly.
- Do not perform any maintenance, service, or cleaning of the Inhab Energy after installation. Contact customer service for support.
- The Siemens Inhab Energy should only be used with Listed Energy-Monitoring Current Transformers.
- Basic Insulation, use CTs only on insulated conductor, secured from contacting live parts.
- To reduce risk of electric shock, always open or disconnect circuits from the power-distribution system (or service) of a building before installing or servicing current transformers.
- The Siemens Inhab Energy should be wired to power using 16AWG, 600V, UL1015,  $105^{\circ}\text{C}$  (or higher) copper-only wires
- It is recommended that the Siemens Inhab Energy be wired to the breaker closest to the device.

# Safety information



## WARNING

- Do not position the Siemens Inhab Energy so that it is difficult to operate disconnecting devices or breakers.
- Do not use 3rd party accessories or Current Transformers (CTs) with the Siemens Inhab Energy. The Inhab Energy and CTs are customized and integrated. Third party accessories or CTs may compromise the data accuracy and equipment safety.
- The current transformers may not be installed in equipment where they exceed 75 percent of the wiring space of any cross-sectional area within the equipment
- Restrict installation of current transformers in an area where it would block ventilation openings.
- Restrict installation of current transformers in an area of breaker venting. Do not install the Siemens Inhab Energy Monitor in any area where breaker arc venting exhaust gasses could be re-directed as a result of submetering equipment installation.
- The Siemens Inhab Energy is not suitable for Class 2 wiring methods and not intended for connection to Class 2 equipment. (Refer to NEC 2023, Section 725.)
- Secure current transformers and route conductors so that the conductors do not directly contact live terminals or buses.
- The Siemens Inhab Energy shall not be mounted within 50.8 mm (2 in) of any live parts including primary conductors, primary terminals, and primary lugs; but excluding insulated cables. It's acceptable for the Inhab Energy to be mounted to the grounded panel box and near the neutral/ground bus bars. The Inhab Energy employs Class I wiring allowing its wires to safely coexist with all other wires in the panel.
- If the Siemens Inhab Energy Monitor is attached to the enclosure, it shall not contact the panel interior insulation such as the material that separates the GND and LIVE bus bars.
- Siemens Inhab Energy Monitor mounting provisions shall not be attached to any energized part.
- Voltage sensing and power supply connections to the primary voltage shall have overcurrent protection through connection to a breaker/MCB.
- Do not use aluminum wire with the Inhab product.
- Do not install the Siemens Inhab Energy in electrical panels installed in outdoor environments.

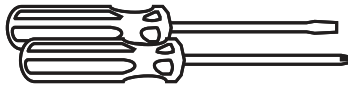
# Before you get started

The Siemens Inhab Energy is installed in a home's electrical panel. ***It will be necessary to turn off power supplying the home's electrical panel. If the home's electrical panel is service equipment, the main breaker should be set to the off position. Please note, setting the main breaker to the off position will only shut off power to the home; the cables feeding the panel will remain energized.*** The following may help with safe installation.

- Installation should be performed by a qualified personnel only such as a licensed electrician or other qualified professional
- Install in accordance with the regional electrical code where it is being installed
- Ensure that the product specifications of the Inhab Energy are compatible with the system and the panel type where it is being installed.
- Identify the location of service disconnect. It may be outside of the panel.
- Ensure the work environment is clean with additional lighting available.
- Identify empty breakers or breakers that can be tapped for voltage monitoring. The number required corresponds to the system phases.
- The following items are recommended:



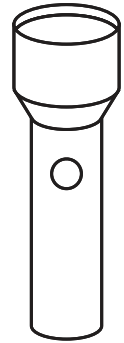
Insulated gloves



Phillips and flathead screwdrivers



Protective eyewear



Alternative light source

# What's in the box

The Siemens Inhab Energy contains the following items. ***If any of these items are missing or if you believe they've been damaged, contact support immediately.***



Inhab Energy monitor



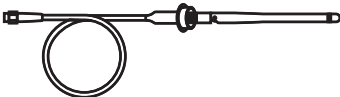
2 Main 200A CTs with 22 AWG wire and 5mm screw terminal plugs



16 Branch 50A CTs with 22 AWG wire and 3.8mm screw terminal plugs



Wire harness with 7.6mm screw terminal plugs and 4x16AWG wire leads



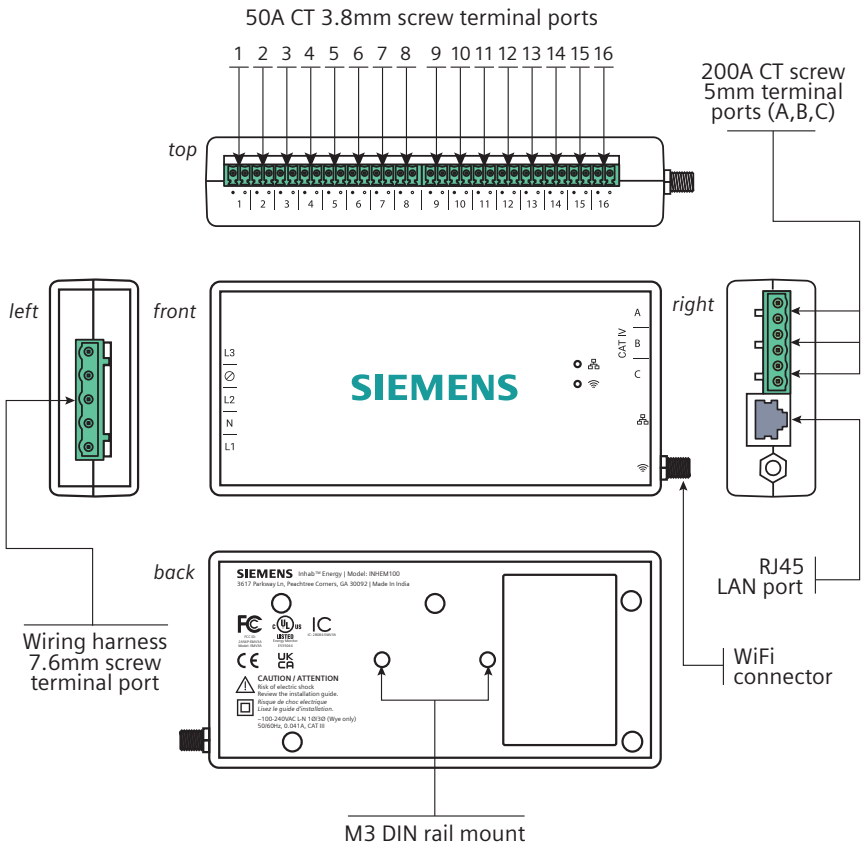
WiFi antenna assembly



2 wire nuts and two 14 AWG, 600V splicing wires

# Energy monitor connections

The energy monitor is the hub of the Siemens Inhab Energy. The screw terminal port for the wiring harness is located on the left-hand side of the monitor. The screw terminal ports across the top of the monitor are the inputs for the 50A Branch Current Transformers (CTs) (the bundle may have come with 8 or 16 CTs, or none at all). The A, B, and C screw terminal ports on the right side of the monitor are the inputs for the 200A Main CTs (the bundle may have shipped with two or three). The RJ45 LAN port and coaxial connector for the WiFi antenna cable are also on the right hand side of the monitor. All of the ports are clearly labeled on the energy monitor.



# Step 1: Get the app

Use the camera on your phone to scan the unique QR code located either on the back of the Inhab Energy monitor or on the Getting Started Guide included in the box. This QR code will take you to the Siemens Inhab Energy Monitoring home page, where you can download the Siemens Inhab Energy app onto a phone or tablet from the Apple App Store or Google Play and start the Inhab Energy setup process. Once the app is downloaded, you'll be prompted to create an account if you don't have one.

Also, if you plan to connect the Inhab Energy to the internet via Wi-Fi, this is a great time to use a phone to check the signal strength of the Wi-Fi network next to the electrical panel in the home. Low/no signal may require a Wi-Fi extender or an ethernet connection for the Inhab Energy to work properly.



Download on the  
**App Store**



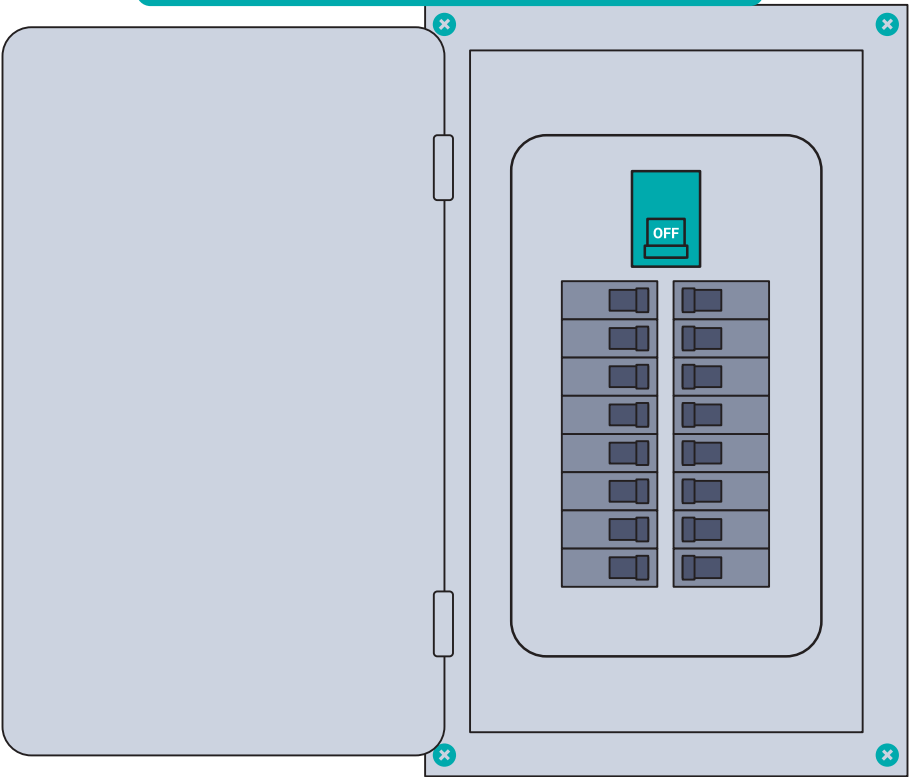
GET IT ON  
**Google Play**

# Step 2: Turn off the main breaker and remove the cover

First, turn service disconnects and/or main breakers feeding the panel into the OFF position. Note that these may be located outside of the panel in which you're installing the Inhab Energy. Next, remove any screws holding the cover to the panel and remove the cover to access the circuit breakers and **service entrance wires to the load center. Service entrance wires are energized!**



Service disconnect may be located outside of the panel



## DANGER

**Hazardous Voltage**

**Will cause death or serious injury.**

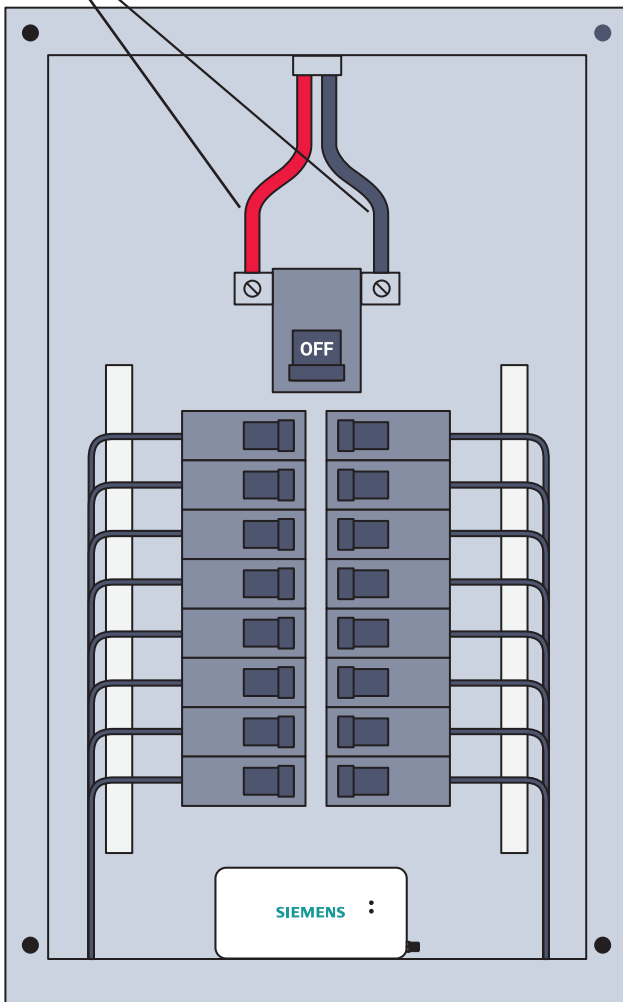
Turn off and lock out all power supplying this device before working on this device. Replace all covers before power supplying this device is turned on.



# Step 3: Find a place for the monitor

Locate a place within the electrical panel for the Inhab Energy monitor ensuring it is at least 50.8mm (2 in) from any live parts including primary conductors, primary terminals, and primary lugs; but excluding insulated cables. The breaker box may be oriented differently than below, but the monitor is small and designed to fit easily in the box. Find a place that works. If the Inhab Energy is to be mounted on a DIN rail, the monitor has two threaded screw holes to attach mounting hardware using two M3 screws and lock washers (sold separately).

Energized service mains



**DANGER**

**Hazardous Voltage**  
**Will cause death or serious injury.**

Turn off and lock out all power supplying this device before working on this device. Replace all covers before power supplying this device is turned on.

# Step 4: Prepare for Internet connection

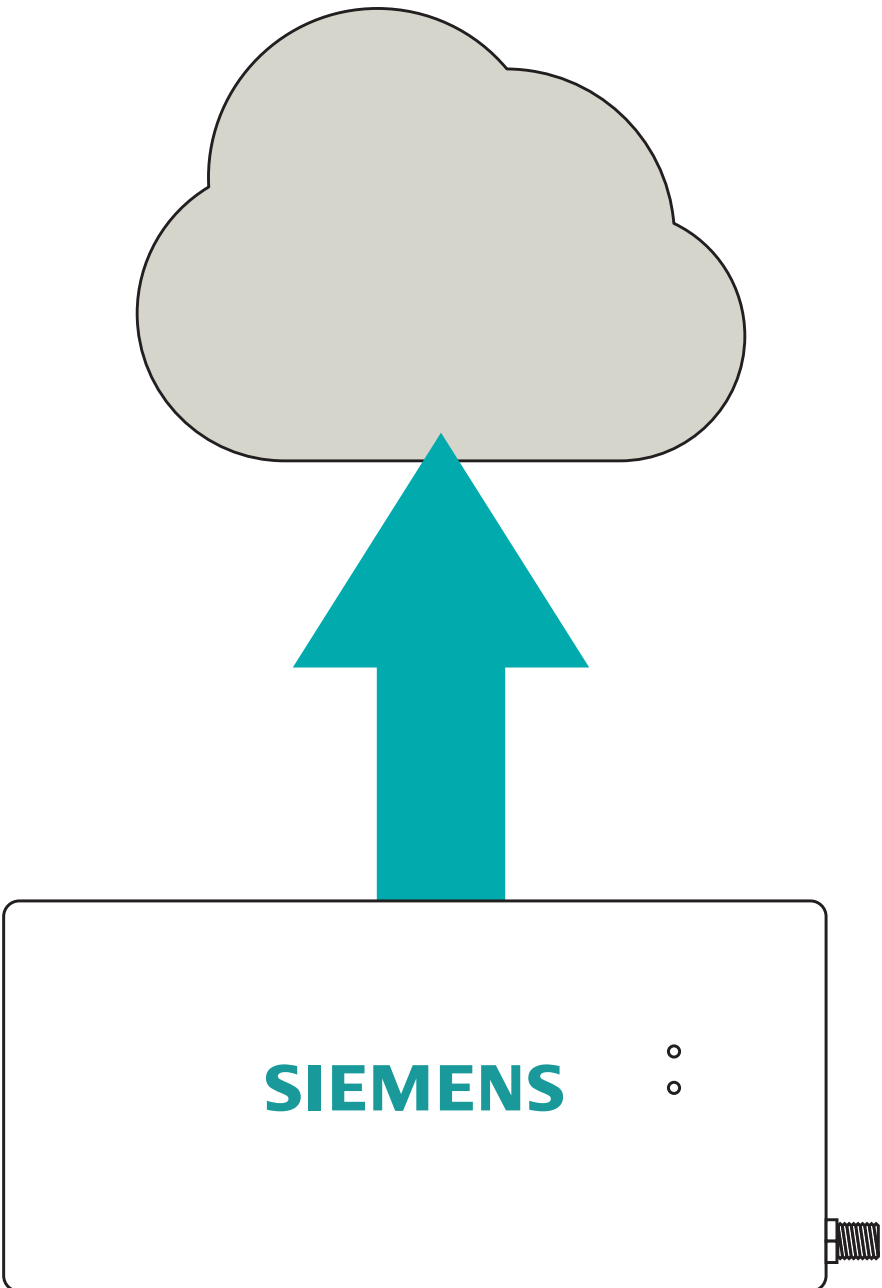
The Inhab Energy is capable of connecting to the internet either via a wired LAN connection, a Wi-Fi connection, or both. If both are implemented, the Inhab Energy will prioritize wired LAN. If a wired LAN is unavailable, the Inhab Energy will attempt to connect over Wi-Fi. Choose the preferred method(s) and go to the corresponding step below.




Step 4(a): Prepare for wired LAN connection

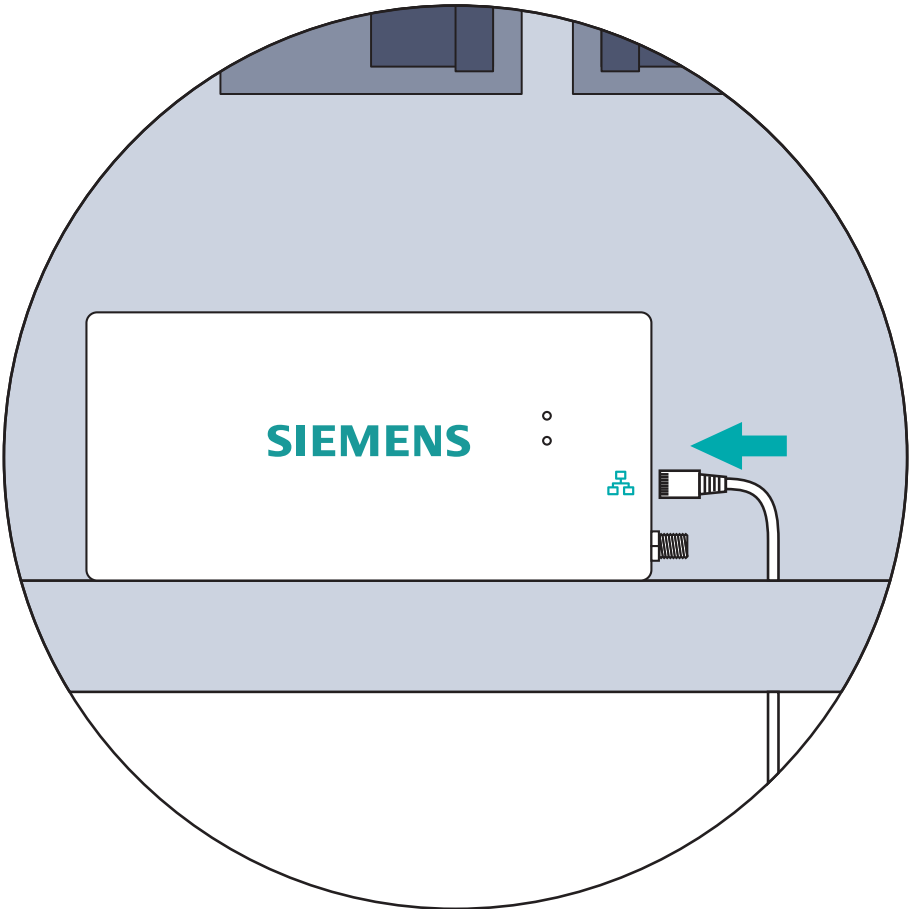


Step 4(b): Prepare for Wi-Fi connection




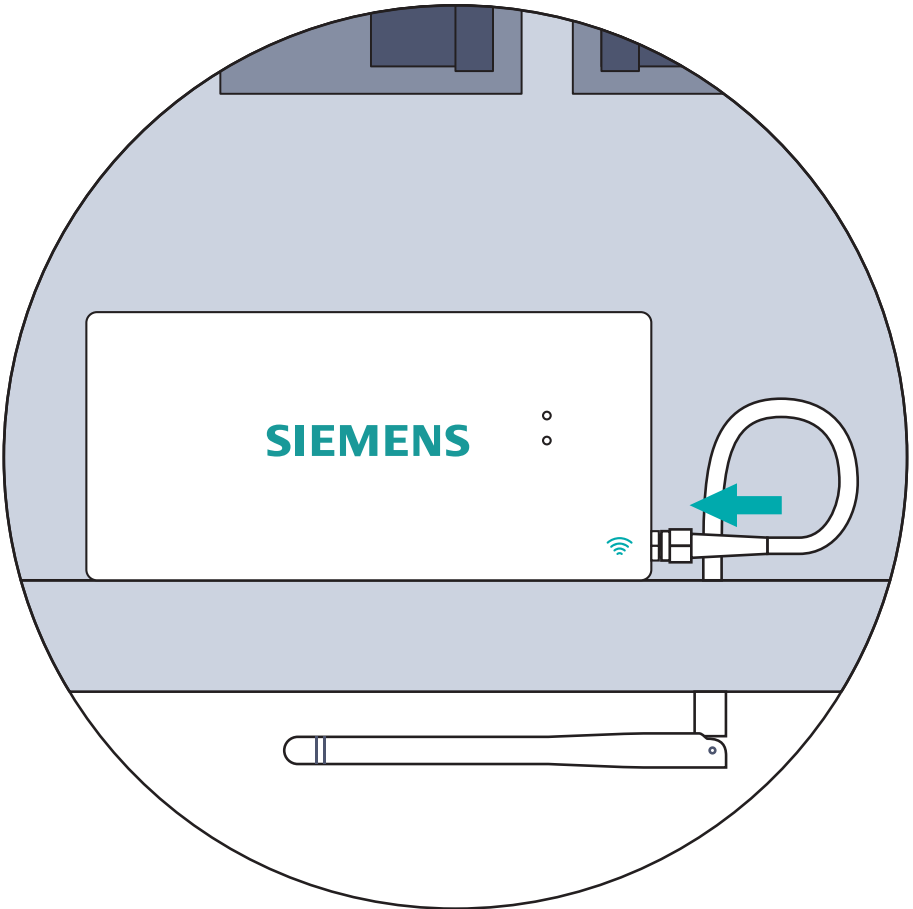
# Step 4(a): Prepare for wired LAN connection

This step is to prepare for a wired internet connection. To connect to the internet wirelessly via Wi-Fi, see Step 4(b). Run a Cat5e or higher ethernet cable with an RJ45 connector from a router, switch, or modem to the electrical panel. Then, use a screwdriver to remove a knockout from the electrical panel. Next, feed the cable through the hole to the Inhab Energy and plug it in the socket on the right-hand side of the energy monitor marked .



# Step 4(b): Prepare for Wi-Fi connection

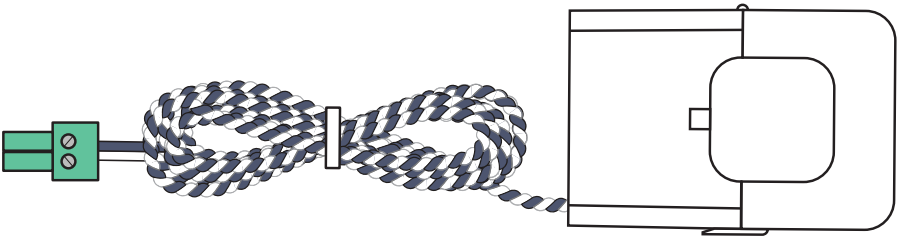
This step is to prepare for a wireless internet connection. To connect to the internet via wired LAN, see Step 4(a). Use a screwdriver to remove a knockout from the electrical panel. Now, feed the antenna through the hole. Then, screw the antenna assembly cable to the right-hand side of the energy monitor in the coaxial connector marked . Finally, plug the hole with the knockout plug. It's acceptable to install the antenna inside of a wall.



# Step 5: Installing Main current transformers

The Main CTs will attach to the incoming live mains. **They should not be used on neutral lines.** They will be installed differently depending upon whether or not the home has solar and how that solar system is connected to the electrical system. The Inhab Energy will be installed differently depending on whether the solar is a breaker-fed or a line-side tap installation. The Main CTs that connect to the mains will provide net metering out of the box — displaying electricity used minus electricity produced. These installations are covered in the subsequent pages. To monitor electricity used and electricity produced separately, Branch CTs will be used as described in Step 8.

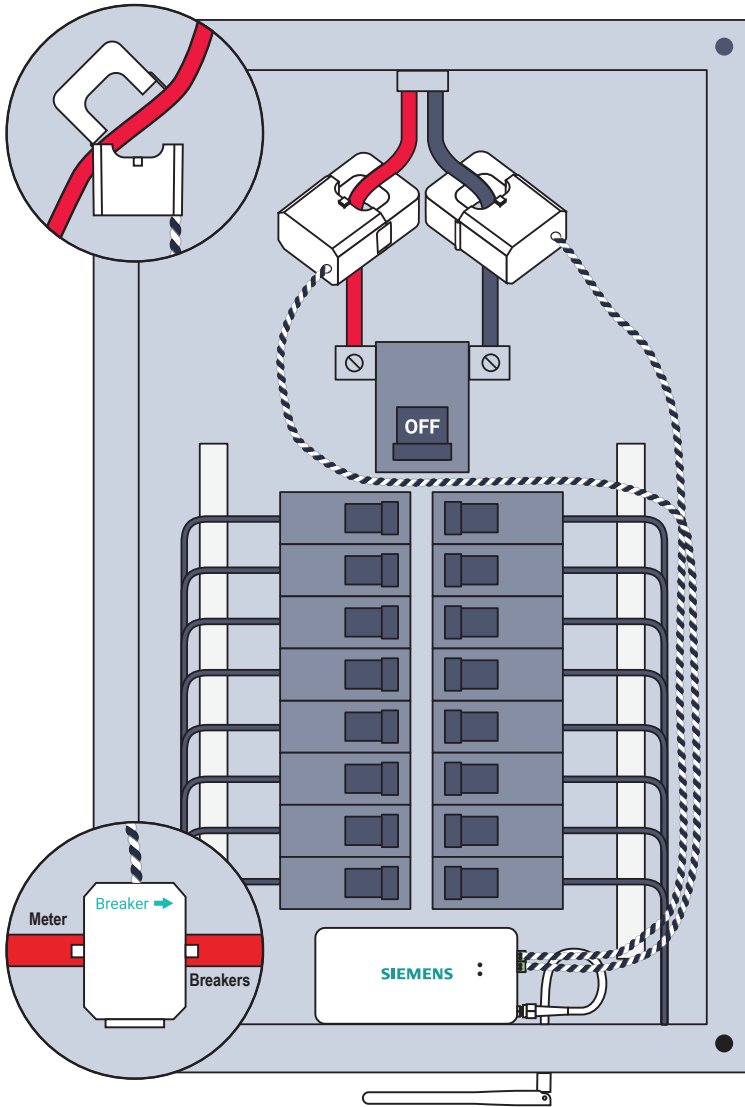
- Step 5(a): No solar Main CT
- Step 5(b): Breaker-fed solar Main CT
- Step 5(c): Line-side tap solar Main CT



**Note for Canadian Market:** If a service entrance barrier is installed, it may be necessary to temporarily remove barrier to install Main CTs.

# Step 5(a): No solar Main CT installation

Open the clasps on the CTs and place each clamp around one of the main service cables. Then, shut the clasps to secure the CTs. **IMPORTANT! The Breaker imprint on the bottom of CTs should point toward the main breaker or main lugs installed in the electrical panel.** Finally, insert the screw terminal plugs into the ports on the right side of the monitor. To avoid clutter, unscrew the 22 AWG wires from the screw terminals, cut them to size, and reattach them ensuring the black and white wires match the icons on the front of the Inhab Energy.



## DANGER

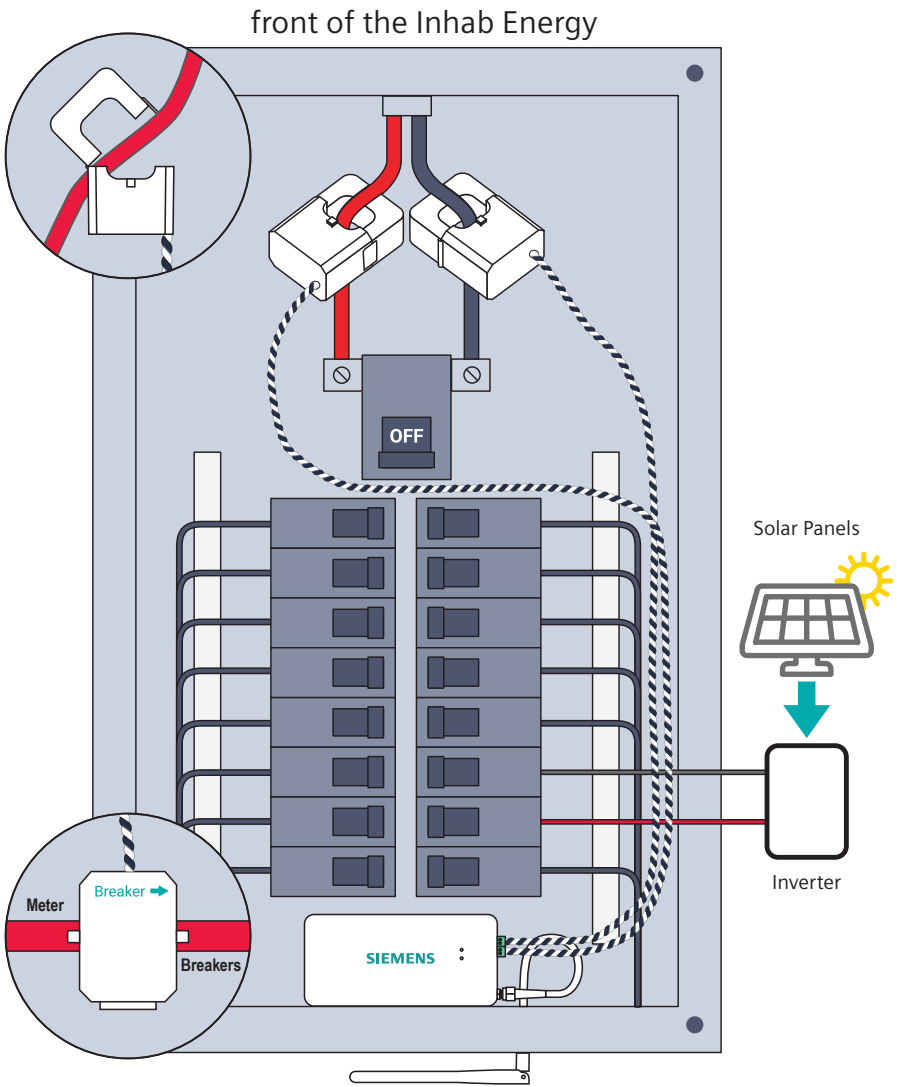
**Hazardous Voltage**  
**Will cause death or serious injury.**

Turn off and lock out all power supplying this device before working on this device. Replace all covers before power supplying this device is turned on.



# Step 5(b): Breaker-fed solar Main CT installation

Open the clasps on the CTs and place each clamp around one of the main service cables between the meter and the main breaker. Then, shut the clasps to secure the CTs. **IMPORTANT! The Breaker → imprint on the bottom of CTs should point toward the main breaker or main lugs installed in the electrical panel.** Finally, insert the screw terminal plugs into the ports on the right side of the monitor. To avoid clutter, unscrew the 22 AWG wires from the screw terminals, cut them to size, and reattach them ensuring the black and white wires match the icons on the front of the Inhab Energy.

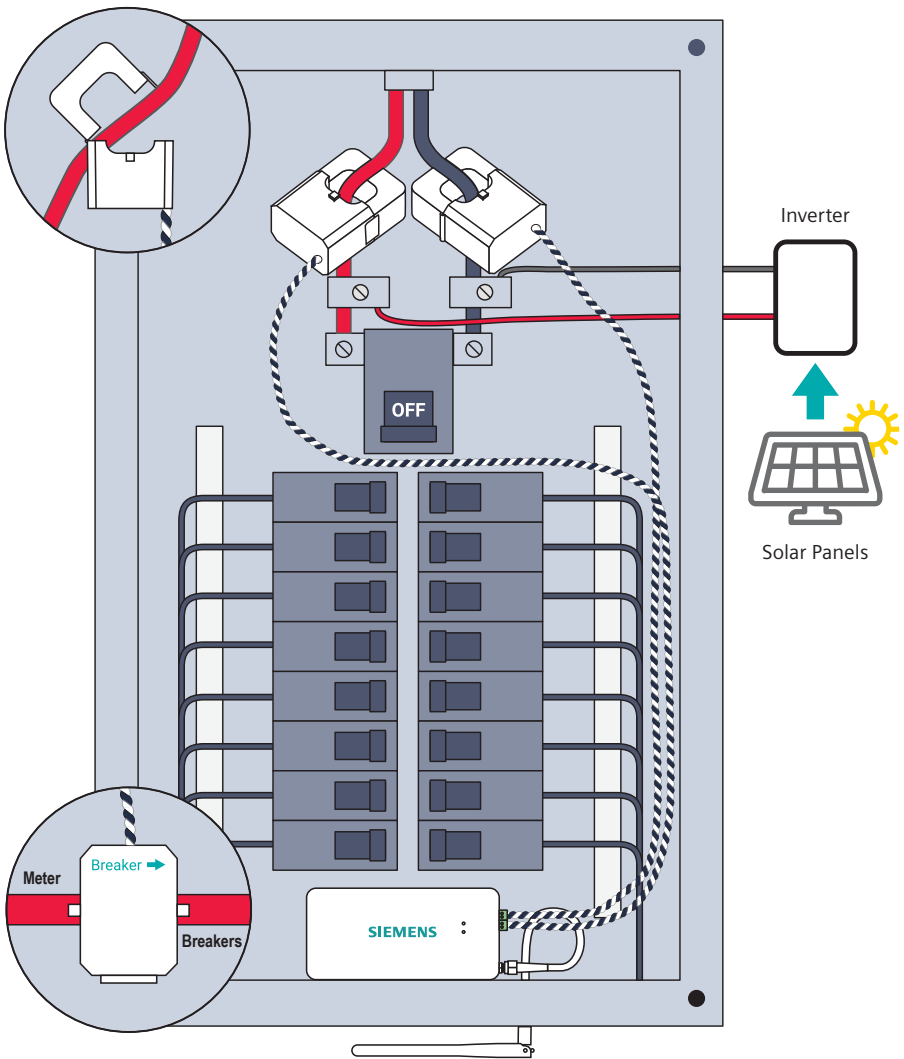


	<b>⚠ DANGER</b>
	<b>Hazardous Voltage</b> <b>Will cause death or serious injury.</b> Turn off and lock out all power supplying this device before working on this device. Replace all covers before power supplying this device is turned on.



# Step 5(c): Line-side tap solar Main CT installation

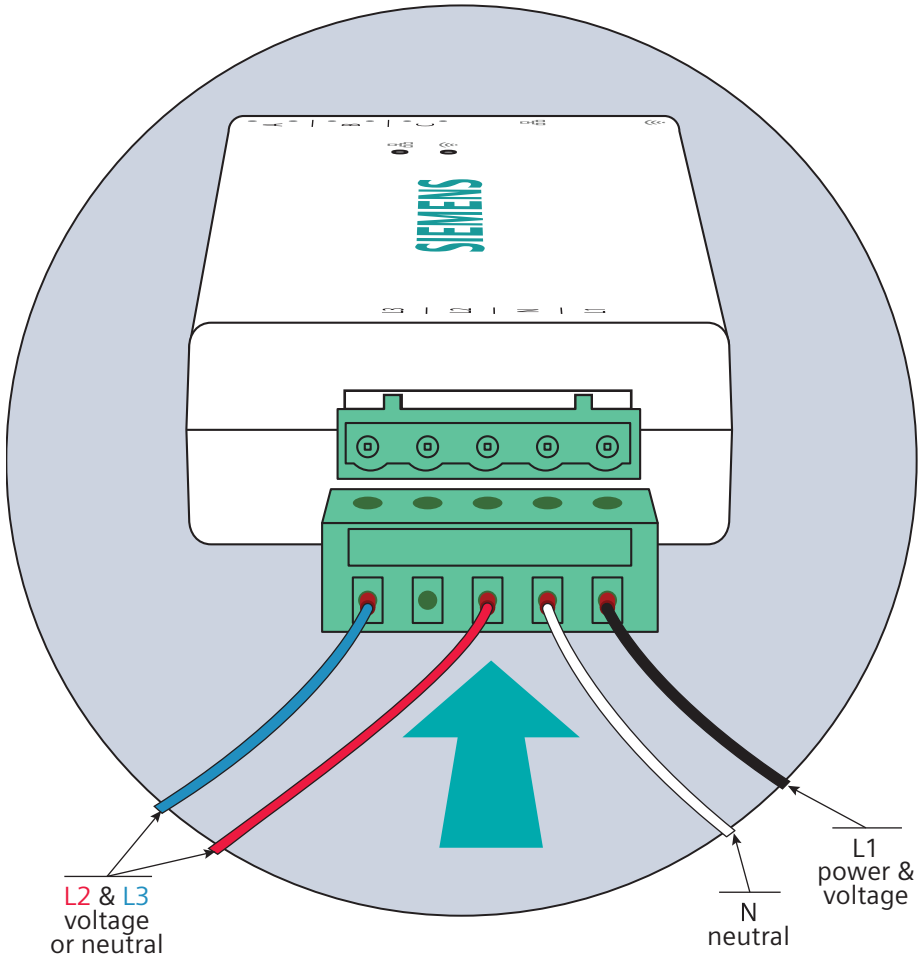
Open the clasps on the CTs and place each clamp around one of the main service cables between the utility meter and incoming line-side inverter taps. Then, shut the clasps to secure the CTs. **IMPORTANT! The Breaker imprint on the bottom of CTs should point toward the main breaker or main lugs installed in the electrical panel.** Finally, insert the screw terminal plugs into the ports on the right side of the monitor. To avoid clutter, unscrew the 22 AWG wires from the screw terminals, cut them to size, and reattach them ensuring the black and white wires match the icons on the front of the Inhab Energy.



	 <b>DANGER</b>
	<b>Hazardous Voltage</b> <b>Will cause death or serious injury.</b> Turn off and lock out all power supplying this device before working on this device. Replace all covers before power supplying this device is turned on.

# Step 6: Plug in the voltage sensing wire harness

Insert the 7.6mm screw terminal plug of the power supply wiring harness with four 16 AWG wire leads into the port of the left side of the energy monitor until it clicks into place securely. These wires can also be cut to length to reduce panel clutter. The wire harness allows for single-phase power and three-phase voltage sensing: Black (L1) provides power and voltage sensing, White (N) connects to Neutral, and Red (L2) and Blue (L3) provide voltage sensing only (if applicable).



# Step 7: Connect the wire harness

The wire harness is wired to one or more breakers in the electric panel.

## 1. Wiring to an empty breaker

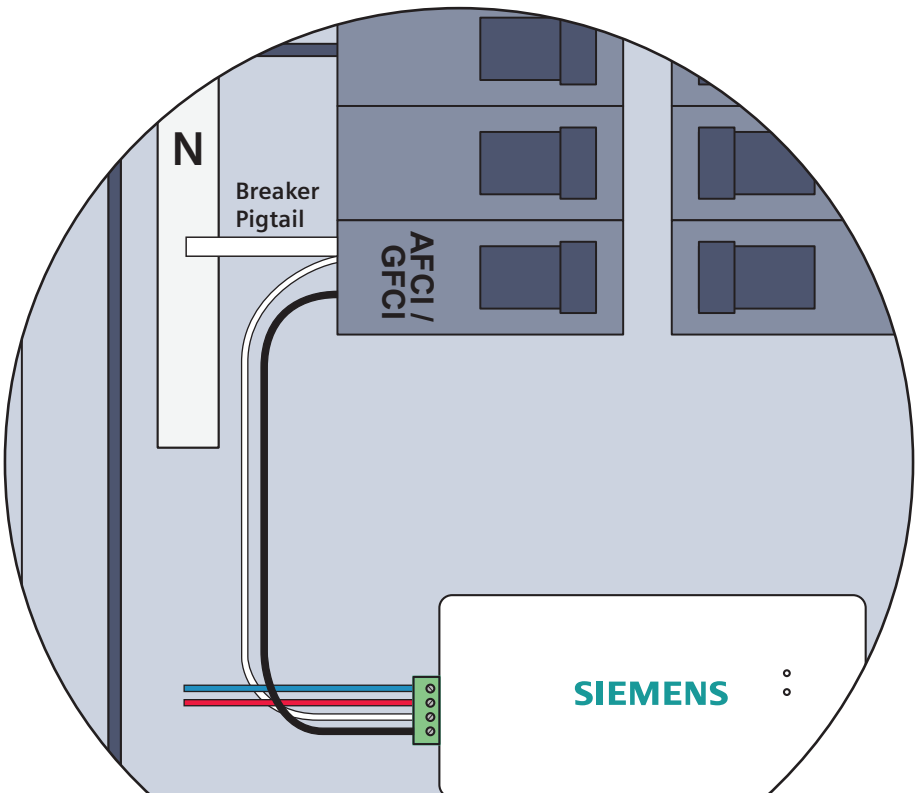
If wiring to an empty (unused) breaker, wire it directly to the breaker.

**Follow breaker manufacturer's instructions for breaker wiring connections.**

## 2. Wiring to a AFCI / GFCI breaker

If the wire harness is connected to an AFCI / GFCI breaker, *the black wire needs to be wired to the breaker load lug and the white wire may need to be wired to the breaker neutral lug depending on breaker brand and model.*

**Follow breaker manufacturer's instructions for breaker wiring connections.**



Typical wiring of white and black harness wires for AFCI/GFCI breakers. Always consult breaker manufacturer instructions for correct breaker wiring.



# DANGER

**Hazardous Voltage**

**Will cause death or serious injury.**

Turn off and lock out all power supplying this device before working on this device. Replace all covers before power supplying this device is turned on.



# Step 7 (continued): Connect the wire harness

The voltage sensing wire harness will be connected differently depending on the number of Main CTs installed in Step 5. Go to the step below based on the system. It is recommended to use dedicated breakers for voltage sensing wire connections. If you're unsure, contact Siemens Support and we'll help you through it.

## **Step 7(a) Common in split phase homes**

- Two empty breakers
- Two Main CTs

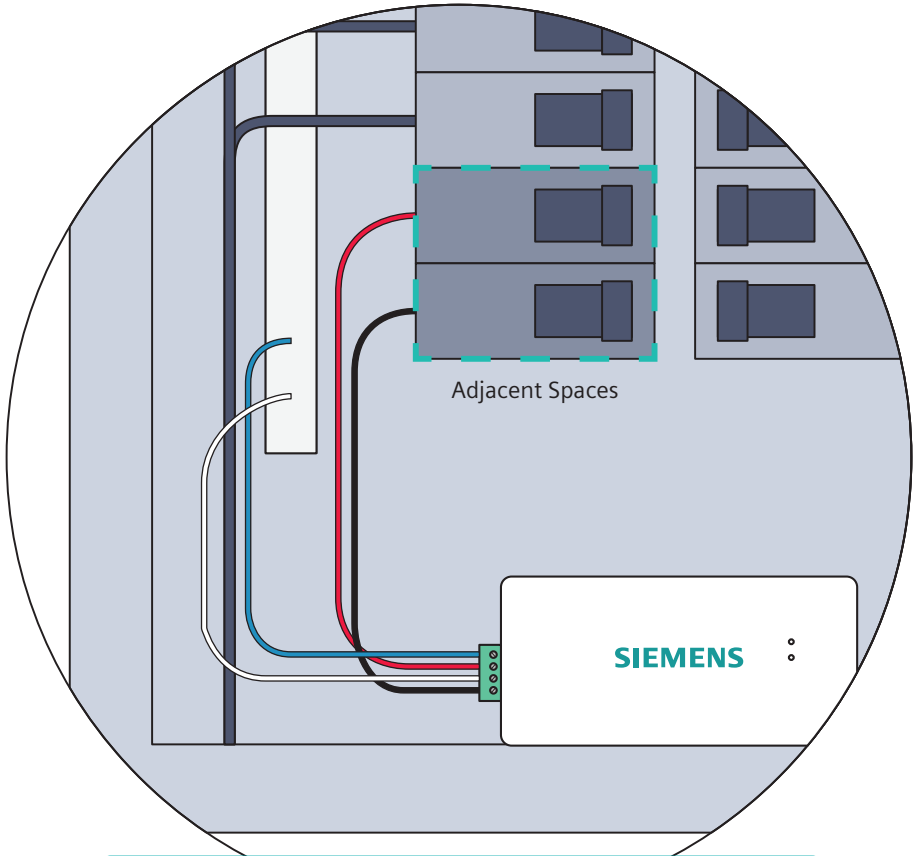
## **Step 7(b) Common in 3-phase commercial systems**

- Three empty breakers
- Three Main CTs

# Step 7(a): Two empty breakers and two Main CTs

## Common in split phase homes

Secure the White (N) and Blue (L3) wires from the wire harness to the neutral bus bar. Turn off breakers in two vertically adjacent (stacked) load center spaces and secure the Black (L1) and Red (L2) wires from the harness to each breaker terminal.



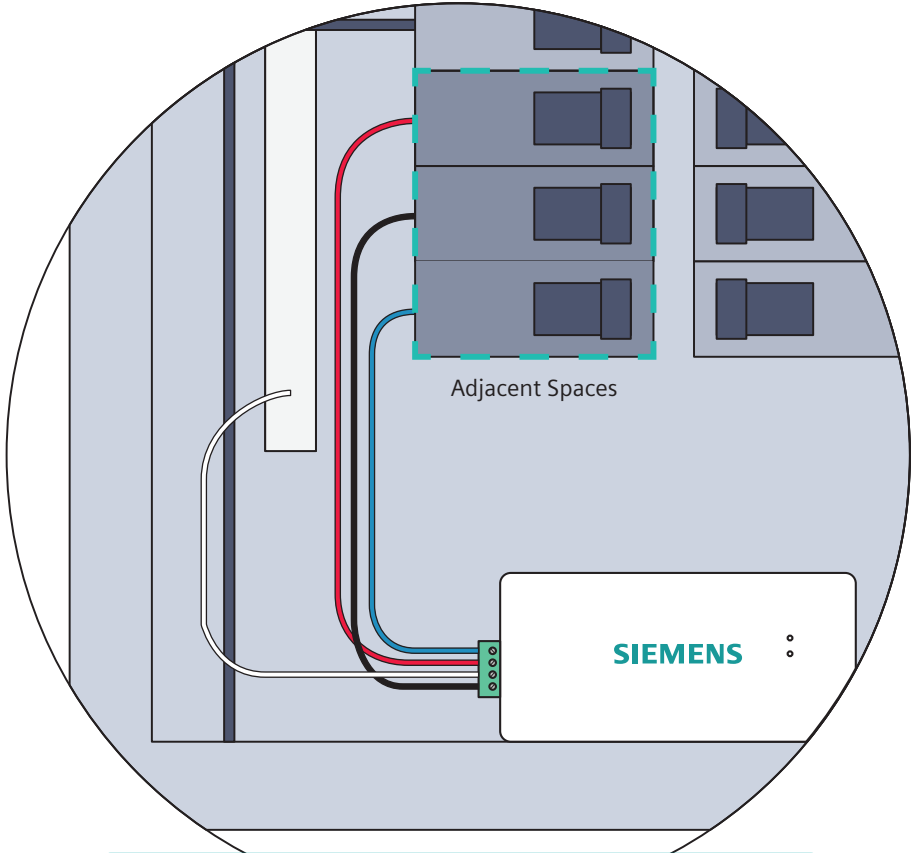
 Use maximum 15A circuit breaker

	 <b>DANGER</b>
	<b>Hazardous Voltage</b> <b>Will cause death or serious injury.</b> Turn off and lock out all power supplying this device before working on this device. Replace all covers before power supplying this device is turned on.

# Step 7(b): Three empty breakers and three Main CTs

## Common in 3-phase commercial systems

Secure the White (N) wire from the wire harness to the neutral bus bar. Turn off breakers in three vertically adjacent (stacked) load center spaces and secure the Black (L1), Red (L2), and Blue (L3) wires from the harness to each breaker terminal.



Use maximum 15A circuit breaker



## DANGER

**Hazardous Voltage**

**Will cause death or serious injury.**

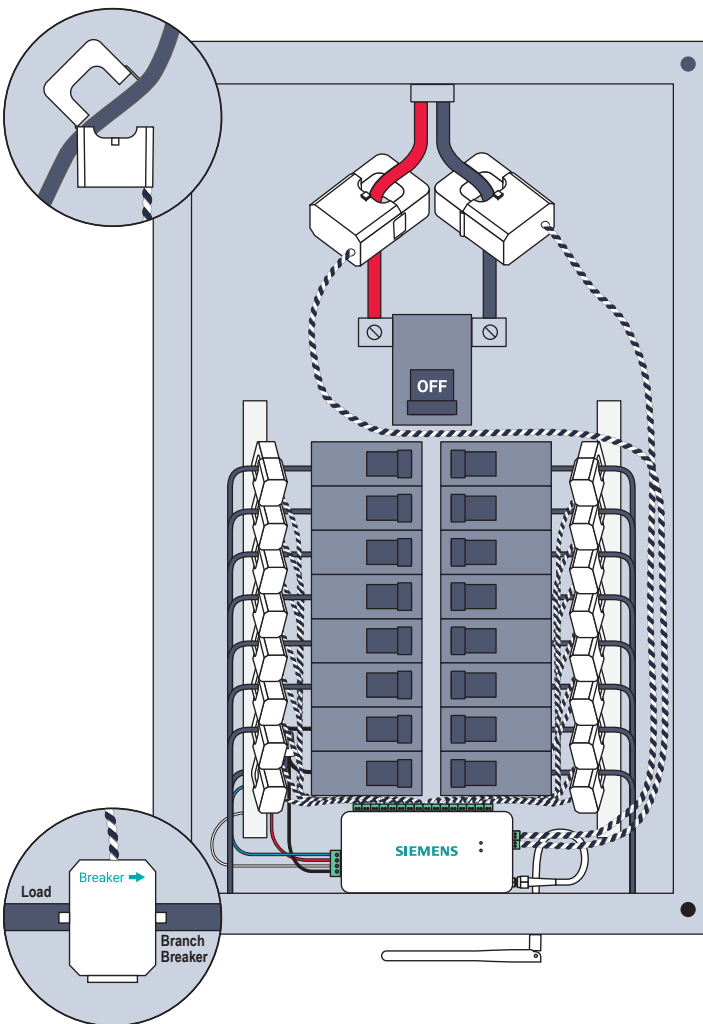
Turn off and lock out all power supplying this device before working on this device. Replace all covers before power supplying this device is turned on.



# Step 8: Plug in and connect the Branch current transformers

If the Inhab Energy has Branch CTs, open the clasps on the CTs and place each clamp around the non-neutral leg from the breaker that is to be monitored. Then shut the clasps to secure the CTs. Then, insert the screw terminal plugs into the ports on the top of the energy monitor. Note the circuit each CT is installed on and the port where CT is plugged into the energy monitor, this information will be needed later in the installation process for app setup. To avoid clutter, unscrew the 22 AWG wires from the screw terminals, cut them to size, and reattach them ensuring the black and white wires match the icons on the top of the Inhab Energy.

**Note:** Make sure that the **Breaker** ➔ imprint on the bottom of the CTs is pointing towards the branch breakers.



## DANGER

**Hazardous Voltage**

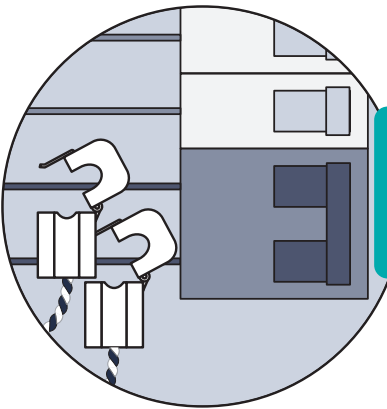
**Will cause death or serious injury.**

Turn off and lock out all power supplying this device before working on this device. Replace all covers before power supplying this device is turned on.

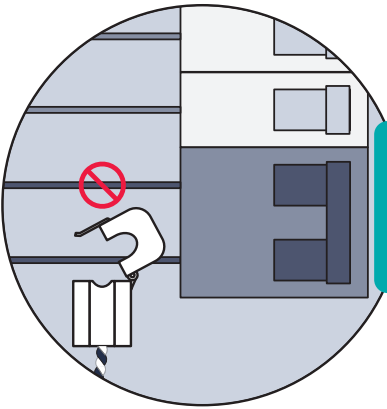


# Step 8 (continued): A note about multi-pole breakers

If 2- or 3-pole breakers are to be monitored, we recommended that one CT be used for on each pole; however, to conserve the number of CTs, a single CT can be used. To use a single CT, clasp the clamp around either one of the non-neutral leads coming off the breaker (it doesn't matter which). When only one CT is used, input a circuit multiplier in the app to double or triple the reading by entering a "2" or "3". **Using a single CT to monitor a multi-pole breaker does not accurately monitor unbalanced loads.**



Most accurate - Attach one branch sensor on each leg of the breaker



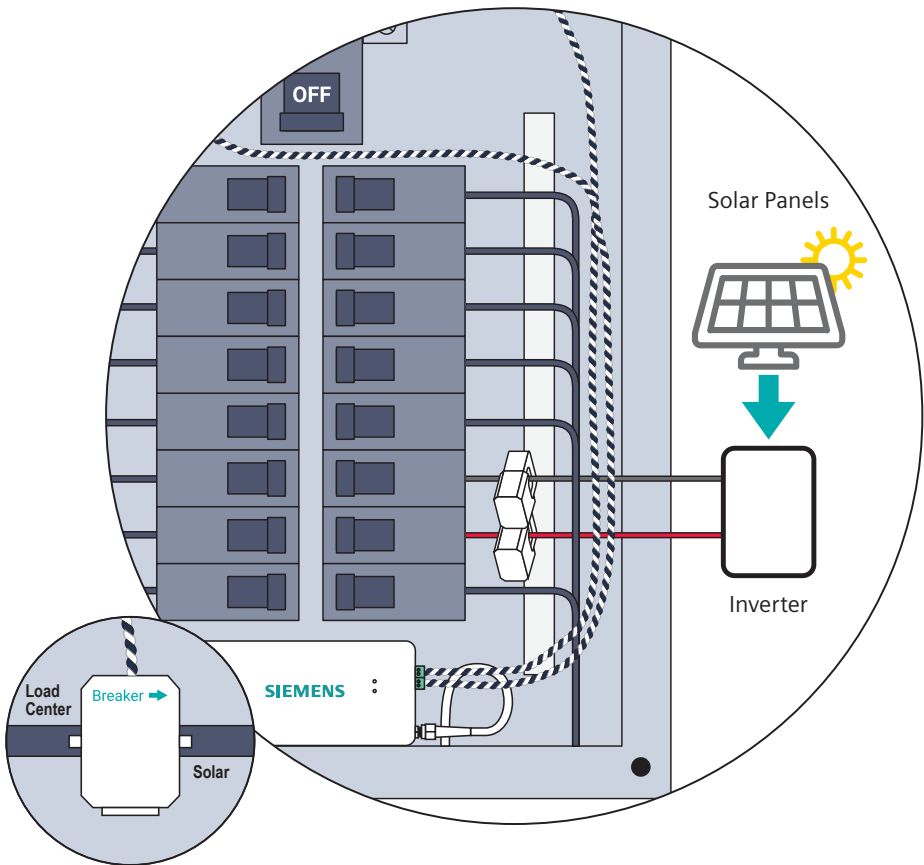
Less accurate - Attach one branch sensor on a single leg and use an app multiplier.

	 <b>DANGER</b>
	<b>Hazardous Voltage</b> <b>Will cause death or serious injury.</b> Turn off and lock out all power supplying this device before working on this device. Replace all covers before power supplying this device is turned on.



# Step 8 (continued): A note about solar monitoring

For the Inhab Energy to be able to calculate how much energy from the system is going to and from the grid, Branch CTs will need to be connected to the incoming leads from the inverter regardless of whether the solar is a breaker-fed or a line-side tap installation. **CTs installation orientation is reversed for solar wires therefore the Breaker ▶ imprint on the bottom of the CTs should point towards the solar inverter.** Specify the circuits monitored by these CTs as 'Solar/Generation' in the app. If only one CT is used, input a circuit multiplier in the app to double or triple the reading by entering a "2" or "3".

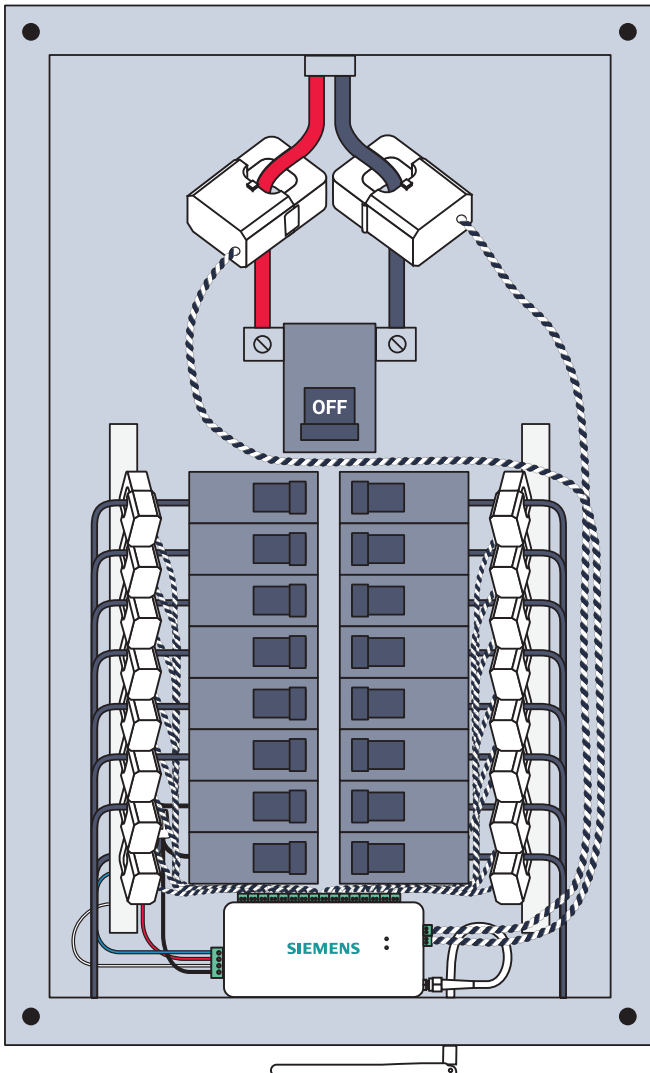
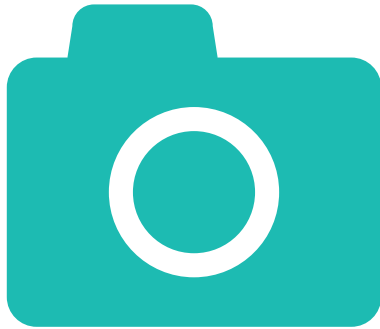


	 <b>DANGER</b>
	<b>Hazardous Voltage</b> <b>Will cause death or serious injury.</b> Turn off and lock out all power supplying this device before working on this device. Replace all covers before power supplying this device is turned on.

# Step 9: Take a photo of your system

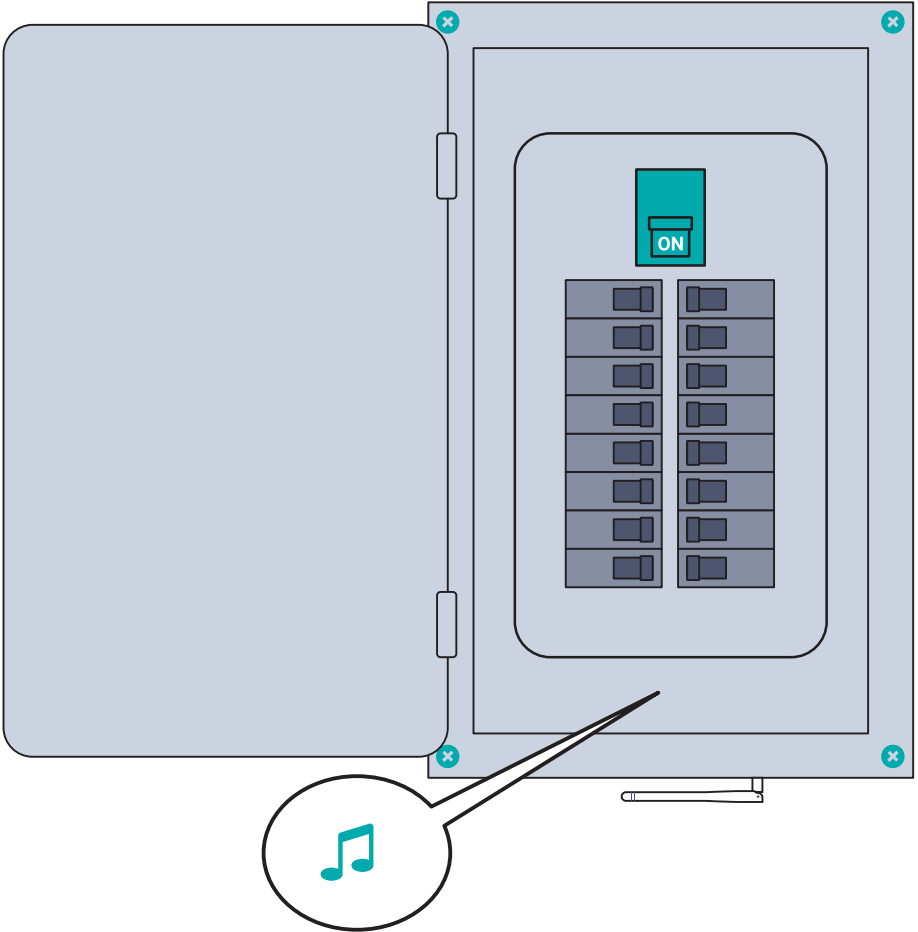
Before replacing your panel cover, take photos of the installation in case you need to contact support.

**Reminder:** Make sure you have noted the circuit each CT is installed on and the port where CT is plugged into the energy monitor. This information will be needed for app setup.



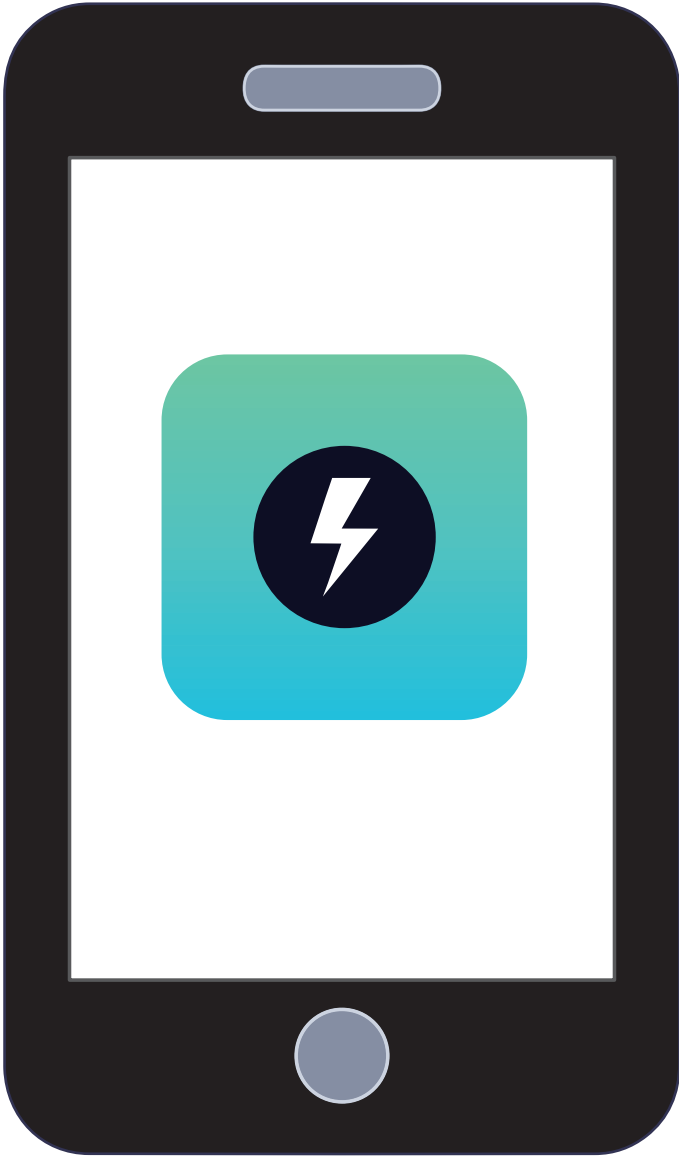
# Step 10: Replace the cover and turn on all breakers

Secure the cover to the box with any screws you removed in Step 2. Next, return any breakers to the on position that you moved to the off position during installation to restore power to the circuits in the home. You should hear a power up tone from the Inhab Energy to confirm it has power. Then, close the panel. Once the panel cover is replaced, the antenna connector and screw terminal ports on the Inhab Energy will not be accessible.



# Step 11: Complete setup

Return to the Siemens Inhab Energy app to continue the setup process that you began in Step 1 by scanning the QR code on the Inhab Energy or Getting Started Guide to connect the Inhab Energy to the internet via Wi-Fi or wired LAN connection.



# Troubleshooting Tips

Here are some of our most frequent troubleshooting tips. For more help, call the Siemens Technical Support number at 1-800-241-4453.

## The Siemens app is not finding the Inhab Energy after I've installed it.

- Ensure the Inhab Energy has power:
  - Check for a flashing Wi-Fi light.
  - Listen for a startup tone.
  - Check the wire harness is secure and wired properly.
  - Check that the main breaker is turned on.
  - Check that the breaker powering the Inhab Energy is turned on.
- Ensure your phone connect to the Inhab Energy.
  - Check your phone's Bluetooth is on.
    - If you're using an Android, turn on Location Services for your phone to properly scan for Bluetooth devices.
    - If you're using an iPhone, make sure Bluetooth is allowed in the Settings > Siemens Inhab Energy app > Bluetooth allowed
  - Ensure the Inhab Energy's Wi-Fi antenna has been installed properly.
    - Check the antenna is properly screwed into the energy monitor
    - Ensure the antenna is outside of the electric panel. It's ok if it is inside a wall, just ensure it's not inside the metal box.
  - Ensure the Inhab Energy's wired LAN connection is installed properly
    - Check that the ethernet cable is securely connected to the Inhab Energy's LAN port
    - Check that the ethernet cable is securely connected to a router, switch, or modem
    - Ensure the network does not have a firewall preventing new devices from accessing the internet
  - Try power cycling the breaker to which the Inhab Energy is connected.
  - Try restarting the Siemens App.
  - Try rebooting your phone.

## The Siemens Inhab Energy app isn't getting real-time data from the Inhab Energy

- Ensure all current transformers are securely fastened around their respective cables in the electric panel.
- Check the screw terminal plugs are securely plugged into the ports of the energy monitor.
- Check that the CT wires are securely connected to the screw terminals and that the screws are tight

# Troubleshooting Tips

**The Siemens app isn't showing solar net metering or grid measurements from the Inhab Energy.**

- Ensure the Main CTs are clamped on the mains between the meter and incoming leads from the solar inverter.
- Ensure all CTs are oriented as per the instructions. CTs are directional.
- Check that the appropriate wiring harness wires are attached to adjacent breakers on different phases
- When configuring the Inhab Energy with the App, make sure that you temporarily turn the solar off so it is not supplying power to the system. Try running the configuration at night.
- When configuring the Inhab Energy with the App, make sure that there is a discernible load on the system. Try turning on an oven, A/C, or dryer.

# Inhab Energy LED lights

The Inhab Energy has two LED lights on the front of the energy monitor, that can help troubleshoot the status of the internet connection and whether or not the monitor has power.



## Wi-Fi (and indication of power)

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Slowly Flashing Green	Not connected to router.
Quickly Flashing Green	Connected to router. Attempting Internet connection.
Solid green	Connected to Internet.

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## Wired LAN

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Off	Not connected to router.
Flashing Blue	Connected to router. Attempting Internet connection.
Solid Blue	Connected to Internet.

---

# Technical Details

## Energy Monitor (INHEM1216)

### Supported system configurations:

- Single phase, 2-wire systems
- Single-split phase, 3-wire systems
- 3-phase, 4-wire Wye systems with earthed (TN or TT) neutral (no-Delta)
- Fuse: 260VAC/0.3A (Fusible resistor: 10E, 1W, 5%, TH)
- Maximum voltage sense range: 264VAC L-N per channel
- Power usage: < 3 Watts
- Wi-Fi: 2.4 GHz IEEE 802.11b/g/n
- Ethernet: 10/100Base-T, IEEE 802.3
- Operating conditions: -40° - 122° F (-40° - 50° C) | 0-80% RH 3,000 meters above sea level | Indoor | Dry location Pollution Degree 2

### Terminals:

- Ethernet: Cat5e, RJ45, 600V insulation required
- WiFi: SMA coaxial cable, 50Ω impedance, 600V insulation required
- Voltage Terminals:
  - ~100-240VAC line-to-neutral, 50/60Hz, 41mA, Overvoltage / Measurement CAT III
  - Field terminal torque value: 5Lb-In/0.56Nm 16AWG, UL1015, 600V, 105C copper-only wiring
- Main Current Transformer Terminals:
  - 3.3V, 1mA, Measurement CAT IV
  - Field terminal torque value: 5Lb-In/0.56Nm 22AWG, UL1015, 600V, 105C copper-only wiring
- Branch Current Transformer Terminals:
  - 3.3V, 1mA, Measurement CAT III
  - Field terminal torque value: 3Lb-In/0.2Nm 22AWG, UL1015, 600V, 105C copper-only wiring

## Main Current Transformers (INHEM010)

- Max Primary Current: 200A
- Max Voltage: 250V (Primary) / 333mV (Secondary)
- Burden Resistor: 5ohm, 1%, 1/4W
- Cable length: 1m
- Inside diameter: 22 mm
- Accuracy: ±2%

## Branch Current Transformers (INHEM001)

- Max Primary Current: 50A
- Max Voltage: 250V (Primary) / 333mV (Secondary)
- Burden Resistor: 20ohm, 1%, 1/4W
- Cable length: 1m
- Inside diameter: 10 mm
- Accuracy: ±2%

# Information de sécurité



Ceci est le symbole d'alerte de sécurité. Il est utilisé pour vous avertir des risques potentiels de blessures corporelles. Respectez tous les messages de sécurité qui accompagnent ce symbole pour éviter d'éventuelles blessures ou la mort.



## AVERTISSEMENT

AVERTISSEMENT indique une situation dangereuse qui, si elle n'est pas évitée, peut entraîner la mort ou des blessures graves.



## AVERTISSEMENT

L'installation de transformateurs à l'intérieur du panneau électrique de votre maison et une tension dangereuse pouvant entraîner des blessures ou la mort. Siemens vous prions de bien vouloir que l'installation soit effectuée par une personne qualifiée, telle qu'un électricien agréé ou un autre professionnel qualifié, conformément au code électrique régional du lieu d'installation.

Une installation ou une utilisation incorrecte de l'équipement peut être dangereuse, voire mortelle. Siemens ne pourra en aucun cas être tenu responsable envers vous ou un tiers pour tout dommage, direct ou indirect, pour une blessure personnelle résultant de votre non-respect des informations et instructions de sécurité contenues dans ce guide d'installation.

# Information de sécurité



## AVERTISSEMENT

- Coupez l'alimentation du panneau électrique avant l'inspection. Portez des lunettes et des gants de protection avant de tenter d'inspecter le système Inhab Energy. Assurez-vous qu'aucun câblage pour la mesure de tension, la mesure de courant, l'alimentation ou les données n'est éloché ou n'a de conducteurs exposés. Assurez-vous qu'il n'y a pas de fissures, de cassures ou d'autres défauts dans le boîtier du Inhab Energy ou des CT.
- Si vous pensez que l'un des composants de l'Siemens Inhab Energy peut avoir été endommagé, n'essayez pas de l'utiliser. Contactez immédiatement l'assistance à [support@emporiaenergy.com](mailto:support@emporiaenergy.com).
- N'utilisez pas l'Siemens Inhab Energy d'une manière autre que celle spécifiée dans ce guide d'installation, sinon la protection fournie par l'équipement pourrait être altérée.
- N'essayez pas d'ouvrir, de démonter ou de réparer l'un des composants de l'Siemens Inhab Energy.
- N'installez pas l'Siemens Inhab Energy dans des environnements contenant des gaz ou des vapeurs explosifs ; ni dans des environnements humides ou mouillés ; ni en plein soleil ; ni lorsque les températures sont constamment inférieures à -40 °F (-40 °C) ou supérieures à 122 °F (50 °C).
- Assurez-vous que l'Siemens Inhab Energy n'est pas sous tension pendant toute manipulation, y compris l'installation et le démontage.
- N'effectuez aucun entretien, service ou nettoyage du Inhab Energy après l'installation. Contactez le service client pour obtenir de l'aide.
- L'Siemens Inhab Energy ne doit être utilisé qu'avec des transformateurs de courant de surveillance de l'énergie répertoriés. Isolation de base, utilisez les TC uniquement sur un conducteur isolé, à l'abri des contacts avec des pièces sous tension.
- Pour réduire le risque de choc électrique, toujours ouvrir ou déconnecter les circuits du système de distribution d'alimentation (ou de service) d'un bâtiment avant l'installation ou l'entretien transformateurs de courant.
- L'Siemens Inhab Energy doit être câblé à l'aide de fils de cuivre 16AWG, 600V, UL1015, 105° C (ou plus)
- Il est recommandé de câbler l'Siemens Inhab Energy au disjoncteur le plus proche de l'appareil.

# Information de sécurité



## AVERTISSEMENT

- Ne placez pas l'Siemens Inhab Energy de manière à ce qu'il soit difficile d'actionner des dispositifs de déconnexion ou des disjoncteurs.
- N'utilisez pas d'accessoires tiers ou Current Transformateurs (TC) avec l'Siemens Inhab Energy. Le Inhab Energy et les CT sont personnalisés et intégrés. Les accessoires tiers ou les TC peuvent compromettre l'exactitude des données et la sécurité de l'équipement.
- Les transformateurs de courant ne peuvent pas être installés dans des équipements où ils dépassent 75 % de l'espace de câblage de toute section transversale de l'équipement.
- Restreindre l'installation des transformateurs de courant dans une zone où cela obstruerait les ouvertures de ventilation.
- Restreindre l'installation des transformateurs de courant dans une zone d'évacuation d'arc du disjoncteur. N'installez pas le moniteur d'énergie Siemens Inhab Energy dans une zone où les gaz d'échappement de la ventilation de l'arc du disjoncteur pourraient être redirigés à la suite de l'installation d'un équipement de sous-mesure.
- L'Siemens Inhab Energy n'est pas adapté aux méthodes de câblage de classe 2 et n'est pas destiné à être connecté à un équipement de classe 2. (Se référer à NEC 2023, l'article 725.)
- Sécurisez les transformateurs de courant et acheminez les conducteurs de manière à ce qu'ils n'entrent pas directement en contact avec les bornes sous tension ou les bus.
- L'Siemens Inhab Energy ne doit pas être monté à moins de 50,8 mm (2 pouces) de toute pièce sous tension, y compris les conducteurs primaires, les bornes primaires et les cosses primaires ; mais à l'exclusion des câbles isolés. Il est acceptable que le Inhab Energy soit monté sur le boîtier du panneau mis à la terre et près des barres omnibus neutres/terre. Le Inhab Energy utilise un câblage de classe I permettant à ses fils de coexister en toute sécurité avec tous les autres fils du panneau.
- Si le moniteur d'énergie Siemens Inhab Energy est fixé au boîtier, il ne doit pas entrer en contact avec l'isolation intérieure du panneau, telle que le matériau qui sépare les barres omnibus GND et LIVE.
- Les dispositions de montage du moniteur d'énergie Siemens Inhab Energy ne doivent être fixées à aucune pièce sous tension.
- Les connexions de détection de tension et d'alimentation électrique à la tension primaire doivent être protégées contre les surintensités par le biais d'une connexion à un disjoncteur/MCB.



Energy Monitor  
E527638, E527638, E535044



Measurement categories are defined by the CE and UL safety standard IEC 61010-1 and are used to indicate the ability of an instrument (like the Inhab Energy Monitor) to withstand voltage spikes without posing a shock hazard to the operator. An instrument should only be used at or below its rated measurement category and voltage. For example, the Inhab Energy Monitor is CAT III rated and can be used to monitor CAT I, CAT II, and CAT III circuits.

CAT III: This category is for measurements performed on equipment permanently installed in the building. Examples are measurements on motor control centers, circuit-breaker panels, junction boxes, switches, lighting fixtures, and wiring, including cables, bus-bars, and equipment for industrial use and some other equipment, for example, stationary motors with permanent connections to the electrical distribution system.

There are situations where the Inhab Energy Monitor needs to monitor the main service entrance, which is classified as CAT IV. In this situation, the Inhab Energy voltage inputs (green screw terminal block) must be connected in a breaker panel or panel board, downstream of a the main disconnect, breaker, or fuses. The line voltages at this location will be essentially identical to the voltages measured at the main disconnect, so the Inhab Energy's measurements will be accurate.

## IC

This device complies with Industry Canada licence-exempt RSS-247 standard. 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.

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.



FCC ID:  
2AS6P-EMV3A  
Model: EMV3-A

## Federal Communication Commission Interference Statement

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 of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and 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.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

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.

***Caution: Any changes or modifications not expressly approved by Siemens void the user's authority to operate the equipment.***

**Legal Manufacturer**

Siemens Industry, Inc.  
3617 Parkway Ln  
Peachtree Corners, GA 30092  
United States of America  
[www.usa.siemens.com/InhabEM](http://www.usa.siemens.com/InhabEM)  
Order No. PDIG-INHABEM-0424

**Product Support:**

Web: [usa.siemens.com/InhabEM](http://usa.siemens.com/InhabEM)  
Telephone: 1-800-241-4453  
Tech Login: [usa.siemens.com/InhabEM\\_tech](http://usa.siemens.com/InhabEM_tech)

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