Frequently Asked Questions

The Leviton Load Center

- **What is the Leviton Load Center?**
  The Leviton Load Center is an innovative residential electrical circuit breaker panel that offers contractors and homeowners an easy to install, safe and approachable solution to home energy management. Its award-winning installation design, safety features that exceed the UL standard and optional internet connectivity have made it the industry’s most advanced load center to date.

- **How is the Leviton Load Center installed?**
  Leviton offers the fastest installing circuit breakers available on the market today, saving builders and contractors on installation time and increasing jobsite efficiency. Trim-out is also the fastest on the market - circuit breakers up to 60A feature a no-pigtail, fully plug-on design, so the entire panel, up to 60A using copper wire, can be wired at rough-in. At trim-out, simply plug on the breaker to complete the circuit.

  Smart circuit breakers install the same as our standard circuit breakers along with our single data hub installed at the panel. The system automatically discovers and connects each of the smart circuit breakers through the My Leviton app. Wi-Fi® or Ethernet (hardwire) connectivity set up is simple and straightforward.

- **What types of circuit breakers does Leviton offer?**
  Leviton offers several types of circuit breakers to ensure the right fit for your project’s application. Each variety of circuit breaker is available in a range of amperage ratings and protection types: Standard, AFCI, GFCI, AFCI/GFCI and GFPE.

  - **Thermal Magnetic circuit breakers** are best suited for traditional indoor installations
  - **Hydraulic Magnetic circuit breakers** are ideal for harsh climates, where temperatures may be extreme, and operate from -40°C to 85°C (-40°F to 185°F)
  - **Smart circuit breakers** are internet connected and feature hydraulic magnetic technology, making them suitable for harsh climates

- **Why do Leviton hydraulic magnetic circuit breakers sometimes feel warm to the touch?**
  Due to the construction of Leviton’s hydraulic magnetic branch circuit breaker, current flows nearer to the face of the breaker than some competitive breakers.

- **How does construction and current flow affect temperature?**
  Electrical currents generate heat and Leviton hydraulic magnetic breakers’ internal current carrying components reside near the face of the circuit breaker. Temperatures up to 40°C (104°F) can be measured at the face of the breaker near the handle, which is far below UL temperature limit of 60°C (140°F). In some competitive circuit breakers, the current path is located more toward the back plane. Due to this, these breakers will feel cooler toward the front. Based on Leviton’s testing, overall internal temperatures are very similar.
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- **Does this affect performance?**
  This doesn’t affect performance at all. As defined by UL in the UL489 standard dated June 2011, the following applies:
  - Handles, knobs and other user surfaces: UL489, paragraph 7.1.4.1.6 states that the maximum temperature on handles, knobs, and other surfaces subject to user contact during normal operation shall not exceed 60°C (140°F) on metallic and 85°C (185°F) on nonmetallic surfaces.

**Table 1: Summary of temperature rise and maximums for a standard rated breaker (breakers are calibrated in 40°C ambient)**

<table>
<thead>
<tr>
<th>Surface</th>
<th>Temp. rise above ambient</th>
<th>Temp. max at 40°C ambient (104°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Termination on standard rated breaker</td>
<td>50°C (90°F)</td>
<td>90°C (194°F)</td>
</tr>
<tr>
<td>Termination on 100% rated breaker</td>
<td>60°C (108°F)</td>
<td>100°C (212°F)</td>
</tr>
<tr>
<td>Handles, knobs, other user contact surfaces – Metallic</td>
<td>N/A</td>
<td>60°C (140°F) Maximum</td>
</tr>
<tr>
<td>Handles, knobs, other user contact surfaces – Nonmetallic</td>
<td>N/A</td>
<td>85°C (185°F) Maximum</td>
</tr>
</tbody>
</table>

For more information on the differences between Thermal Magnetic and Hydraulic Magnetic circuit breakers, please review our [Technical Application Note](#).

- **When would you use a 2-pole AFCI breaker?**
  2-pole AFCI breakers are needed for multi-wire branch circuits, also known as “shared neutrals” or “Edison circuits”. The definition of a multi-wire branch circuit provided by NEC 210.4 is circuits that “consist of two or more ungrounded conductors that have voltage between them, and a grounded conductor that has equal voltage between it and each ungrounded conductor of the circuit, and that is connected to the neutral or grounded conductor of the system”. Another important point from this section of Code, is that all conductors for a multi-wire branch circuit must originate from the same panel. The NEC made a change in 2011, in section 200.4, that “prohibits installation of ungrounded conductors on the same phase, to share a neutral”, essentially ending this practice.

  Shared neutrals were quite common in the past so when upgrading a panel or replacing breakers you may see shared neutrals. To meet the latest version of the NEC, if AFCI protection is required on the shared neutral circuits being wired, you will be unable to use a 1-pole AFCI breaker, because in order for the 1-pole AFCI to function properly, you need a dedicated conductor for the line and neutral.

  When wiring a dedicated circuit with AFCI protection, the line conductor is wired from the ‘A’ phase lug of the breaker that feeds a dedicated load device and the neutral return is wired back to the neutral lug for that same breaker. For a multi-wire branch circuit with a shared neutral, the difference is two-line conductors are used. Line conductors will be wired from phase ‘A’ and ‘B’ lugs of the breaker that feeds load devices and the neutral return will be shared with one
conductor landing on the neutral lug ‘C’ for the same breaker. 2-pole AFCIs are NOT 240V rated. See Figure below.

- **How can I troubleshoot a Leviton 2-Pole AFCI circuit breaker?**

Leviton’s 2-pole AFCI circuit breaker is intended to be used on a multi-wire circuit (shared neutral) applications. Each Phase is rated at 120V with a common trip. The 2-pole AFCI breaker will monitor and protect two separate circuits that share a neutral. The breaker’s rocker handle and LEDs indicate the status per the matrix below:

<table>
<thead>
<tr>
<th>Handle Window</th>
<th>LED “←→”</th>
<th>LED “↑↓”</th>
<th>Device Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>Red</td>
<td>OFF</td>
<td>OFF</td>
<td>Overload or short-circuit trip</td>
</tr>
<tr>
<td>Red</td>
<td>ON</td>
<td>OFF</td>
<td>Series arc-fault trip (LEFT POLE)</td>
</tr>
<tr>
<td>Red</td>
<td>OFF</td>
<td>ON</td>
<td>Series arc-fault trip (RIGHT POLE)</td>
</tr>
<tr>
<td>Red</td>
<td>BLINK (1 second)</td>
<td>OFF</td>
<td>Parallel arc-fault trip (LEFT POLE)</td>
</tr>
<tr>
<td>Red</td>
<td>OFF</td>
<td>BLINK (1 second)</td>
<td>Parallel arc-fault trip (RIGHT POLE)</td>
</tr>
<tr>
<td>Red</td>
<td>BLINK (0.1 second)</td>
<td>OFF</td>
<td>Electronics self-test failure on LEFT POLE (breaker will be locked out and must be replaced)</td>
</tr>
<tr>
<td>Red</td>
<td>OFF</td>
<td>BLINK (0.1 second)</td>
<td>Electronics self-test failure on RIGHT POLE (breaker will be locked out and must be replaced)</td>
</tr>
<tr>
<td>Red</td>
<td>OFF</td>
<td>Both LEDs BLINK (3 seconds)</td>
<td>Neutral miswired</td>
</tr>
<tr>
<td>White</td>
<td>OFF</td>
<td>OFF</td>
<td>Manual OFF</td>
</tr>
</tbody>
</table>
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- **How do circuit breakers reset after a trip?**
  To reset a Leviton circuit breaker, you must turn the breaker OFF, and then back ON.

- **What safety features does the Leviton Load Center offer?**
  Leviton continuously builds upon its legacy as an industry leader in safety innovation. Beyond its optional smart functionality, the Leviton Load Center offers the only circuit breakers on the market with Leviton’s groundbreaking GFCI technology that exceeds existing UL 943 requirements. No other circuit breaker on the market provides this level of end-of-life protection.
  Apart from exceeding UL requirements, Hydraulic magnetic circuit breakers feature precision trip technology, helping to ensure breakers operate as intended from -40°C to 85°C (-40°F to 185°F) without re-rating.

- **What are some of the benefits of choosing Leviton smart circuit breakers?**
  Users can choose optional internet-connected circuit breakers to enjoy remote energy management options such as real time monitoring and tracking, remote tripping and system updates and alerts sent to their smartphones, tablets or desktops via the My Leviton app. Using a central data collection hub, the system’s status is securely sent to the My Leviton app. This communication capability helps give homeowners peace of mind that their electrical system is functioning properly no matter where they are in the world. In addition, access to the My Leviton app helps contractors securely troubleshoot issues without being in front of the unit itself.

- **I already have a Leviton Load Center. How do I make it smart?**
  You can easily upgrade a Leviton Load Center by purchasing the Data Hub kit and replacing your standard breakers with smart circuit breakers. This should be done by a licensed electrician. The enclosure itself does not change. Then, simply download the free My Leviton app on Google Play or the Apple Store and you’ll be walked through the easy pairing process.

- **If I choose Leviton smart circuit breakers and I use solar energy, will they measure the current produced by the panels?**
  The app is not currently set up to clearly delineate solar PV systems. It is a planned feature, however, for future releases.

- **Will the Leviton smart circuit breakers work with 3rd party devices: Alexa, Google Assistant or IFTTT?**
  Not at this time.

- **Do I need Wi-Fi to make my panel a smart panel?**
  The Data Hub is equipped with Wi-Fi or ethernet capabilities. In addition, if an internet connection is not available at the time of installation the panel can be still be configured and paired to a My Leviton app account later.

- **What is the name of the app and where can I find it?**
  The name of the app is My Leviton. It is available as a free download on Google Play and the Apple Store. You can also use the My Leviton app to control the Decora Smart™ with Wi-Fi® product line.
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- **Can the My Leviton app be used on the computer?**
  Yes, there is a web (desktop) app available in addition to the mobile app. It can be found at [https://my.leviton.com](https://my.leviton.com).

- **How do users manage their smart circuit breakers through the My Leviton app?**
  The My Leviton app gives homeowners the ability to manage their home’s energy usage and monitor their smart circuit breakers through their smartphones, tablets or desktops. Within the My Leviton app, homeowners can:
  - Monitor electricity usage per branch circuit breaker
  - Review their home dashboard to see system status
  - Analyze graphs around ‘cost’ and ‘energy consumption’ to better monitor their energy use for each circuit and track their electricity bill
  - Receive alerts if a critical circuit has tripped, or if a particular appliance has been left ON (like an oven) or, conversely, is not drawing power (like a refrigerator)

The My Leviton app also helps ensure that the Leviton Load Center’s smart circuit breakers are always functioning with the latest firmware.

Additionally, the My Leviton app platform offers users the ability to add Leviton Decora Smart Wi-Fi wiring devices once installed in the home – allowing them to set schedules, create activities and take advantage of voice control through our Amazon Alexa and Google Assistant partners for these devices.

- **Can contractors be added as notification recipients?**
  Yes, contractors may be invited as a User to your Residence via the My Leviton app and they can then set up notifications.

- **How accurately can the circuit breakers measure energy consumption?**
  The Leviton Smart Circuit Breakers can measure consumption at ± 3% accuracy.

- **How do you remotely update firmware with Leviton’s smart circuit breakers?**
  Firmware is software that is utilized by small microcontrollers or processors inside of hardware devices and is usually designed for specific purposes. In the case of a circuit breaker with electronics (AFCI, GFCI, AFCI/GFCI), firmware is embedded to sense electrical signals and act if a potentially unsafe situation—like a ground fault or arc fault—is detected.

  With Leviton smart circuit breakers, additional firmware is embedded to enable metering and communication capabilities. From time to time, Leviton may push firmware updates to the breaker to improve communication functionality or fix minor bugs, similar to how a smart phone operates. These kinds of updates do not require user intervention.

  In addition, Leviton’s smart AFCI and AFCI/GFCI circuit breakers have the capability to capture an arc’s “signature” (waveform) during an arc fault trip event. This signature can be transmitted to the Leviton cloud, so we can analyze the arc for future improvements.

  In one example, a homeowner reports an AFCI trip to their local electrician. The electrician should then contact Leviton Tech Support to work through all arc fault troubleshooting procedures. If it is
determined that the arc is being generated by a known source producing a safe arc, like an old miter saw, Leviton engineers can update the circuit breaker’s firmware to “mask” that arc. After it has been confirmed the new firmware meets UL requirements, Leviton can then push an update to that particular AFCI breaker. The user must turn OFF the breaker, enable the update, and turn the breaker back ON. The AFCI’s firmware has now been updated.

- **Can circuit breakers be remotely turned back ON once tripped remotely?**
  No. Circuit breakers must be manually turned on after being remotely turned off.

- **Does the Data Hub, LDATA, require its own breaker?**
  The Data Hub requires a powering breaker to operate; however, it does not have to be dedicated. You can tap off any 15A or 20A single pole circuit breaker.

- **Does Leviton sell or share data collected thru the My Leviton app?**
  When you download and use the My Leviton app, Leviton safeguards your personal data – and none of the data we access identifies any individual or device. While using the My Leviton app, select third party analytic companies may collect information such as how often you use the My Leviton app and what kind of device and browser type you use to access the My Leviton app.

  This information is used to better administer the My Leviton app and analyze its usage. Leviton does not track its customers over time, and the My Leviton app does not collect real time information about you or the location of your device.

- **Can someone hack into my system and turn off my circuit breakers or access my data?**
  Leviton respects and values our users’ privacy and security. All communications from devices that connect to the My Leviton app, as well as the My Leviton app communication to the cloud, are encrypted using industry standards. Leviton’s internal security teams perform frequent reviews and updates and are regularly audited by external third parties.

- **How does the price compare to the current offering?**
  Now incorporating metering and connectivity, Leviton’s smart circuit breakers will cost more. This is because of the technology built within the breakers and the additional value they add to the overall system.

- **How do Leviton’s smart circuit breakers compare to other circuit monitoring solutions?**
  Leviton smart circuit breakers have integrated energy management control that monitors energy consumption and circuit breaker status in real time. Other circuit monitoring solutions make it possible to do this in less integrated ways by using CTs that are either connected to the main breaker loads or to individual branch loads.

- **Do you plan on adding other capabilities like Data Analytics or Artificial Intelligence?**
  At Leviton, we are always looking at ways to improve the customer experience and having the ability to gather real time data at the nerve center of the home affords us a unique opportunity to move forward should we choose.