

ELECTRIFICATION INFRASTRUCTURE PART 2: Building a Smart, Resilient Residential Infrastructure

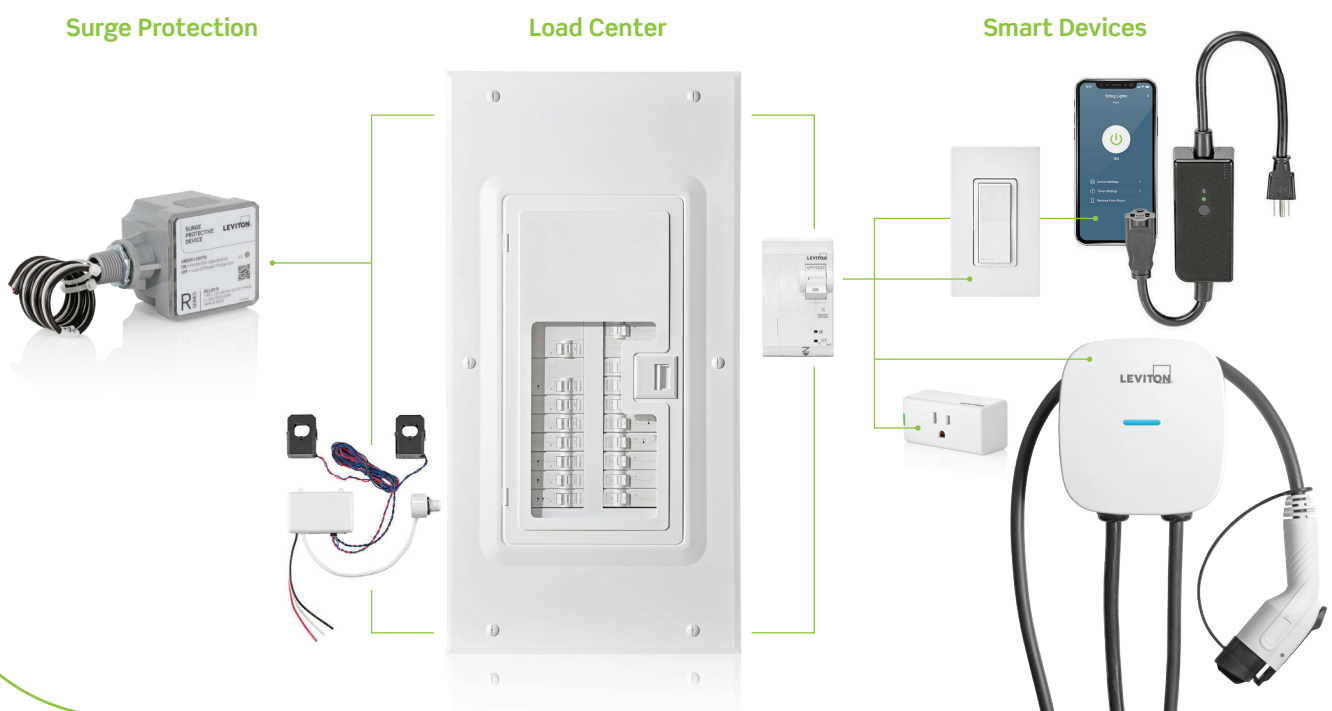
The Shift Towards Electrification – What Does it Imply?

As technology continues to advance, homes, commercial buildings, and industrial facilities are all shifting towards electrification. Whether it's the integration of household electric appliances, or the adoption of new, innovative technologies, electrification has an impact on infrastructure that should not be overlooked.

Picture, for example, a modern-day home. Imagine the hum of motors powering appliances and HVAC systems, and the wave of inrush current – the maximum current drawn by a device when turned on – as LED bulbs turn on. Add to this scenario the power demand from a newly installed electric vehicle charging station in the garage, a new smart refrigerator, and new electric water heater installed. These new technologies accumulate over time and demand a more reliable, resilient infrastructure to stay up and running efficiently.

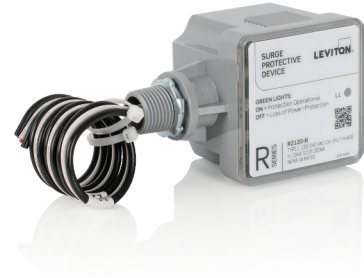
As a result, residential contractors face a unique challenge: how to build a resilient infrastructure that can withstand both current and future demands. Leviton has thoughtfully designed and engineered smart solutions to help minimize or eliminate impacts to infrastructure. By leveraging these solutions, contractors can avoid high maintenance and operational costs while improving customer trust and relationships. This white paper will explore Leviton solutions for contractors to ensure homes remain safe, efficient, and adaptable.

Laying out Resilient Infrastructure with Smart Leviton Solutions



SURGE PROTECTIVE DEVICES

Homeowners require their infrastructure, including valuable electronics, to be protected from disturbances. While most people associate surges with storm activity and lightning, many events, from utility work to turning on/off air conditioning units and washer/dryers, cause small surges and disturbances inside the home every day. While these routine events may not render obvious damage, they could diminish the lifespan of equipment and appliances over time.



This is where providing surge protective solutions becomes key. By layering multiple SPD types throughout a home, you are protecting your customers valuables and can ultimately save them thousands on equipment and devices. Often time homeowners don't even think about surge protection, but they should, and this is your opportunity to educate! This includes devices like Type 1 Surge Protective Breakers, Type 1 and 2 Surge Protective Panels, and Type 3 Surge Protective Receptacles and Power Strips.



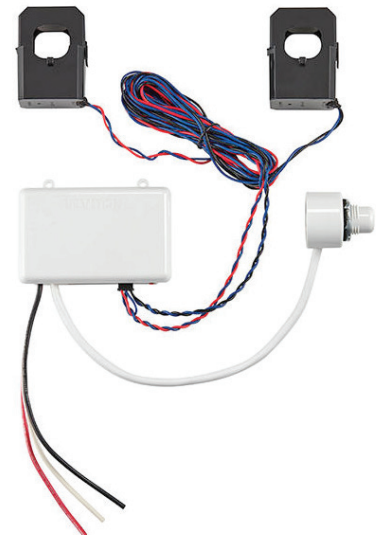
MY LEVITON OVERVIEW

An industry first, My Leviton offers single app control of the Leviton Smart Load Center, EV Series Charging Stations, and the Decora Smart® Wi-Fi® product lines, enabling users to seamlessly control their smart home from anywhere in the world using their smartphone or tablet. As a contractor, provide peace-of-mind with alerts and notifications for unusual electrical activity, including when and why a circuit trips, high or low voltage events, if the breaker fails a self-test, or if communication is lost through the My Leviton App. Additionally, users can receive alerts if unusual activity is identified, such as a freezer not running, or an HVAC system running for too long. **While the My Leviton app is beneficial for homeowners, it holds value for the contractor as it provides them with a tool to offer their customers smarter, more resilient infrastructure solutions.**

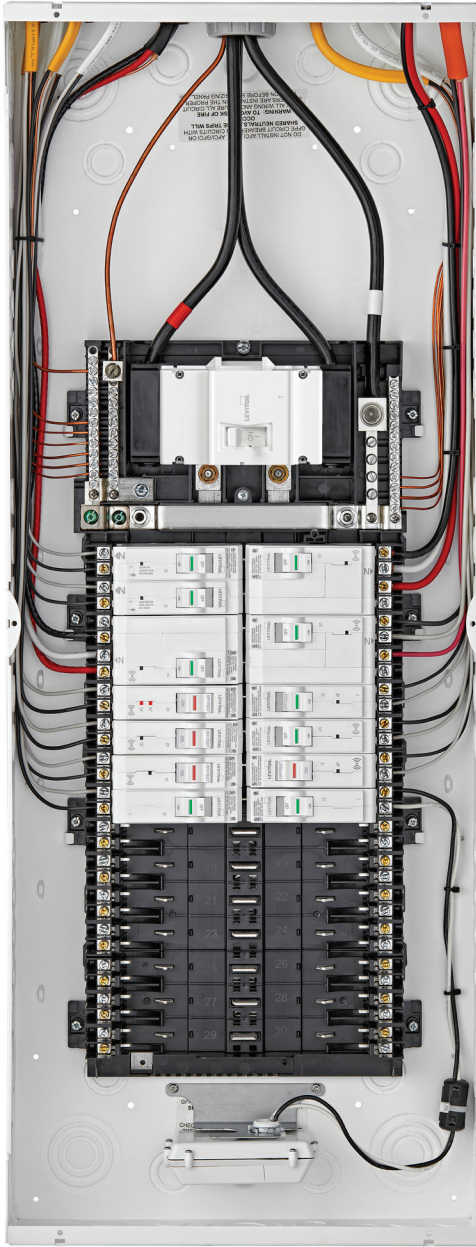
LEVITON WHOLE HOME ENERGY MONITOR (LWHEM)

First, let's look at Leviton's Whole Home Energy Monitor, compatible with the My Leviton App. This solution offers real-time energy consumption data and controls Leviton Smart Circuit Breakers. With the LWHEM, users access:

- Energy Consumption Insights – LWHEM provides an aggregate view of energy usage and generation
- Integration with Automatic Transfer Switch (ATS) – LWHEM includes contact inputs that allow seamless integration with an ATS, ensuring reliable power transfer during emergencies or grid fluctuations
- Unparalleled Control – When paired with Leviton 2nd Gen Smart Circuit Breakers, the LWHEM empowers users with unparalleled control over the home's electrical system as users receive alerts for circuit breaker trips, notifications for unusual activity, and the ability to remotely manage and schedule circuit breakers



By offering the LWHEM, contractors can provide a solution to help their customers optimize their energy usage and ensure a more efficient, productive infrastructure.



LEVITON'S SMART LOAD CENTER

Next, let's look at Leviton's Smart Load Center, which provides a flexible and adaptable design:

- Modular Design – with a modular, fully plug-on design, either Standard and/or smart Circuit Breakers can be installed, providing cost savings compared to competitive Smart Panels, protecting homeowners from high upfront costs
- Flexible Sizing – Smart Circuit Breakers take up the same footprint as Standard versions and require no additional wiring, allowing for contractors to easily install and for homeowners to prioritize essential circuits during backup power activation. So, when power goes out, critical systems remain ON and designated non-essential circuits turn OFF to conserve energy

When used together, Leviton's LWHEM, select Smart Circuit Breakers on appropriate circuits, and the load center panel provide a modular and affordable energy management solution. The My Leviton dashboard provides a summary of real-time total energy usage. Consumption data can be viewed by day, week, billing period, and year-over-year with charts to identify trends in historical energy usage and opportunities to adjust behaviors and save money. Additionally, Smart Anomaly Detection sends automatic alerts if unusual activity is identified for the specified branch type – such as a freezer not running, or an HVAC system running for too long. **As a contractor, providing your customers with smart energy management solutions will set your business apart and improve customer relationships.**



ADDITIONAL SMART SOLUTIONS

Let’s consider the earlier example of the modern-day home, where potential issues like bleed-through, flickers, and pulsing can impact infrastructure over time. This is where Leviton has developed Decora Smart switches, outlets, and plug-ins with both the contractor and homeowner in mind.



With Leviton’s Decora Smart dimmers, the concept of “OFF” genuinely means “OFF.” These solutions are designed to eliminate glowing/bleed-through. Additionally, within the My Leviton App users can fine-tune and eliminate flicker or pulse, without having to physically replace the dimmer with a switch. Within the My Leviton App, users can adjust:

- Dimming Curve – change the dimming behavior by adjusting the bulb type itself
- Dimming Range – define a specific dimming range to avoid flickering
- Control Timing – eliminate light pulse by fine-tuning the timing of the dimming process

In addition to the above features which help eliminate impacts to infrastructure over time, **Leviton is constantly testing new bulb compatibility and fixture compatibility to provide OTA app updates to improve performance in real time, allowing contractors to provide the most up-to-date technologies and solutions.**

In addition to smart dimmers, Leviton’s smart GFCIs allow contractors to provide peace of mind by sending notifications directly to users’ smart phone when a GFCI trips due to a ground-fault, using the My Leviton app. At-a-glance, the app provides details on protection status, if and when a ground-fault occurs, and if the GFCI is in self-test mode. These smart GFCIs increase resiliency in homes when used with refrigerators, freezers, sump pumps, and other appliances in out-of-the-way locations.



Summary – Building a Smart, Resilient Residential Infrastructure

Electrification is here. As a contractor, it is critical to your business for you to be a resource for your customers and understand the hidden risks in infrastructure and how to mitigate them. By implementing smart solutions, not only are you providing a more resilient infrastructure for your customers, but you are also setting yourself up for less callbacks, more revenue, and happier customers.

Visit our website at:
[Leviton.com/ContractorConnect](https://www.leviton.com/ContractorConnect)

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