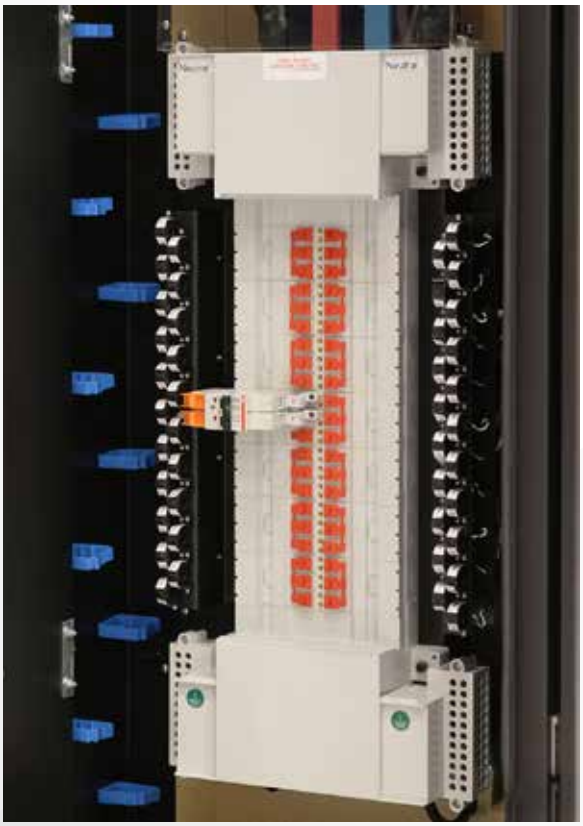
LayerZero Power Systems, LLC.

The Foundation Layer

SafePanel® Distribution

IP-20 Rated, Finger-Safe Panel Board



Product Brochure

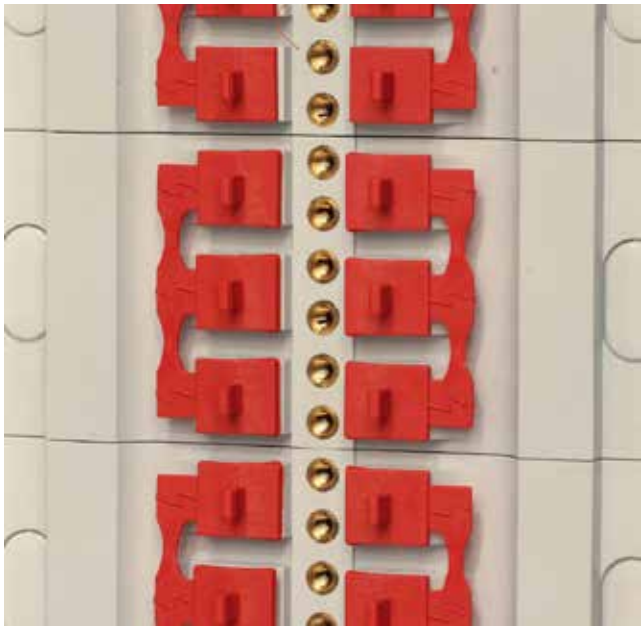
The Critical Role of Safety in Data Centers

In data center operations, safety, particularly in power distribution, is of utmost importance. At LayerZero Power Systems (LayerZero®), we understand that protecting personnel and equipment is crucial for maintaining operational reliability and stability. The inherent risks in power distribution, such as electrical disturbances and potential equipment failures, have a direct impact on the functionality of data centers.

Addressing Power Distribution Challenges: The LayerZero Approach

Data centers face various challenges in power distribution, including managing high power loads and ensuring a stable power supply. These challenges are critical as they impact the risk of equipment malfunctions and power instability. The LayerZero SafePanel is designed to address these challenges effectively. Every design detail of the SafePanel is carefully planned to enhance operator safety and system reliability.

The Bus of the 1200 A SafePanel



The 400 A SafePanel Features Isolated, Non-Conducting Brass Screws

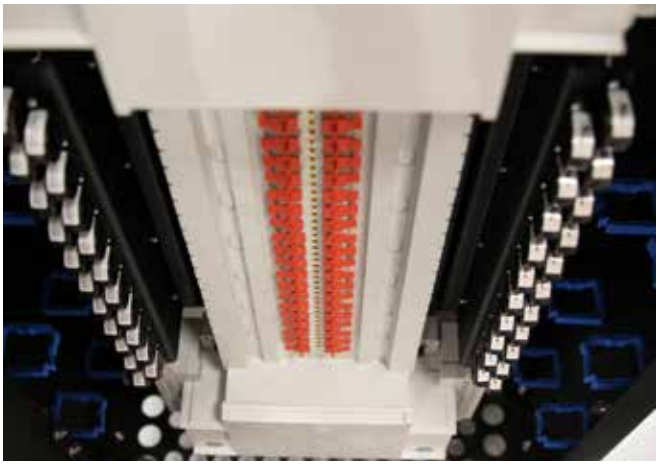
Introducing the SafePanel®

The LayerZero SafePanel is an essential component in our suite of mission-critical power distribution solutions, designed for both safety and reliability in data centers. It is available in two variations, 400 A and 1200 A, catering to different power requirements and ensuring adaptability to various data center sizes.

The SafePanel stands out with its unique finger-safe design and IP-20 rating, ensuring maximum safety for operators. These features make the SafePanel an invaluable tool for enhancing safety in data center and mission-critical environments.

LayerZero SafePanel: Designed for Safety and Reliability

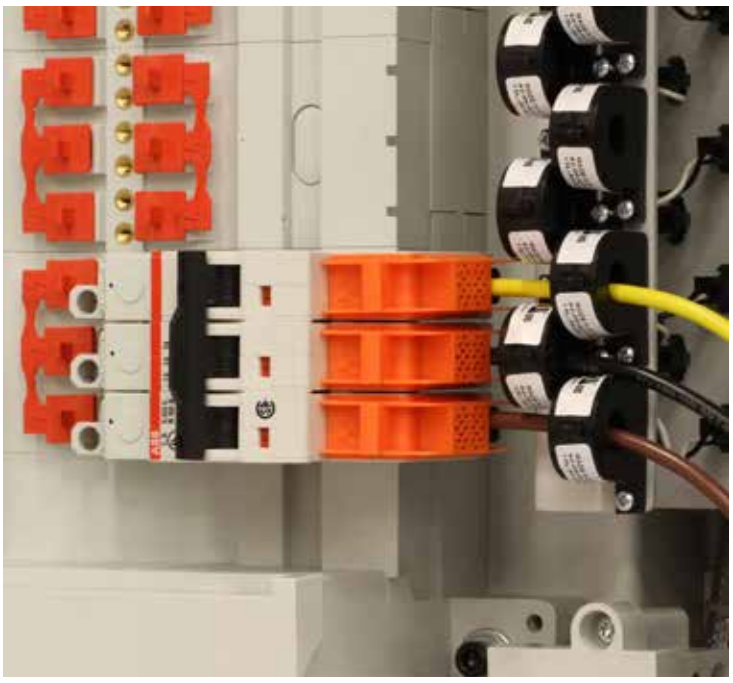
The LayerZero SafePanel is an essential element in mission-critical power distribution. In mission-critical environments, any power interruption can lead to significant issues. The SafePanel reduces the likelihood accidental contact with exposed live bus, decreasing risk in environments where uninterrupted power supply and safety is of the upmost importance. Simply put, the SafePanel helps maximize uptime by minimizing risk.



The 42-Circuit SafePanel Panel Board

Innovative Design for Enhanced Safety

The SafePanel is a testament to LayerZero's commitment to operator safety. It features an IP-20, finger-safe panel board. This design means that the openings are too small to allow the entry of a ½" (12.5mm) diameter probe, maximizing operator safety against accidental contact. This attention to detail in design is a crucial aspect of our commitment to creating safe working environments in data centers and critical facilities.



Wiring Installed Through CTs on 42-Circuit SafePanel

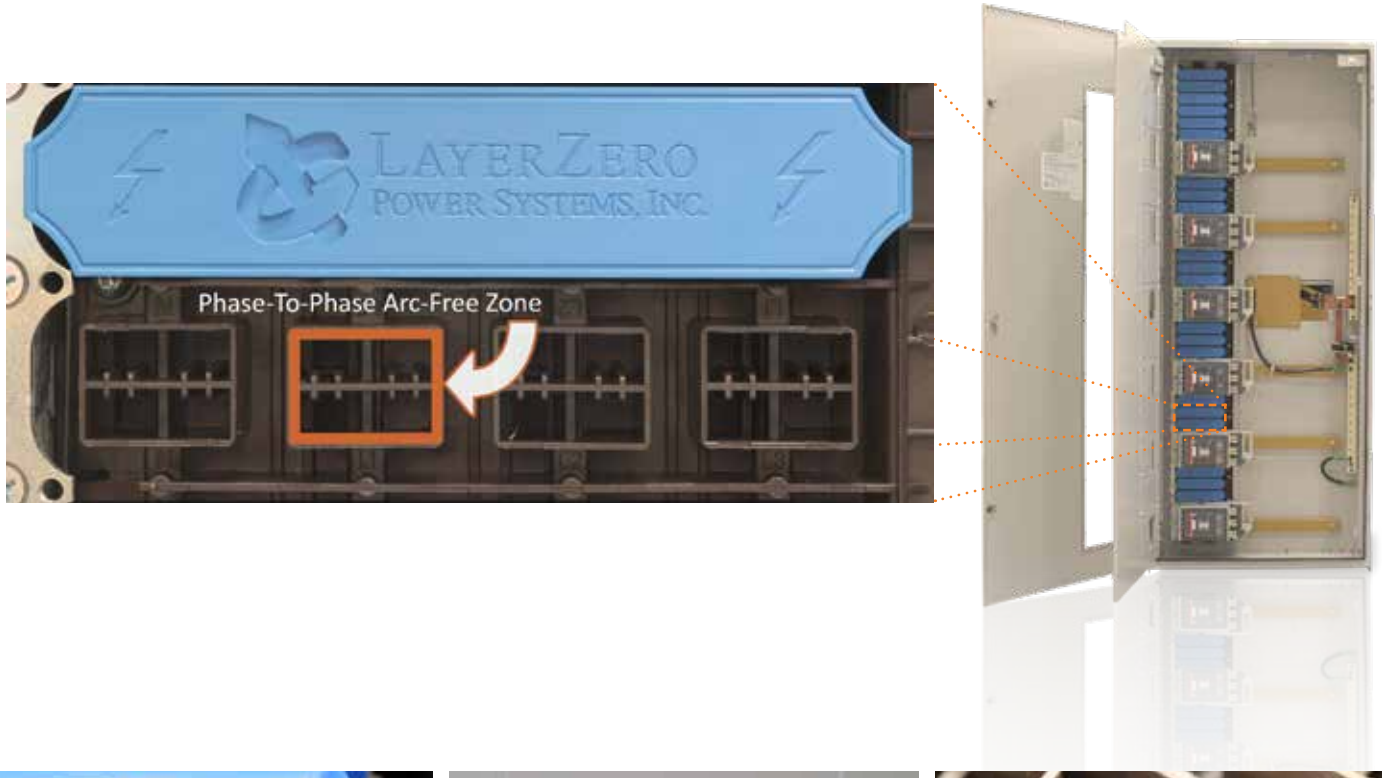
Installing a Subfeed Circuit Breaker in a 1200 A SafePanel

All product specifications are subject to change without notice.

* N Applies to 4-Wire Power Systems

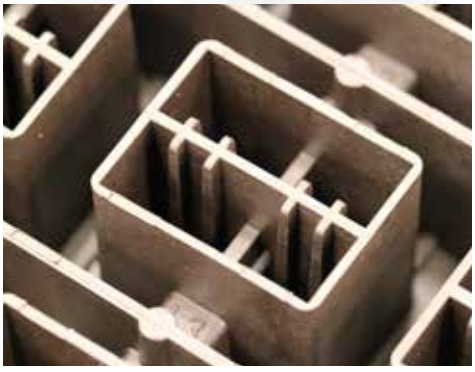
Arc Containment and Safe Operation

One of the standout safety features of the SafePanel is its arc containment capability. In power distribution, arcs can form when two live conductors are separated, such as during the removal of a circuit breaker from a panel board. The SafePanel's unique design features an "Arc-Free Zone" to contain potential arcs within the connection well. Utilizing the SafePanel in data centers and mission-critical facilities reduces risks for both operators and equipment through its containment features.



Rear of Blue Subfeed Cover

Rear of Subfeed CB

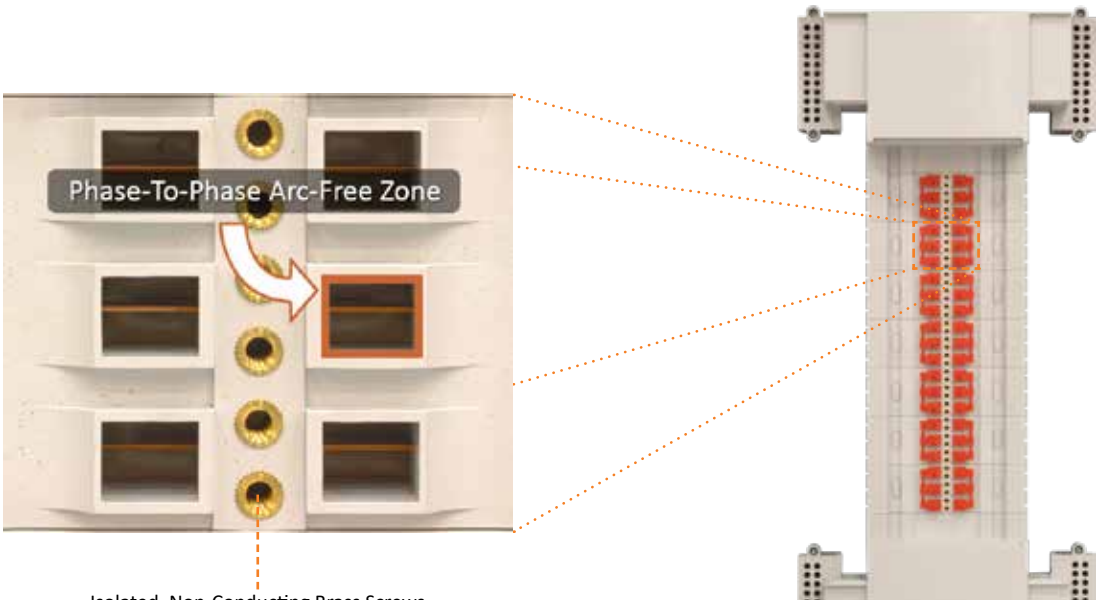


A close-up of the SafePanel recessed well

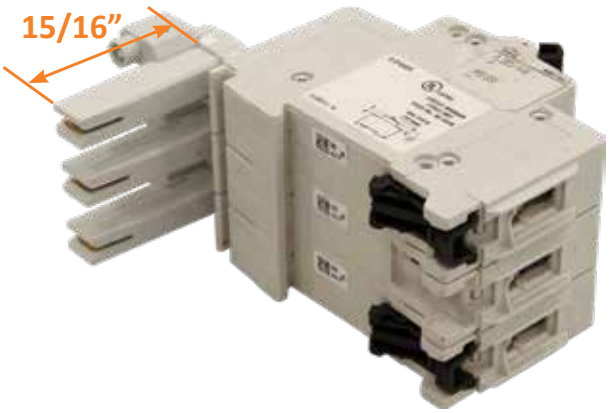
- Modular Lattice Work
- Recessed Well Encapsulates CB Before Connection is Made
- Shrouds Cover Unused Circuit Breaker Spaces

SafePanel Maximizes Operator Safety

The SafePanel is designed to maximize electrical safety in mission-critical environments. The SafePanel permits the safe installation of circuit breakers, incorporating a design that allows for safe and easy insertion or removal of breakers without exposing the operator to exposed contacts. This unique design reduces the risk of workplace accidents related to electrical installations.



The front of the 400 A SafePanel



- Opening will not allow ingress of ½” (12.5mm) diameter probe
- Individual Fault-Free Wells and Non-Conducting Bolt-on Recepticles
- Line-Side Snaps Into Recessed Bus
- Load-Side Snaps Into Din Rail

In-Depth Exploration of Finger-Safe Technology

The LayerZero SafePanel incorporates advanced finger-safe technology, a key feature that significantly enhances operator safety. This technology is designed to prevent accidental contact with exposed electrical components, an important consideration in high-risk environments like data centers. The impact of this technology on enhancing operator safety cannot be overstated. By significantly reducing the risk of electrical shock and other related injuries, the SafePanel ensures a safer working environment, contributing to the overall safety culture within data centers.

The SafePanel goes beyond the traditional exposed busbar and terminal design. Its innovative barrier, a resin-injected mold, creates a physical shield that conceals exposed live parts, effectively preventing accidental contact.

Closeup of Covers Installed in 1200 A SafePanel

Understanding the IP-20 Rating

The IP-20 rating is an international protection marking that classifies the level of protection provided against the intrusion of solid objects. Specifically, an IP-20 rating indicates that the equipment is protected against the insertion of objects larger than 12.5 millimeters, but not against the ingress of water. This rating is crucial in ensuring that the internal components of the SafePanel are shielded from accidental contact or the entry of foreign objects, which could potentially cause short-circuits or other electrical hazards.

The Benefits of SafePanel Panel Boards

The innovative finger-safe technology incorporated in the SafePanel significantly enhances operator safety by:

- **Covering exposed live parts:** This significantly reduces the risk of electrical shock, burns, and other related injuries.
- **Promoting a safer working environment:** By prioritizing safety, the SafePanel contributes to a positive safety culture within data centers, leading to increased employee well-being and productivity.
- **Reducing potential downtime:** By minimizing the risk of accidents, the SafePanel ensures uninterrupted operation and optimal data center performance.

Two Subfeeds in the 1200 A SafePanel

Ease of Installation and Maintenance

The SafePanel is not only safe but also user-friendly. The components are insulated and deeply isolated, which makes the installation and removal of breakers both safe and straightforward. This ease of maintenance is a key factor in the SafePanel's design, ensuring that routine operations do not compromise safety or reliability. Below illustrates the installation processes for installing breakers.

1200 A SafePanel Subfeed Installation Process

The Breaker Is Inserted Into The SafePanel

The Handle Is Unlocked

Screws Help Secure The Breaker

For Maximum Safety, The SafePanel Has Recessed Bus Work and Finger Safe Lattice.

400 A SafePanel Circuit Breaker Installation Process

The Protective Cover Is Removed

The Breaker Is Inserted Into The Opening

The Breaker Snaps Into The DIN Rail

The Breaker Is Secured With An Isolated, Non Conducting Screw

SafePanel Covers are Designed with User-friendliness in Mind

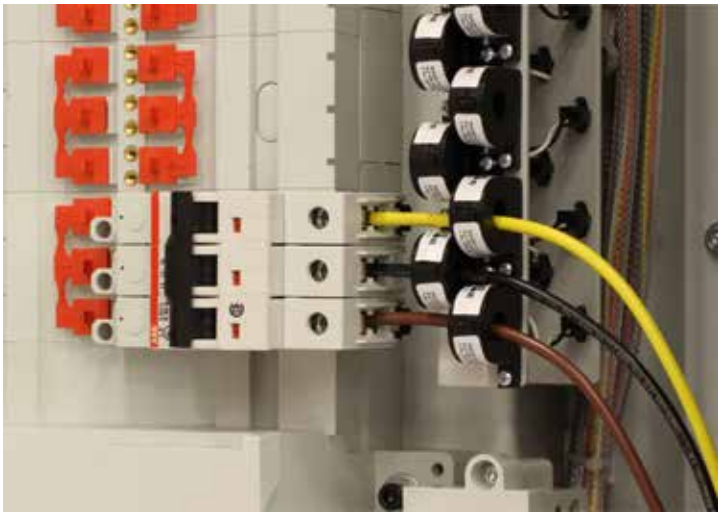
The SafePanel utilize a unique design that includes a body, a connector, and a gripping portion. The body has two parallel surfaces connected by a perimeter wall. A notch in the perimeter wall provides access to a fastener on the power panel. The connector has a perimeter wall that extends from the body to a distal end. Relief areas in the perimeter wall near the distal end allow for easy insertion and removal. A stop in the connector prevents it from being inserted too deeply.

This unique design provides a number of advantages, including:

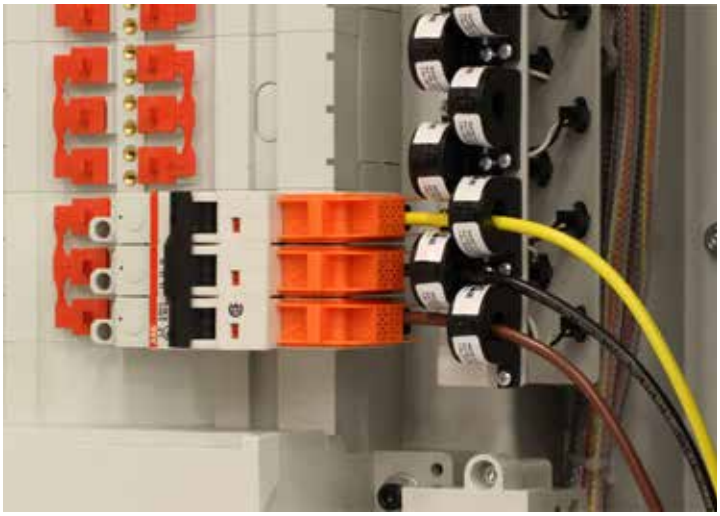
- **Increased safety:** SafePanel covers prevent accidental contact with live conductors and other energized components, reducing the risk of electrical accidents and injuries.
- **Improved reliability:** SafePanel covers reduce the risk of electrical accidents and workplace injuries, which improves reliability for mission-critical applications.
- **Easy installation and removal:** SafePanel covers are easy to install and remove, even with heavy gloves, making them ideal for use in environments where workers need to be able to access power distribution panels quickly and safely.

LayerZero's Patented Circuit Breaker Covers

LayerZero's Patented Subfeed Covers



Wiring Without Shrouds Leaves Wiring Exposed

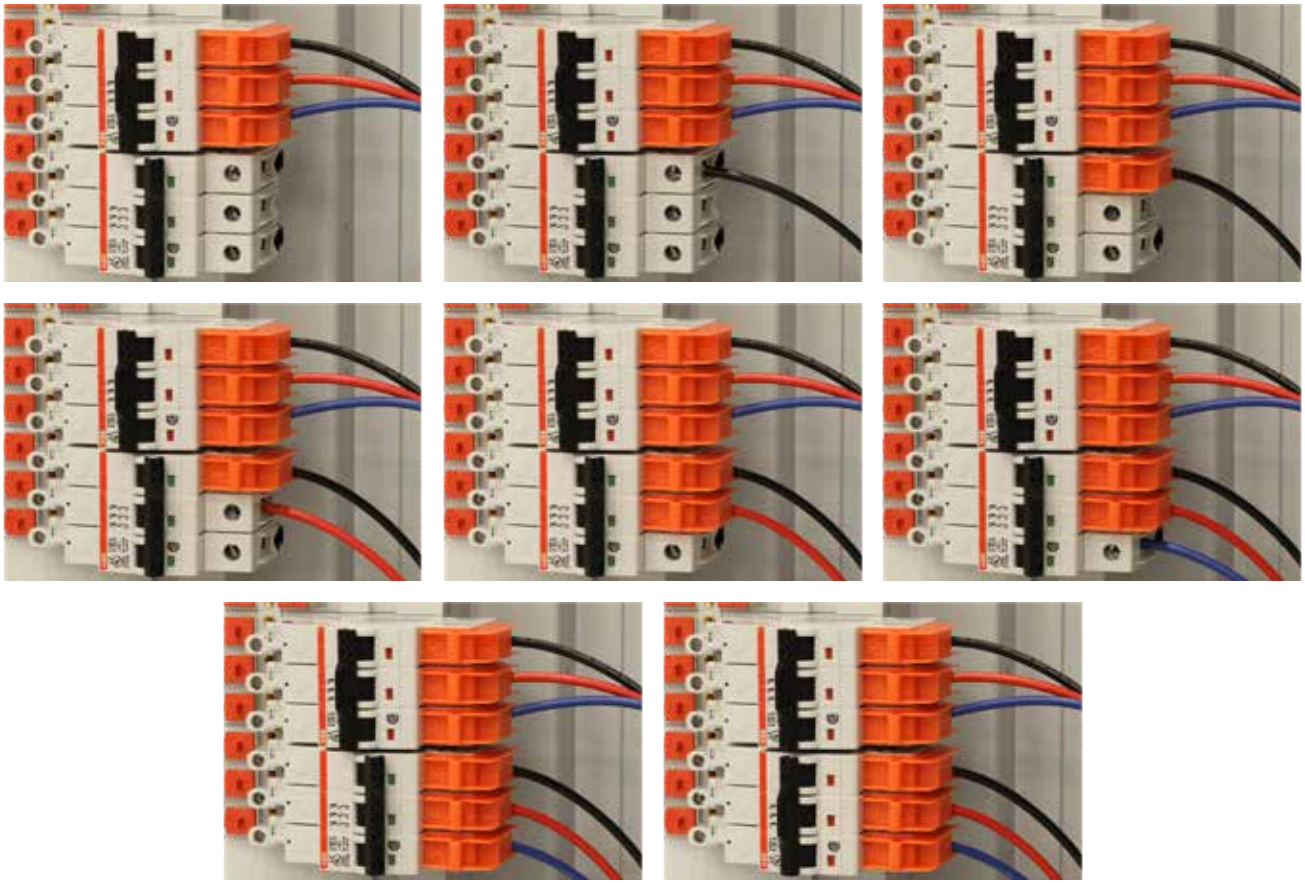


Circuit Breaker Shrouds Maximize Operator Safety

SafePanel Maximizes Data Center Safety and Reliability

LayerZero provides covers for the SafePanel. SafePanel covers are designed to reduce the risk of electrical accidents and injuries. SafePanel covers are also designed for ease of installation and removal, even with heavy gloves. Their unique patented design features a body, a connector, and a gripping portion, simplifying the user experience. The image sequences below illustrate how to install circuit breaker covers in both the 1200 A and 400 A SafePanel panel boards.

Installation of a subfeed cover



Installation of wiring and an orange 400 A circuit breaker shroud into the 400 A SafePanel

SafePanel Options

In addition to the standard SafePanel cover, LayerZero also offers a fiberglass link insert that can be used to couple two or more covers together. This is useful for covering larger openings or for creating a barrier around multiple power distribution panels.

Optional fiberglass link insert in subfeeds

Fiberglass Inserts

To improve safety, LayerZero provides the option to include circuit breaker shrouds on the load side, with break-off tabs for access to the mechanical lugs. Lug shroud are available for dual-lug/dual cable installations.

The installation process for installing covers, removing tabs, and installing inserts.

SafePanel Options - Universal Dead-Front Door

LayerZero Power Systems provides the option for a “universal dead front door” design, allowing blank plates to be interchanged with plates with openings to permit circuit breaker operation.

A subfeed circuit breaker installed in the 1200 A SafePanel with a plate on the dead front door installed

LayerZero’s Commitment to Operator Safety

LayerZero is committed to driving innovation in the field of power distribution, with an unwavering focus on safety and reliability.

LayerZero will continue to innovate and provide solutions that not only meet but exceed the expectations of our clients. Our journey is one of continuous improvement, and the SafePanel is a key milestone in this journey, setting new standards in the industry for safety and reliability.

When it comes to mission-critical operator safety, think of LayerZero.

Learn more at www.LayerZero.com

LayerZero Power Systems, LLC.
1500 Danner Drive
Aurora, OH 44202 U.S.A.

Rev. 3/26 #7