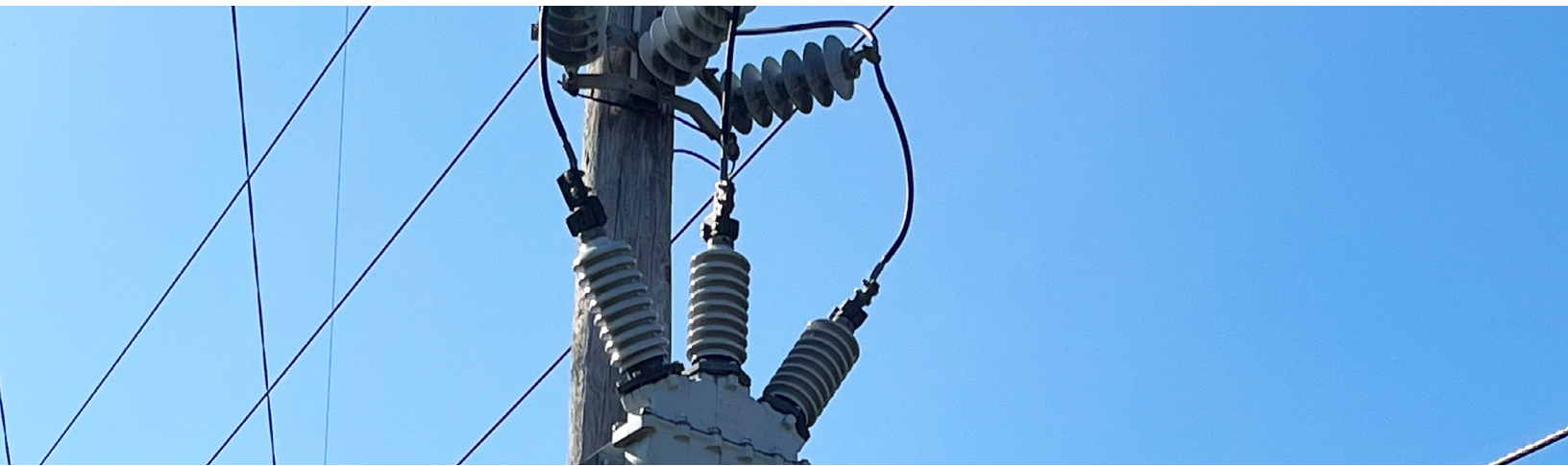


# The Grid's Unsung Heroes:

## How Cable Terminations Ensure Reliable Power Delivery

### BACKGROUND

While so many other aspects of power delivery change, the inherent tradeoff between overhead and underground power lines remains constant. Overhead lines are cheaper to install and easier to repair and maintain. But they are susceptible to damage from weather, animals and other external forces, pose increased wildfire and other safety risks, and suffer increased energy losses due to line resistance. Underground lines, on the other hand, offer superior reliability, fewer safety issues, more pleasing aesthetics and lower energy losses thanks to reduced inductive interference and corona discharge. But they come with a high upfront price tag and make fault location and repair more challenging.



While the differences between overhead and underground line installation are significant, there is a critical, yet often overlooked, component that always bridges the gap between these different distribution methods: cable terminations.

### What to Look for in Cable Terminations

The best cable terminations are designed with longevity and ease of use in mind. Here are some key features of G&W Electric's product line that ensure reliable performance:

- **Robust seals:** Cable terminations prevent contamination or degradation of dielectric materials, safeguarding the integrity of the connection.
- **Mechanical strength:** Built to withstand harsh environments, G&W Electric's terminations can endure extreme weather conditions and mechanical stress.
- **Electrical design:** Terminations are meticulously designed to meet or exceed the flashover values required for specific cable ratings, ensuring optimal electrical performance.
- **Ease of installation:** Recognizing the importance of efficient field installation, G&W Electric offers both field-assembled and preassembled terminations that cater to different project needs and skill levels. Customizable components, such as connectors for soldering or compression, also allow for flexibility in installation methods. And slip-on terminations come pre-filled with dielectric compound, eliminating the need for messy field filling.

### The Crucial Role of Cable Terminations

Cable terminations are the unsung heroes of the power grid, ensuring a safe and reliable connection between underground and overhead lines, or between cables and electrical equipment. They are designed to terminate underground cables at overhead lines or equipment; available in a variety of configurations to suit diverse applications; and engineered for longevity and ease of use.

G&W Electric understands the impacts of climate change and other unique challenges on utilities today. We are a trusted partner in the industry, offering a comprehensive suite of solutions to address the evolving needs of power distribution systems. From overhead reclosers to customizable underground switches and a wide range of cable terminations, G&W Electric equips utilities with the tools they need to deliver safe and reliable power, including a variety of robust cable termination options.

## Terminations for Every Application

G&W Electric provides a comprehensive selection of cable terminations to address the diverse needs of overhead and underground distribution systems. These include the following porcelain options:

- **Capnut terminations:** G&W Electric has been making disconnectable potheads since 1910, and these capnut terminations are the closest version to the original design of cable terminations, even using some of the same components. Classic capnut terminations offer a field-assembled option for easy adaptation and are available in single or three-conductor configurations for aerial connections, entrance housings and various dielectric fluid options. They require less cable data for installation.
- **Sodertite® and Crimptite® terminations:** These “sister terminations” provide a choice between soldered or crimped connections, eliminating the potential for leaks associated with gaskets. Their closed-hood and simple ferrule design enhance internal creepage distance. They require less field assembly than capnut terminations while still offering flexibility to accommodate cable unknowns. (When choosing between these options, it's important to note that Sodertite® terminations are well-suited for low pressure gas filled and medium pressure gas filled cables.)
- **Slip-on terminations:** Preassembled for simplified installation, slip-on terminations feature integrated stress relief for cable protection. Installation involves attaching an adapter kit (if required), cable preparation, crimping the connector and inserting the cable into the termination housing. These terminations are ideal for use with dielectric fluid-filled applications.

As terminations cannot be fully built in the factory, proper installation of these products is critical to the product's longevity in the field. While it's best to engage experienced installers to prepare the cable and complete the installation, G&W Electric has simplified the experience as much as possible.

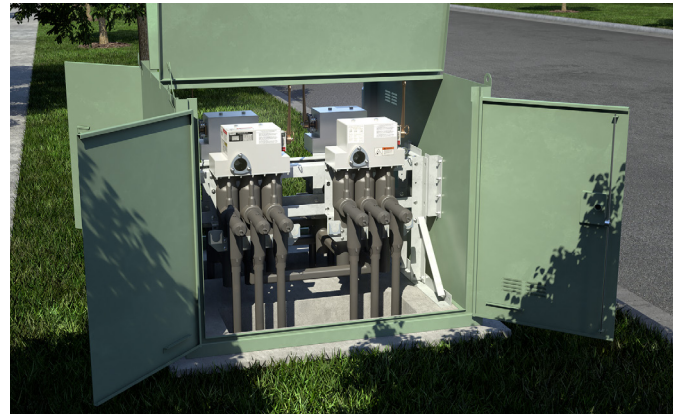
- **Strategic Undergrounding: A Hedge Against Extreme Weather**  
The increasing frequency of extreme weather events has prompted many utilities to take a closer look at strategic undergrounding. This involves converting sections of overhead lines to underground for enhanced reliability in critical areas. Cable terminations play a vital role in facilitating this transition by enabling a seamless connection between underground and overhead segments.

Beyond cable terminations, G&W Electric provides utilities with a comprehensive suite of overhead and underground distribution solutions—including top-of-the-line reclosers and customizable switches—needed to build a safe, reliable and efficient power grid.

- **Reliable Recloser Solutions for Overhead Lines**

Designed for overhead, substation and padmount applications, G&W Electric's Viper® reclosers provide fast and reliable fault clearing, minimizing outage duration and protecting valuable equipment via state-of-the-art magnetic actuator technology.

The Viper® recloser's key benefits include easy installation, electronic three-phase overcurrent protection for systems through 38kV, 800A continuous current and 12.5kA symmetrical interrupting ratings, as well as maintenance-free solid dielectric insulation and safety features like vacuum interrupters and lockout handles that protect both operators and wildlife. “L” and “Z” module designs provide maximum installation flexibility, and the reclosers are available in multiple frame configurations and site-ready options.



## Deep Support for Underground Lines

G&W Electric also offers a variety of products specifically designed for underground applications, including:

- **SF6 switches,** which provide exceptional customization for various configurations, including single or three-phase arrangements with different options for phases, orientation, placement and shapes. Ideal for underground distribution systems, SF6 switches are corrosion-resistant, totally sealed and factory filled with nontoxic, nonflammable switching dielectric gas, eliminating the need for field adjustments of critical contact areas as well as concerns about environmental contamination or other intrusions.
- **Trident® switches,** which boast a dead-front design for enhanced safety and utilize submersible epoxy insulation to encapsulate load and fault interrupters to deliver reliable, maintenance-free operation with no fuses, fuse links or external power source or PT required. The switches also can be deployed in single or three-phase operations, and are ideal for padmount, dry vault and submersible installations.
- **Cable joints,** including PILC tape joints (1/C and 3/C available for 8.7kV and above) and cable transition modules (CTMs) that facilitate transitions between different cable types. With their ability to convert between PILC or LPGF to XLPE/EPR, CTMs (offered from 15kV-35kV) enable utilities to transition sections of aging underground infrastructure to newer technologies without undertaking a whole replacement project.

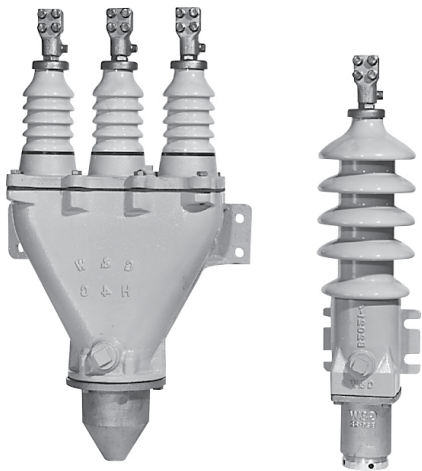


## Why G&W Electric Is a Preferred Cable Termination Partner

Regardless of your distribution system configuration, G&W Electric has the cable terminations you need to ensure a seamless and reliable connection between overhead and underground lines or between cables and electrical equipment. Our terminations offer:

- Robust design for long-lasting performance
- Flexibility to adapt to existing cable configurations
- Compatibility with various applications, including fluid-filled systems

By partnering with G&W Electric, utilities gain access to a comprehensive suite of overhead and underground distribution solutions, including top-of-the-line reclosers, customizable switches and a wide variety of cable terminations. Contact G&W Electric today to learn more about our cable termination solutions and how we can help you optimize your power distribution system.



### CONTACT US

305 West Crossroads Pkwy  
Bolingbrook, IL 60440 USA  
Phone: 708.388.5010 | Fax: 708.388.0755

[www.gwelec.com](http://www.gwelec.com)

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