

Gas Insulated Switching Solutions

Gas Insulated Switches for Vault and Padmount Applications



With over a century of experience engineering exceptionally long lasting medium-voltage distribution products, G&W Electric knows power. And more importantly, we know the power of listening. By taking time to understand your application and asking the right questions, we develop a solution that precisely matches your needs. The answer may be our time-tested switches that keep power running seamlessly in mission-critical industries, or an advanced automation system for next-generation smart grids. Whatever your challenge, you'll experience decades of high-performance engineering to meet your needs.

Gas Insulated Solution

We are dedicated to delivering proven solutions that meet and exceed your needs. That's why our engineers ask you questions and listen to find the right solution.

Our line of gas insulated switchgear is available with load break and/or fault interrupters and is designed and tested to IEEE and IEC standards. It's ideal for harsh environments where the ability to be submerged is required for operation on distribution systems rated up to 38kV, 900A continuous current and 40kA asymmetrical momentary current. Our best-in-class puffer switchgear are ideal for mission critical applications. They offer:

- Smart Grid/LaZer® Solutions
- Submersible designs
- Dead-front designs
- Compact construction
- Maintenance-free operation
- Two and three position switching
- Mounting flexibility
- Ease of Automation



Switchgear for Greater Safety and Performance

Our distribution switchgear is engineered to industry standards, meeting the needs of your application while ensuring operator safety. With our comprehensive line, we can provide switchgear for any padmount or vault application with ratings for primary substation and secondary distribution.

Provide Operators with Easy-to-Use Equipment

Can be operated manually or within distribution automation solutions. Padmount switchgear provides easy access to cable connections and operating apparatus, while vault switchgear can be wall- or floor-mounted for underground installations with flexibility to the direction of incoming underground cable connections.

Ensure Safety with Tested and Proven Switchgear

Designed and tested to industry standards, our switchgear is field-tested and proven, with many still in service after more than 60 years of operation.

In-house Design Expertise

Our extensive portfolio of switchgear provides options for a wide range of applications and a variety of system configurations and a variety of ratings and are tested to industry standards.



Maximum Operator Safety

Dead front switch construction eliminates any exposed live parts. Spring-assisted mechanisms assure quick-make, quick-break operation. Viewing windows permit visual verification of open or closed contacts. Tamper-resistant enclosures utilize penta head bolts and padlocking provisions. Motor actuators are available permitting remote operation. The result is maximum operator safety.

Minimal Maintenance

G&W Electric's gas insulated switches are corrosion-resistant, totally sealed and factory filled. No more field adjustments of critical contact areas or concerns with environmental contamination or intrusions. A periodic check of the pressure gauge is all that is required.

G&W Electric's selection of gas insulated switchgear includes:

Load Break Switches

G&W Electric offers a wide selection of vault or padmount gas insulated switches for systems rated 15.5kV through 38kV, 40kA asymmetrical momentary, and 630A to 900A continuous current. Gas insulation provides excellent electrical and mechanical properties and offers many advantages compared to other dielectrics. Switches can be operated either manually or through various distribution automation packages.



Padmount application at a solar farm



Vault application in hospital

Load Break and Fault Interrupting Switches

G&W Electric offers a wide selection of vault or padmount gas insulated switches for systems rated 15.5 through 38kV, 12.5kA to 25kA fault interrupting and 630A to 900A continuous current. The fault interrupters provide electronically controlled, resettable over current protection in a totally sealed, submersible, dead front device. Gas provides excellent electrical and mechanical properties and offers many advantages compared to other dielectrics. Switches can be operated either manually or through various distribution automation packages.

Application Versatility

Multi-way Configurations – Switches are available for either two-position or three-position (incorporating an integral ground, tie or test position) switching. Switches are easily configurable to meet your applications needs. whether it is single, or multiple sources, G&W Electric switchgear can feed multiple loads off a single bus, or utilize a bus tie to segment the load.

Mounting Flexibility – Horizontal and vertical configurations are available with operating apparatus accessible from the front, top or side compartments. Enclosures are removable for easy cable installation or field replacement.

Bushing Variety – Many bushing styles are available including an exclusive disconnectable style permitting field changeout. Cable entry can be bottom, front, back or side. Transformer throat designs are available.

Visible Break – Load break switches can incorporate a visible break of all three phases.

Overcurrent Protection – Fusing or electronically controlled, resettable vacuum interrupters are available.

Transformer and Motor Protection

- The three phase trip feature and high continuous current capability protects three phase motors and transformers

Loop and Tap Switching

- Tap switching up to 900A and up to 25kA symmetric fault protection is accomplished using resettable, electronically controlled vacuum interrupters. The vacuum interrupters also function as load break switches

Automatic Transfer for Critical Load Applications

- Switches can be supplied with an automatic transfer control package to provide automatic transfer from one source to another minimizing downtime

Smart Grid / LaZer Automation Solutions

- Can be supplied with motor actuators on both the line and load side providing remote control capability
- For Smart Grid applications, we work with the top control manufacturers of the industry, to match the right control for the application
- For automatic power restoration, G&W Electric's LaZer solution provides a pre-engineered, field proven system which can be pre-assembled and factory tested prior to shipment
- Various control packages including portable controls are available



Wind switch designed specifically for wind turbine applications



Padmount application for outdoor airport applications

Automation

LaZer® Power Grid Automation

The G&W Electric LaZer Automation System is the culmination of decades of experience designing innovative power automation solutions. From simple automatic transfer schemes to the most complex SCADA/master station configurations, our comprehensive solutions are custom engineered to meet your precise application needs.

LaZer Power Grid Automation solutions combine proven power grid hardware and software with decades of system integration experience that can reduce or eliminate outage costs and improve your bottom line.

LaZer Automation is a protection and control package that features one or more protective relays, equipped with distributed capabilities and peer-to-peer communication to make intelligent operating decisions and to monitor field conditions. LaZer Automation focuses on critical load installations to maximize service reliability.

G&W Electric's LaZer Power Grid Automation solutions combine proven power grid hardware and software with decades of system integration experience that can reduce or eliminate outage costs and improve your bottom line. The system specifically addresses fault detection, isolation and restoration (FDIR) requirements. It continuously monitors the circuit. When it senses an electrical overload or short circuit fault within its protection zone, it issues a command to the appropriate switchgear to trip-open within a pre-determined time delay based on the severity of the fault.

Communication with other upstream and downstream LaZer devices functions continually to determine what other actions are required to reconfigure the circuits to automatically restore power to customers connected to the unfaulted lines. The entire process from fault detection to system restoration can typically be completed within 60 seconds or less.

Flexible communication and open protocols are critical for integrating to existing Smart Grids and expanding to handle future needs. LaZer solutions offer flexible communication using hardwired connections, fiber optic cable, or a range of wireless technologies on RS232, RS485, and Ethernet ports. Some of the different protocols available are:

- DNP 3.0
- SEL Mirrored Bits® (proprietary)
- IEC61850 with GOOSE messaging



FLISR (Fault Locations, Isolation and Service Restoration) shown on a monitoring computer

Note: Mirrored Bits is a registered trademark of Schweitzer Engineering Labs, Inc.



A RELIABLE PARTNER

G&W Electric combines unmatched design and manufacturing expertise, as well as extensive research and development, with ISO 9001 certified quality systems across the entire design and manufacturing process. Our suite of products is designed to the latest industry standards and backed by over a century of engineering and manufacturing expertise. The result? Time proven, reliable performance.

With a commitment to listening to our customers and delivering on their needs, G&W Electric has built a long-standing reputation for delivering quality solutions and superior service. This commitment to putting our customers first has kept us ahead of a changing industry, allowing us to continue powering the world.

Contact your nearest G&W Electric sales representative or corporate headquarters for additional information.

Contact us today

708.388.5010 or info@gwelec.com

G&W Electric

Engineered to order. Built to last.®

Since 1905, G&W Electric has been a leading provider of innovative power grid solutions, including the latest in load and fault interrupting switches, reclosers, system protection equipment, power grid automation and transmission and distribution cable terminations, joints and other cable accessories. G&W is headquartered in Bolingbrook, Illinois, U.S.A., with manufacturing facilities and sales support in more than 100 countries, including Canada, Italy, China, Mexico, Brazil, India, UAE and Singapore. We help our customers meet their challenges and gain a competitive edge through a suite of advanced products and technical services.

gwelectric.com

© 2022 G&W Electric
GW75-2022 10/22