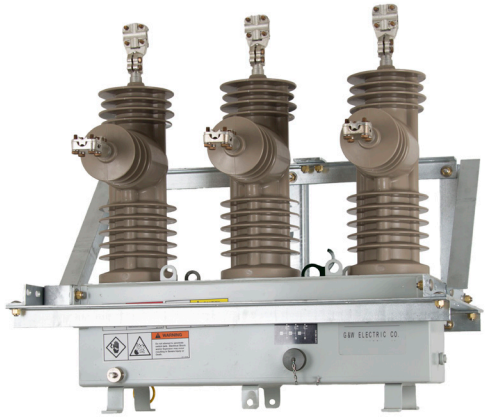
G&W

Engineered to order. Built to last.

Diamondback

Diamondback now available with SEL-651RA relay



Solid-Dielectric, SCADA-Ready Load Break Switch

FEATURES:

- Automation ready
- Maintenance-free solid-dielectric technology
- Six internal voltage sensors (VS) for distribution automation applications
- Three internal current transformers
- Faster installations with site-ready designs: factory installed and wired options such as lightning arrestors and potential transformers
- Compact size & light weight construction
- Single control cable design
- Mechanical open and close operations
- Lockout ring handle prevents switch operation with electrical lockout and mechanical block
- Dead line operation on battery backup

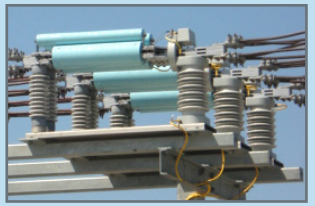
Mechanical open/close handle

Experience the full product offering of G&W

Single and Three Phase Solid Dielectric Reclosers
Available in overhead, substation and padmount applications. Unmatched safety, reliable performance, automation ready.

Underground Distribution Switchgear
Submersible, maintenance-free construction built to the most rigorous industry standards. Available in solid dielectric or SF6.

System Automation and Smart Grid Solutions
Lazer Automation provides standard or customized peer-to-peer solutions and is 100 percent scalable on a model-based platform.



System Protection Equipment
High continuous current ratings with current limitation and ultra-high speed operation. Mitigates Arc Flash and Arc Blast.

Transmission and Distribution Cable Accessories
Terminations and joints designed and manufactured to accommodate any new cable or existing cable systems.

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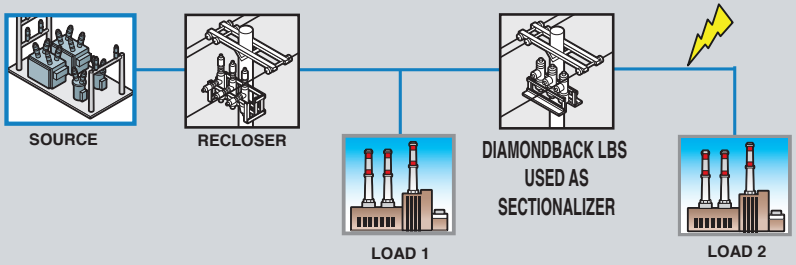
ISO 9001:2008 Certified
ISO 14001:2004 Certified

APPLICATIONS:

- Basic distribution load break switching to complex loop schemes
  - Remotely Operated Switching
  - Fault Passage Indication
  - Automated Switching
    - Sectionalizing
    - Auto Close (Tie Switch)
    - Auto Open
    - Loop Scheme



Application Example: Diamondback Applied as a Sectionalizer

1. A fault occurs between Diamondback and Load 2
2. The recloser starts reclosing sequence: trips open, closes, trips open
3. The Diamondback opens after 2nd overcurrent trip
4. The recloser closes and restores power on the line between the recloser and Diamondback

RATINGS:

Maximum Voltage	29.3kV
Continuous Current	630A
Frequency	50/60 Hz
Power Frequency Withstand Voltage, Wet	60kV
Power Frequency Withstand Voltage, Dry	50kV
Lightning Impluse Withstand Voltage	150kV
Short-Circut Current, 3 seconds	12.5kA (RMS)
Making Current Peak	32.5kA
Mechanical Operations	5000 times
Temperature Range	-40°C to +65°C

The Diamondback has been tested and designed to comply with the IEEE C37.74 and IEC 62271-103 standards (formerly known as IEC 60265-1:1998).

CONTROL:

SEL-651RA Relay

Measurement & Status Monitoring

The SEL-651RA is equipped to control and monitor measurement and status of the Diamondback load break switch. Instantaneous and demand metering are available with programmable integration intervals.

- Voltage, Current, and Phase Angle
  - Six voltage inputs
  - Fault Passage Indication
  - Over/under Voltage
  - Phase Sync Fail Detection
  - Battery charging and status monitoring

Distribution Automation Ready

Integrate Diamondback with SEL-651RA relay into SCADA or distribution automation systems with ease. Communications interfaces include RS232/RS485 serial port, USB, and Ethernet (metallic or fiber).

Communications protocols supported include DNP 3.0, Modbus, and IEC 61850. G&W Automation programming applications include:

- Sectionalizing
- Auto Open
- Auto Close/Tie

Data Acquisition

Analyze grid performance with event and fault recording.

- Fault waveform recording
  - 60 cycle length, 128 samples/cycle event reports
  - Waveform Evaluation Software
- Sequence of Events (SOE) and Event History

▲ *Diamondback with SEL-651RA Relay*