Innovative Protection and Self-Healing Solutions for Improving Distribution Network Reliability

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PulseClosing® Technology

- 95% reduction in energy
- Less equipment stress, damage
- Enables new applications

Greater Segmentation

- TCCs & PulseFinding Technique ensures coordination
- More segmentation on any circuit

Hybrid Circuits

- Universal protection strategy for overhead, underground, and hybrid circuits

Distributed Intelligence

- With or without communication
- Restores service in 10s of seconds
- Applications co-exist with DMS
Reclosing

- Multiplies Faults!
- Causes Overhead Equipment Damage
- Causes Stress on Cables & Transformers
- Causes Voltage Sags, Affecting Power Quality
PulseClosing Technology
Pulseclose - Normal Speed
TECHNOLOGY

Rogowski Coil

±0.5% measurement
±2.0% protection
TECHNOLOGY
High-Performance Magnetic Actuator
IntelliRupter Precision Allows More Devices in Series
More Solutions for Coordination/Grading

- PulseFinding enables faster restoration where coordination/grading is not possible, reducing customer exposure to outages.
- Communication-enhanced coordination/grading also an option.
Hybrid Circuit Protection

• Hybrid circuits effectively disables reclosing due to concern over cable faults
PulseClosing Technology Overcomes Reclosing Limitations

- 95% less energy used than reclosing
- Avoid outages
- Segment underground sections
- Universal protection strategy

Substation PC PC PC
IntelliTeam-SG: FLISR Using Distributed Intelligence

IntelliTeam SG substantially reduces “Customer Minutes of Interruption” (CMI), markedly improving DISTCOM reliability ratings
Storm Hits Municipal Utility in January 2013

To improve electrical service reliability, a municipal utility in Tennessee outfitted ALL of their 15 kV class circuits with over 1,000 S&C automated switches. In January 2013, a large storm rolled through, causing a power outage to 11,258 homes and businesses.

Within 43 seconds, the Self-Healing Technology system re-routed power to 10,800 homes and businesses.

11,258 Outages → 10,000 Restored → 10,800 Restored → 11,000 Restored → All Outages Restored!

Storm hits in January 2013. 11,258 homes and businesses lose power.

Self-Healing Technology re-routes power, and 10,000 homes and businesses are restored in 28 seconds.

A 2nd automatic self-healing wave re-routes around the damage again. 800 more homes and businesses are restored.

3:06 minutes later, a dispatcher operates switches, and even more homes and businesses are restored.

2:43 minutes later, the dispatcher makes one more remote call, and all 11,258 homes and businesses are restored – in less than 7 minutes.

Automatic Self-Healing Technology quickly restores service where possible, so dispatchers and field crews can focus their efforts exactly where they are needed most.
Feeder Automation with IntelliRupter and Intelliteam-SG

- **Uses 95% less energy,** preventing damage to your system during fault testing.
- **Low-stress PulseClosing Technology** safely tests for faults on hybrid systems and underground lines.
- **Increased segmentation,** without complex curve coordination, reduces SAIDI and the number of customers out of power.
- **IntelliTEAM-SG FLISR** in 10s of seconds with Distributed Intelligence. Co-exist with DMS.

*Extend the life of your equipment and improve reliability!*