Engineered to order. Built to last.

Automatic Reclosers
Agenda

• Who is G&W?
• Recloser Basics
• Standalone Recloser in Action
• Automated Reclosers
  – With and Without Communication
Who is G&W?

In business in the Chicago area since 1905, in 2012 G&W moved to a new world headquarters in Bolingbrook. From there, they manufacture Solid Dielectric Reclosers, SF6 Insulated and Solid Dielectric Switchgear, Cable Accessories and terminations as well as Current Limiting Protective Devices.
ComEd Automation Pilot

Automated Loop Scheme

To D9312 Source

<table>
<thead>
<tr>
<th>DATE</th>
<th>REVISION</th>
<th>BY</th>
</tr>
</thead>
</table>

PROJECT DIAGRAM
ComEd DISTRIBUTION RELIABILITY
Install MCR on feeder D9312

Reliability Engr.: Jerry Meier
Capacity Planner: Jerry Meier
Region: Southwest
ITN: 40010
Project ID: BSPD0176
Service Date: 12/31/2011
Reliability Mgr.: William J. Allen
Date: 7/1/2010
Recloser Components

- Voltage Sensor
- Current Transformer
- Vacuum Interrupter
- Epoxy Encapsulation
- Drive Assembly
- Metal Casting
- Magnetic Actuator
- Position Indication
- Manual Open Handle

Three Independent Modules
Recloser in Operation
1. Recloser opens to clear fault then recloses to attempt to provide power.
2. If the fault is successfully cleared, power can be delivered again to the energy users.
Automation Without Communication

1. Recloser opens to clear fault then recloses to attempt to provide power.
2. If the fault is not successfully cleared, recloser locks out and stays open.
3. The Sectionalizer senses loss of voltage and opens to isolate the faulted line.
4. The Tie senses loss of voltage and closes to provide power.
5. Automation complete in less than 1 minute.
1. Source 1 is lost.
2. Source 1 Recloser opens after 5s to isolate Source 1.
3. Tie Recloser closes after 2s to energize the line between Source 1 Recloser and Tie Recloser.
4. Automation completes in less than 10 seconds.