

# Live-tank breaker parts and service

Service solutions for your T&D infrastructure

The Siemens type LPO and 3A-family live-tank high-voltage (HV) circuit breakers have offered dependable service for the past 30 years. As the supplier of OEM parts for your Siemens HV breakers, we are committed to supporting you with qualified parts and factory trained field service support throughout your breakers' life cycle.

### Field service:

Siemens provides technical field assistance, turnkey maintenance, testing and project management services. Project engineers strictly follow OEM guidelines to minimize downtime and maximize breaker reliability and performance.

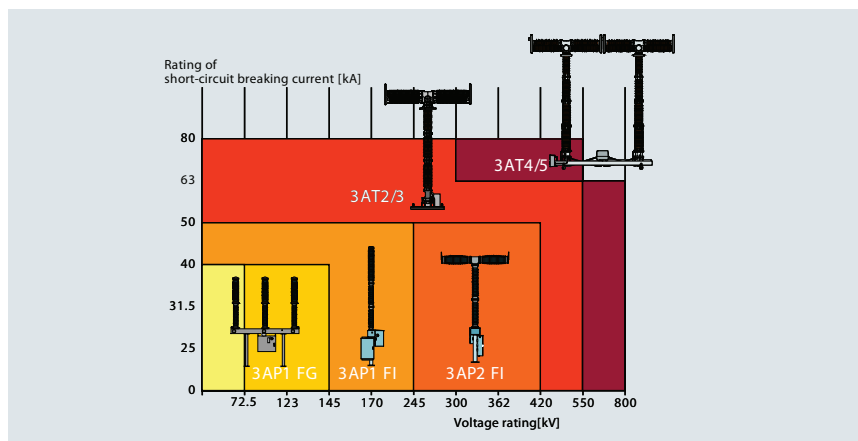
### Customer benefits:

- Improved outage planning and support
- Comprehensive project management with access to OEM engineering departments
- Most advanced equipment available
- Extended breaker service life
- Reduced ongoing maintenance costs

### Maintenance training:

When combined with a scheduled maintenance outage, breaker technical field assistance and on-site training provides the following hands-on experience for maintenance crews:

- Maintenance and repair sequencing
- Factory adjustment procedures and tolerances
- Part identification
- Troubleshooting
- Failure analysis



## Major maintenance program – 20 year

Performing major maintenance on Siemens HV circuit breakers enables reliable service for an additional 20 years or more.

Operation	Major inspection	Major maintenance
<b>Circuit breaker</b>	<b>10 years</b>	<b>20 years</b>
Visually inspect breaker externally	X	X
Measure SF <sub>6</sub> gas pressure	X	X
Remove SF <sub>6</sub> gas		X
Check contact system, blast cylinder		X
Visually inspect bell crank mechanism parts and locking devices		X
Replace seals		X
Refill breaker with SF <sub>6</sub> gas		X
Check response time and synchronization	X	X
<b>Hydraulic control</b>		
Visually inspect hydraulic system	X	X
Replace hose between monitoring unit and the oil pump		X
Drain oil, inspect tank, replace with new oil and filter	X	X
Vent oil-pump, hydraulic system	X	X
Measure nitrogen pre-charge pressure	X	X
Measure operating values of safety valve	X	X
Inspect hydraulic system for internal leaks, measure oil pressure	X	X
<b>General</b>		
Measure operating values of SF <sub>6</sub> density monitor, oil pressure switches	X	X
Check breaker pressure gauge for SF <sub>6</sub> and pressurized oil		X
Inspect anti-condensation heaters	X	X
Functional checks	X	X
Measure SF <sub>6</sub> gas humidity content, SF <sub>6</sub> gas-air content		X



Siemens LPO 245kV live-tank power circuit breaker

### Siemens Industry, Inc.

7000 Siemens Road  
Wendell, NC 27591

For more information, please contact our Customer Support Center.  
Phone: 1-800-333-7421

[usa.siemens.com](http://usa.siemens.com)

Order No: IC1000-E240-A111-X-4AUS  
Printed in USA

©2017 Siemens Industry, Inc.

The technical data presented in this document is based on an actual case or on as-designed parameters, and therefore should not be relied upon for any specific application and does not constitute a performance guarantee for any projects. Actual results are dependent on variable conditions. Accordingly, Siemens does not make representations, warranties, or assurances as to the accuracy, currency or completeness of the content contained herein. If requested, we will provide specific technical data or specifications with respect to any customer's particular applications. Our company is constantly involved in engineering and development. For that reason, we reserve the right to modify, at any time, the technology and product specifications contained herein.