

## Benefits

### Protect Your Electrical Distribution System

A survey performed by the InterNational Electrical Testing Association (NETA) assessed the field performance data of approximately 340,000 protective devices and revealed that 23 percent of circuit breakers tested had an issue affecting operation. In some cases, the circuit breakers did not operate at all which subjects downstream equipment to possible meltdown and potentially exposes personnel to large values of incident energy.

Circuit breakers play a critical role in protecting the people and equipment in a plant or facility, and they are integral in limiting the damage should a fault occur. But like all electrical components, circuit breakers can and do fail.

When circuit breakers are periodically tested and properly maintained, facilities gain peace of mind knowing these critical safety mechanisms will perform reliably.

### Benefits

- Proper electrical system protection
- Improved worker safety
- Reduced unplanned downtime
- Decreased maintenance costs
- Extended equipment operating life
- Arc flash mitigation



## Maximize system and worker protection with a comprehensive testing and maintenance solution for circuit breakers

Regular testing and proper maintenance, which is required by the National Fire Protection Association's Standard for Electrical Safety in the Workplace® (NFPA 70E), is the best way to ensure circuit breakers will operate properly under fault or overload conditions. Vertiv™ delivers the most complete solutions for electrical system reliability and safety, including circuit breaker testing and maintenance. By regularly inspecting, cleaning, lubricating, and exercising the mechanisms in accordance with NETA and/or manufacturers' recommendations, field technicians ensure sound and proper strictest standards in electrical safety. NETA-certified field technicians are the industry leaders in the latest electrical testing techniques and adhere to the strictest standards in electrical safety.

Our circuit breaker services include:

- NETA-certified acceptance and maintenance testing
- Setting verification
- Infrared scans
- Arc flash studies

## NETA-Certified Acceptance Testing and Maintenance

Skilled testing experts use state-of-the-art tools to conduct each test according to the most recent NETA specifications. Testing is a cost-effective way to ensure proper operation of protective devices and protection for the electrical system. It also helps extend the life of operating equipment while avoiding the high costs of emergency maintenance.

Comprehensive circuit breaker testing and maintenance includes:

- Key component inspections (arc chutes, moving and stationary contacts, bolted electrical connections) to verify physical and mechanical condition
- Inductor testing to verify proper resistance values of each contact
- Megger testing to test the insulation of the breaker and safeguard against shorting
- Primary current injection testing to verify the breaker will trip in a fault and provide overload protection
- Mechanical operator and contact alignment tests
- Circuit breaker lubrication to ensure proper operation of moving, current-carrying parts and sliding surfaces
- Preparation of summary report containing as-found condition of circuit breakers and professional recommendations if remediation is required

## Setting Verification

In accordance with your plant's short circuit/coordination study, field technicians verify final protective device settings and perform any adjustments as needed. This ensures circuit breakers

will trip according to specifications, and affords better protection and fewer service interruptions in your system.

## Infrared Scans

Technicians detect hot spots by performing infrared scans. Hot spots represent the deterioration of electrical connections over time due to vibration, improper torque, corrosion, and improper installation. Infrared scans provide early detection of problems before they result in equipment damage, business interruption, emergency maintenance costs, and physical harm to employees.

## Arc Flash Studies

Arc flash studies are a vital tool for mitigating potential electrical hazards for employees or contractors that work on or near energized circuits. Conducted by professional engineers, this review of the electrical distribution system identifies areas of risk and non-compliance, and includes recommendations for personal protective equipment, labeling, training, and other actions needed to comply with critical safety regulations.

## Comprehensive Reports

Reports on all preventive maintenance activities are automatically generated and are easily accessible via a robust, web-based customer portal. These reports provide peace of mind that all necessary maintenance was performed. They also include recommendations for system improvements from the OEM's service team, which is specifically trained to optimize the performance of your Liebert® thermal management equipment.

## Summary

Your plant or facility relies on electric power, and your business and employees rely on you to ensure the power system operates safely and reliably. Circuit breakers are a critical component in this equation and require regular testing and maintenance to do the job of protecting people and profits. The service team of Vertiv™ offers unparalleled expertise in electrical testing and a nationwide network of NETA-certified field technicians. Rely on us to expertly maintain your circuit breakers, and handle all your electrical system reliability and safety needs.

## Ordering Information

To learn more about this service and other Vertiv solutions, visit [VertivCo.com](https://VertivCo.com) or call 1-800-2096070