

TESTING AND MAINTENANCE - CIRCUIT BREAKER



WHY CIRCUIT BREAKER MAINTENANCE? MAINTAIN PROACTIVELY, PREVENT FAILURES

Reliable Power Supply

- ✦ Professional maintenance of your circuit breakers ensures uninterrupted power supply and protects your systems from unplanned failures.

Extended Service Life & Asset Preservation

- ✦ Regular inspections and timely replacement of wear parts increase the lifespan of your power distribution system and reduce long-term operating costs.

Safety for People & Technology

- ✦ Proper testing ensures that your protective systems function reliably in critical situations – providing maximum safety for your employees and your facility.

ADVANTAGES OF REGULAR INSPECTION AND MAINTENANCE

As an independent service provider, Ohmega Energy offers comprehensive service packages for circuit breaker maintenance – tailored to your needs and always according to the highest quality and safety standards.

- ✦ **Increase Reliability**
Maintenance prevents failures and ensures stable power supply.
- ✦ **Extend Service Life**
Cleaned and serviced components last longer, eliminating costly replacements.
- ✦ **Increase Safety**
Properly functioning protection systems reduce the risk of accidents and damage.
- ✦ **Reduce Costs**
Fewer failures and more efficient operation save money, energy and resources in the long term.
- ✦ **Meet Regulatory Requirements**
Regular maintenance fulfills legal requirements and prevents penalties.

OUR MAINTENANCE SCOPE

Through manufacturer-compliant testing, precise measurement procedures and thorough visual inspections, we effectively prevent failures. Our qualified personnel carry out all manufacturer-specified maintenance tasks – ensuring maximum performance and long service life of your system.



PRIMARY TEST SYSTEM Megger INGVAR

MAINTENANCE OF MECHANICAL COMPONENTS

- ✦ *General Inspection* – All safety- relevant connections, functions and fastenings are carefully checked for possible damage or wear.
- ✦ *Arc and Main Contacts* – Arc and main contacts are inspected for proper seating, condition and functionality.
- ✦ *Main Circuit, Busbars and Disconnect Contacts* – Busbars, insulation parts and contacts are thoroughly cleaned, lubricated and checked for secure fastening.
- ✦ *Mechanism, Locking System* – The operating mechanism is cleaned, lubricated and inspected for full functionality.
- ✦ *Arc Chambers* – Arc chambers are checked for damage and cleaned of residues.
- ✦ *Cleaning* – The circuit breaker and all accessories are fully and professionally cleaned.

**Switch safely when it counts –
verified and tested.**

MAINTENANCE OF ELECTRICAL COMPONENTS

- ✦ *Electronic Accessories* – All electronic releases and actuators are electrically and mechanically tested.
- ✦ *Electrical Indicators* – Auxiliary contacts and signaling devices are checked electrically and mechanically.
- ✦ *Overcurrent Release* – Overcurrent releases are visually and mechanically inspected and tested using the **Megger INGVAR primary test system under real current flow**. During this process, the actual tripping current is precisely adjusted, and the tripping time is measured and documented. Unlike software-only tests, this procedure is performed **under real load**, ensuring that the complete tripping behavior – including thermal-magnetic characteristics – is verified. This method enables an **authentic assessment of the protection function** and provides the foundation for a reliable condition evaluation of the circuit breaker.

TYPICAL MAINTENANCE INTERVALS (GUIDELINES)

Application Type	Recommended Interval
Normal environment/standard operation	every 3–5 years
Frequent switching (> 1000 operations)	every 1–2 years
Harsh environments (e.g. high dust or humidity)	annually – every 2 years
Critical infrastructure (e.g. utilities, hospitals)	according to manufacturer's recommendation, often annually
After a fault or trip event	immediate inspection and maintenance