



# High- Power Testing Services

## **Short-circuit and arc fault testing in cooperation with a partner's test facilities**

Through our collaboration with a leading provider of power management, and protection and control technologies for electrical installations, SGS offers accredited high-power short-circuit and arc fault testing for electrical equipment manufacturers and system integrators in Vaasa, Finland. This enables customers to verify products under extreme electrical fault conditions using industrial-scale test infrastructure.

The concept combines partner's high-power laboratory infrastructure and test execution and SGS's independent evaluation and wide product certification services. This enables a direct path from high-power testing to internationally recognized certifications.

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**SGS**

# Access Advanced Testing Capabilities via SGS

## Short-Circuit Testing Capabilities

State-of-the-art test systems enable a wide range of fault simulations:

- High-current short-circuit testing up to 100 kA
- Voltage ranges from low voltage up to medium voltage levels
- Adjustable:
  - Power factor ( $\cos \varphi$ )
  - L/R ratio
- AC and DC testing available
- Typical fault duration: 100–1000 ms

Representative test configurations include:

- Low voltage: up to 100–78 kA
- Medium voltage: up to tens of kV range
- DC systems: up to ~1840 V

Suitable for switchgear, protection devices, power electronics, and industrial equipment.

## Arc Fault Testing (Low Voltage)

- Testing of low-voltage arc fault behavior
- Evaluation of:
  - Containment
  - Safety performance
  - Equipment robustness under arc conditions
- High-speed cameras available for detailed event analysis

(Medium voltage arc testing can be assessed case-by-case.)

## Additional Test Support

- Control interfaces for triggering (e.g., contactor/voltage signals)
- Auxiliary supplies for test setup integration
- Post-test dielectric verification (up to 5 kV)

## Typical Applications

- Circuit breakers & switchgear
- Power distribution systems
- Renewable energy converters
- Industrial drives & control equipment
- Custom electrical assemblies

## How SGS can support you?

SGS acts as your single point of contact and project manager:

- Test planning and setup definition
- Coordination of test execution
- Test witnessing and reporting
- Integration into certification or compliance projects (if required)

Based on compliant results, SGS can issue Product certifications based on client needs (e.g. IEC CB-, FI-, ENEC-certifications)

We enable Global Market Access through globally recognized certifications and unrivalled network.

Contact SGS for availability, quotations, and test planning:

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