

# Stator Core Measurement Upgrade Option

## CPC 100 upgrade option for electromagnetic imperfection testing on rotating electrical machines

Our **Stator Core Measurement Upgrade Option** is used with our CPC 100 multi-functional testing device and Primary Test Manager (PTM) software. Together they perform time-saving and highly reliable electromagnetic imperfection testing (also known as stray flux measurements) on stator cores of rotating electrical machines, including hydro and turbo generators and motors.

### The importance of stator core testing

Electromagnetic imperfection testing is performed to detect stator core interlamination faults that can cause overheating and damage in rotating machines during operation.

During the measurement, the stator core is energized with a small percentage of nominal flux and the stray flux on the surface is measured by a Chattock coil. Any change in the stray flux is an indication of a potential fault between two or more layers. To avoid down times, regular measurements are recommended to compare and evaluate the insulation integrity between stator core layers over time.

### Efficient, user-friendly solution

The measurement sensor is mounted on a rail and automatically moves across the stator core to scan the surface. After one slot is finished, the rail is manually moved to the next slot. The entire stator core is semi-automatically scanned using this approach. This ensures efficient and highly reproducible measurements.

The user-friendly Primary Test Manager (PTM) software provides users with a guided workflow throughout the test and enables a real-time graphical analysis of the results. A heat map with adjustable limits provides you with a visual overview of hot spots in the stator.

The same compact equipment is used in combination with the CPC 100 for both energizing the stator core as well as performing the measurement.

### Frequency-selective measurements

Our frequency-variable source enables a selective measurement starting from 15 up to 400 Hz. With this approach, potential disturbances are eliminated and a better signal-to-noise ratio is achieved. Measurements at mains frequency are also possible.

### System advantages

- > Semi-automatic scanning of the stator core
- > Measurement and excitation in one solution
- > Frequency-variable injection from 15 to 400 Hz
- > User-friendly work flow using Primary Test Manager (PTM) software
- > Automated reporting including results, graphs and heat map
- > Easily extendable excitation cable to meet specific measurement requirements
- > Multi-functional CPC 100 meets additional testing needs

### Stator Core Measurement Upgrade Option

Order No. P0000056

#### Hardware

- 1 × RAA1 measurement rail
- 1 × SCU1 control unit with calibration
- 1 × WMP1 winding multiplier

#### Cables and accessories

- 2 × Chattock coils of different lengths
- 1 × Multiwire excitation cables
- 1 × Booster cable
- 1 × Stator core measurement cable set

#### Useful additions

- Turbo Generator Excitation Set
- Standard Excitation Cable Extension Set
- PTM Advanced for CPC 100

#### Order No. .

- P0000193
- P0000057
- P0006792



OMICRON is an international company that works passionately on ideas for making electric power systems safe and reliable. Our pioneering solutions are designed to meet our industry's current and future challenges. We always go the extra mile to empower our customers: we react to their needs, provide extraordinary local support, and share our expertise.

Within the OMICRON group, we research and develop innovative technologies for all fields in electric power systems. When it comes to electrical testing for medium- and high-voltage equipment, protection testing, digital substation testing solutions, and cybersecurity solutions, customers all over the world trust in the accuracy, speed, and quality of our user-friendly solutions.

Founded in 1984, OMICRON draws on their decades of profound expertise in the field of electric power engineering. A dedicated team of more than 900 employees provides solutions with 24/7 support at 25 locations worldwide and serves customers in more than 160 countries

For more information, additional literature, and detailed contact information of our worldwide offices please visit our website.