Multi-functional testing device for substation assets

OMICRON’s CPC 100 is a multi-functional testing device for substation asset commissioning and maintenance. It replaces several individual testing devices, reducing the costs for transport and training as well as minimizing testing time.

All-in-one testing solution
The versatile CPC 100 can be conveniently used to perform many standard and advanced diagnostic tests on various electrical assets, including power transformers, current and voltage transformers, circuit breakers and switchgear, rotating machines, grounding systems, as well as cables and transmission lines.

To perform this wide range of tests, the CPC 100 provides users with up to 800 A or 2 kV (2 kA or 12 kV with boosters) with up to 5 kVA over a frequency range of 15 Hz to 400 Hz or 400 A DC.

Add-on devices allow the CPC 100 to further expand its testing capabilities to perform specialized tests, such as power/dissipation factor, line and ground impedance measurements as well as GIS testing. In addition, the CPC 100 also enables sampled values and merging unit testing in accordance with the IEC 61850-9-2 standard.

Compact and lightweight.
The CPC 100 weighs only 29 kilograms (64 lbs.) and it comes with a wheeled case. This makes it easy for one person to handle the equipment during on-site testing. Thanks to its compact and lightweight design, it can be easily transported in a vehicle or economically shipped in advance to measurement locations.

Portable HV source
In addition to the diverse variety of electrical tests it performs, the CPC 100 can also be used as a convenient HV source to energize assets for off-line diagnostic testing, as for example during induced voltage testing for voltage withstand and partial discharge measurements. It can be easily transported and used in testing areas that are hard to access or
have limited space. By comparison, traditional types of external HV sources used for off-line testing are often very large, cumbersome and expensive to transport.

**Variable test frequencies**

Variable test frequencies from 15 Hz to 400 Hz can be selected to ensure the effective suppression of mains-related interference. This enables users to obtain accurate measurement results even in noisy environments.

**High level of safety**

To protect users and their electrical assets during high-voltage diagnostic testing, the CPC 100 is equipped with various safety mechanisms, including an automatic ground connection check, overload detection, multiple isolated outputs, a safety lock key, an acoustic signal to indicate measurements in progress, as well as an emergency switch-off button.

**Flexible operation**

The CPC 100 provides users with various ways to conduct on-site tests on substation assets, whether manually from the instrument panel, or with a laptop PC or tablet using OMICRON’s Primary Test Manager™ (PTM) software. This powerful software tool enables users to have extended on-site testing capability at their fingertips, including guided test workflows, data management and automatic real-time assessment.

**Easy data handling and reporting**

All results are displayed as diagrams and tables in real time, and the PTM software also shows the progress of the measurements as well as the remaining tasks. An overview of the test results is given during the measurement and an instant “pass/fail” assessment of the test results is displayed based on specified limit values, such as those conforming to international standards. The software automatically generates reports that include pre-selected information about the asset and the tests that have been performed.

Additional information can be found under [www.omicronenergy.com/cpc100](http://www.omicronenergy.com/cpc100)
Multi-functional CPC 100 for efficient and cost-effective substation asset testing

The all-in-one CPC 100 can be used for a variety of standard electrical tests on a variety of substation assets.

Company profile
OMICRON is an international company serving the electrical power industry with innovative testing and diagnostic solutions. The application of OMICRON products allows users to assess the condition of the primary and secondary equipment on their systems with complete confidence. Services offered in the area of consulting, commissioning, testing, diagnosis and training make the product range complete.

Customers in more than 150 countries rely on the company’s ability to supply leading edge technology of excellent quality. Service centers on all continents provide a broad base of knowledge and extraordinary customer support. All of this together with our strong network of sales partners is what has made our company a market leader in the electrical power industry.

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