

### **OMICRON Products and Solutions**



# TAILORED TESTING AND MONITORING SOLUTIONS

Protection and recloser control testing

IEC 61850 testing and cyber security

Measurement equipment testing

Data and maintenance management

Power transformer testing and monitoring

Instrument transformer testing

Circuit breaker / switchgear testing

Motor / generator testing and monitoring

Partial discharge analysis and monitoring

Cable testing and monitoring

Transmission line testing

Grounding system testing



# Research & manufacturing





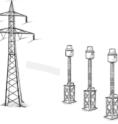
### **Generation**





### **Industry**









## Transmission & distribution







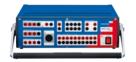


# Protection and recloser control testing

### 6-phase test sets



CMC 356 Universal relay test set and commissioning tool



**CMC 256plus**High-precision test set and calibrator

### 3-phase test sets



**CMC 430**Ultra-portable high-precision protection test set and calibrator



**CMC 353**Compact and versatile three-phase relay test set



**CMC 310**Test set for basic three-phase testing

### Recloser control test set



**ARCO 400** Universal test set for recloser controls

### 1-phase test set



COMPANO 100
Battery-operated primary injection, secondary injection and basic protection test set

### Digital substation test set



**CMC 850**Dedicated IEC 61850
protection test set for digital substations





### **Operation**



**Test Universe** 

PC software suite for advanced secondary testing with CMC test sets



PTL

Creation of specific test templates which adapt automatically to the actual relay settings

### Management



ADMO

Maintenance management solution for protection systems



### RelaySimTest

Software for system-based protection testing with CMC test sets and ARCO 400



### **CMControl P**

Intuitive control option for simple manual testing with CMC test sets



### **CMEngine**

Programming interface for controlling CMC test sets with user-specific software

### **Planning**



### **Time Grading**

Software for easy creation of time grading schedules





# IEC 61850 testing and cyber security in energy systems

### **IEC 61850 testing solutions**



### **StationScout**

Software for a clear overview and automated testing of Substation Automation Systems



### **IEDScout**

Software for analyzing IEC 61850 IEDs. Available for PC and the cyber-secure MBX1 test set



### DANEO Contro

Software for simultaneous analysis of GOOSE, Sampled Values and analog/binary signals



### **SVScout**

Software for visualizing IEC 61850 Sampled Values



### **Test Universe**

Software suite for advanced secondary testing on CMC test sets



### RelaySimTest

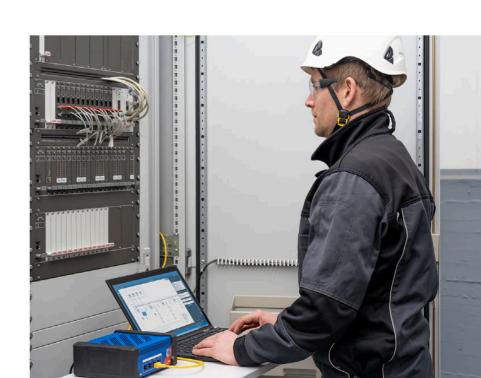
Software for testing protection systems with Sampled Values and GOOSE

### **Cyber security solutions**



### **StationGuard**

Functional security monitoring system for detecting intrusions and cyber threats in IEC 61850 substations





### **Test sets**



### RBX1

Permanently installed 19-inch platform for StationGuard, StationScout and IEDScout



### MBX1

Test set for testing Substation Automation Systems with StationScout and IEDScout



### **DANEO 400**

Measurement and recording device for analyzing signals and network traffic with DANEO Control



### **CMC** family

Versatile protection testing using GOOSE, Client/Server (MMS) and Sampled Values



### **CMC 850**

Dedicated IEC 61850 protection test set for digital substations



### **CPC 100**

Universal primary test set with the ability to receive IEC 61850 Sampled Values

### **Accessories**



### **EMCON 200**

PTP transparent Ethernet media converter powered by PoE



### **ISIO 200**

Binary I/O extension for StationScout and flexible IED for converting binary I/Os to IEC 61850



### **OTMC 100p**

Antenna integrated PTP grandmaster clock for the use in Substation Automation Systems



### **TICRO 100**

Device for synchronization of non-PTP equipment to the PTP grandmaster of an IEEE 1588/PTP infrastructure

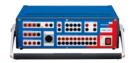


# Testing of meters, transducers and power quality meters

### 6-phase test sets



**CMC 256plus** High-precision test set and calibrator



**CMC 356** Universal secondary test set

### 3-phase test set



**CMC 430**Ultra-portable high-precision protection test set and calibrator

### **Operation**



**Test Universe**Software suite for advanced secondary testing on CMC test sets



**CMControl P**Intuitive control option for simple manual testing with CMC test sets

### Management



**ADMO**Convenient asset and testing management



CMEngine

Programming interface for developing user-specific test software for CMC test sets



# Data and maintenance management

### **ADMO**



ADMO is an easy-to-use database software for central planning and management of all testing and maintenance activities for protection systems in the power industry.





### **Modules for ADMO**



### InSight

The ADMO dashboard processes the asset and maintenance data available in ADMO and displays it using widgets.



### **Test Set Management**

Enables you to add the test sets you use for your maintenance tasks, store test set specific data, schedule test set calibration, and keep track of repair events.



### **Time Grading**

This module supports you in creating your time grading schedules.

### **Primary Test Manager (PTM)**



The Primary Test Manager (PTM) software supports you during diagnostic tests on circuit breakers, current and voltage transformers, rotating machines, grounding systems, power transformers as well as associated equipment such as bushings and on-load tap changers (OLTC).

A high-performance database ensures that the installed equipment and the associated test plans can be managed easily. With the module "PTM DataSync", you can synchronize your database to a central server in order to share and consolidate important asset information company-wide.



# Power transformer testing and monitoring



**TESTRANO 600** 

Three-phase test system for all common conventional tests on power transformers



### **TESTRANO 600 + CP TD12**

Three-phase test system expanded for dissipation/power factor measurements



### **CPC 100**

Universal primary injection test system for electrical diagnostics on various assets



### CPC 100 + CP TD12/15

Universal test system expanded for dissipation/power factor measurements



### **FRANEO 800**

Sweep frequency response analyzer (SFRA) for core and winding diagnosis



### **DIRANA**

Dielectric response analyzer for moisture determination in oil-paper insulations



### **CT** Analyzer

Current transformer test system, e.g. for bushing current transformers



### MPD 800

Universal partial discharge (PD) measurement and analysis system



PDL 650

Acoustic partial discharge localization test system



### **MONTESTO 200**

Portable on-line partial discharge measurement and temporary monitoring system



### **TANDO 700**

High-precision test system for dissipation/power factor and capacitance measurements



CPC 80 + CP TD12/15

Dedicated dissipation/power factor test system



### CPC Sync

Portable HV source for partial discharge and voltage withstand tests on dry-type transformers



### **Primary Test Manager**

Software for testing and management of primary assets





## Instrument transformer testing



**CT Analyzer** Current transformer test and calibration system



**VOTANO 100**Voltage transformer test and calibration system



CPC 100
Universal primary injection test system for electrical diagnostics on various assets



**COMPANO 100**Portable primary and secondary injection and basic protection test set



**DIRANA** 

Dielectric response analyzer for insulation condition assessment



CPC 100 + CP TD12/15

Universal test system expanded for dissipation/power factor measurements



### CPC 80 + CP TD12/15

Dedicated dissipation/ power factor test system



### **TANDO 700**

High-precision test system for dissipation/power factor and capacitance measurements



### **MPD 800**

Universal power discharge measurement and analysis system



### **Primary Test Manager**

Software for testing and management of primary assets

# Circuit breaker / switchgear testing



CIBANO 500 + CB MC2 + CB TN3

Circuit breaker test system for timing, micro-ohm and motion tests with integrated power supply



**CPC 100** 

Universal primary injection test system for electrical diagnostics on various assets



CPC 100 + CP TD12/15

Universal test system expanded for dissipation/power factor measurements





CPC 80 + CP TD12/15

Dedicated dissipation/power factor test system



**COMPANO 100** 

Basic test set, e.g. for singlephase timing tests



### **CT** Analyzer

Current transformer test and calibration system, e.g. for GIS current transformers



**CPC 100 + CP RC** 

Voltage withstand test on GIS with power voltage transformer



### **Primary Test Manager**

Software for testing and management of primary assets



# Motor / generator testing and monitoring



**CPC 100** 

Universal primary injection test system for electrical diagnostics on various assets



### CPC 100 + CP TD15 + CP CR600

Universal test system expanded for dissipation/power factor measurements, incl. highvoltage source



### **MONTESTO 200**

Portable on-line partial discharge measurement and temporary monitoring system



### **MPD 800**

Universal power discharge measurement and analysis system



### **MONGEMO**

Partial discharge monitoring system for rotating machines



### **Primary Test Manager**

Software for testing and management of primary assets



### **TANDO 700**

High-precision test system for dissipation/power factor and capacitance measurements



### **DIRANA**

Dielectric response analyzer for insulation condition assessment

# Partial discharge analysis and monitoring



### MPD 800

Universal power discharge measurement and analysis system



### PDL 650

Acoustic partial discharge localization test system



### **MONTESTO 200**

Portable on-line partial discharge measurement and temporary monitoring system



### **MONCABLO**

Permanent on-line partial discharge monitoring system for high-voltage cables



### **MONGEMO**

Partial discharge monitoring system for rotating machines



PD





# Cable testing and monitoring



### **CPC 100 + CP CU1**

Universal test system expanded for impedance and k-factor measurements



### **MPD 800**

Universal power discharge measurement and analysis system



### **TANDO 700**

High-precision test system for dissipation/power factor and capacitance measurements



### **MONTESTO 200**

Portable on-line partial discharge measurement and temporary monitoring system



### **MONCABLO**

Permanent on-line partial discharge monitoring system for high-voltage cables





### **Transmission line testing**



### CPC 100 + CP CU1

Universal test system expanded for impedance, k-factor and mutual coupling measurements





### **CPC 100 + CP CU1 + HGT1**

Universal test system expanded for ground impedance, and step and touch voltage measurements



### COMPANO 100 + HGT1

Basic test set for ground impedance, and step and touch voltage measurements in small stations







# Innovation & reliability



### **Quality**



By choosing OMICRON, you do not decide to simply buy a product.
You also gain a partner with a stable corporate philosophy and independent funding to support you with passion and energy throughout the entire life cycle of your OMICRON product, and beyond.







**Support** 





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### 100% routine testing

We test each individual component and module prior to assembling.

### **Made in Austria and Germany**

All our devices are produced in Austria and Germany and guarantee highest quality during production. Our suppliers are long-term partners in the region.

### **Compliance with** international standards

We are compliant with ISO 9001, ISO 14001, OHSAS 18001, TÜV and EMAS.

### Safe operation

We use state-of-the-art technology for a maximum level of security: guided workflows, simple wiring concepts, fiber-optical connections, safety accessories, manuals in many languages.

### **Continuous software** maintenance and upgrades

More than 200 software developers ensure our software tools stay up-to-date in the long term.



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### Large investments in R&D

We invest over 15% of our annual sales in R&D to continually set groundbreaking standards in our industry.

### **Time-saving solutions**

Our solutions help you to reduce your testing time with test templates, onebutton-tests, automated test procedures and reduced wiring efforts.

### 24/7 technical support

Reach one of our highly qualified and experienced support engineers – immediately and directly via our technical support hotline. Benefit from our global support network with extensive product and application knowledge -24 hours, 7 days a week.

+1 713 830 4660 +1 800-OMICRON
+43 59495 4444
+852 3767 5500
+91 11 3057 5429
+61 3 9473 8400 1 800 223 177 (toll free)

### **Rental devices**

Benefit from our rental device offer when you are in need of a device.



Support whenever you need it We deal with repair and calibra-

### **Engineering services**

Benefit from our experts' knowledge for consulting, testing and diagnostics.

### Worldwide network

Get local support around the world thanks to 25 offices and our worldwide Sales Partner network.

# La Medde at your ringertips

Make use of the hands-on training possibilities in our well-equipped training centers all around the world and become familiar with both the asset

### **Expert knowledge from** standard committees

Get the latest information from standard committees by our experts.

### **OMICRON Academy**

Broaden your knowledge in customized on-site training, more than 300 training courses and free webinars. Benefit from expert trainers, high-quality training material and from exchanging experiences with other students.



### User meetings, seminars and conferences

Exchange with peer users and industry experts and learn about the latest technological trends at OMICRON events worldwide.

### **Knowledge library**

Receive free access to a huge user network (over 15,000 people) and thousands of interesting papers and application notes.

today we...

... have more than 1000 employees from 59 different nations.









... are proud of having customers in over 170 countries.



... invest a fixed share of our annual profit into social projects dedicated to support underprivileged children. ... have transferred our ownership into the OMICRON trust, a legal entity, which provides a stable basis for the company's long-term development.





# Aboutus

### **Our vision**

We innovate with passion.

We create the best place to work.

We change the world for the better.



### Where it all began

OMICRON was founded in 1984 by Rainer Aberer who had a special vision for his company.

Unfortunately, we lost Rainer in a tragic accident in 2009, but his philosophy still inspires our company culture: we believe in a work setting that entrusts each member of our team with a lot of responsibility. The diverse backgrounds, nationalities and experiences of our colleagues are seen as a fertile ground on which ideas can flourish.

Our working practices encourage team-work and open communication among colleagues and with our customers. An atmosphere of mutual co-operation encourages people to share their ideas, thoughts and opinions. We feel inspired by being able to find new answers that address our customer's unique challenges and requirements.

In this way, we have been able to create an exciting and motivational environment in which we develop our innovative products and services. »Create an environment with no artificial limits where a team of excellent members can reach an excellent performance and enjoy working (having fun) together at the same time. This team should get its recognition for providing the best solutions to the customers.«

Rainer Aberer, founder of OMICRON

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.

We continuously strive to improve our solutions, and we are always eager to work on groundbreaking innovations. For example, our intrusion detection system StationGuard has set new standards in the field of cybersecurity and with the help of smart textiles, our ANGEL system has been designed to make significant contributions to workplace safety.





