

# CPC Sync

Portable, powerful and scalable high-voltage source



# CPC Sync – portable, powerful and scalable high-voltage source

Determining the condition of a dry type transformer's (DTT) insulation requires high voltage in order to perform either partial discharge (PD) measurements or AC voltage withstand tests. For field testing, the induced voltage test is an attractive option to generate high voltage. Therefore, a test voltage is applied to the low-voltage (LV) side of the test object whereas the transformer itself steps up the voltage to the high-voltage (HV) side across its turns ratio.

The CPC 100 comes with a low noise and a PD free amplifier. Furthermore, the software allows you to define test sequences for automated testing. Its compact design and low weight makes it easy to transport.

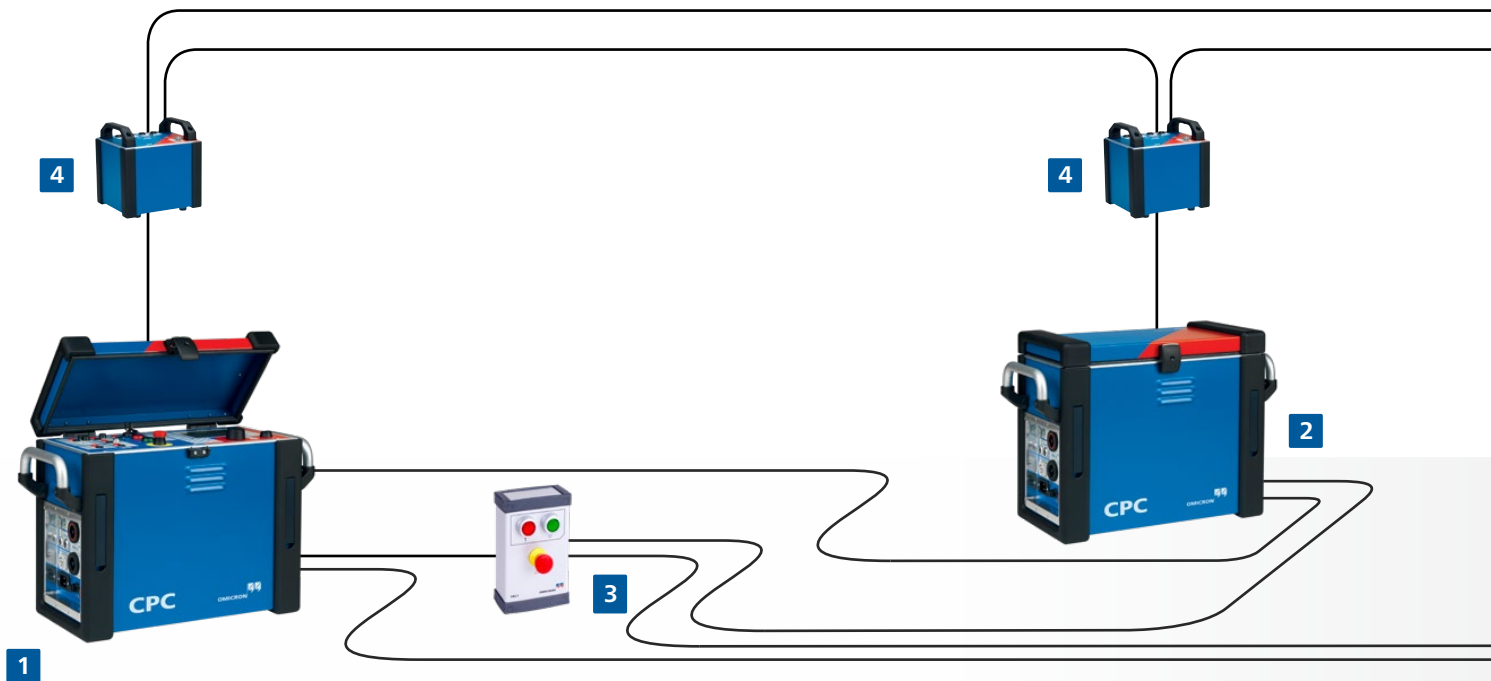
In addition, the CPC 100 now features synchronization of up to 3 units. Thus the power of one single CPC 100 can be multiplied in order to have a powerful source for induced voltage testing. This is useful if one CPC 100 is not sufficient for providing the no-load losses of the transformer under test at a required test voltage.

## 1 CPC 100

- > Multi-functional primary test device
- > Test signal frequency 15 Hz – 400 Hz (for resonant frequency tuning)
- > Low PD level
- > Programmable test sequence

## 2 HV-source (CPC 100/80)

- > CPC 100 is used as a master or slave unit in the synchronization setup
- > CPC 80 is used as a slave unit
- > Portability and scalability due to modular source approach
- > Up to 5 kVA per CPC



CPC Sync is the ideal solution for testing at locations where space is limited.

### 3 Synchronization

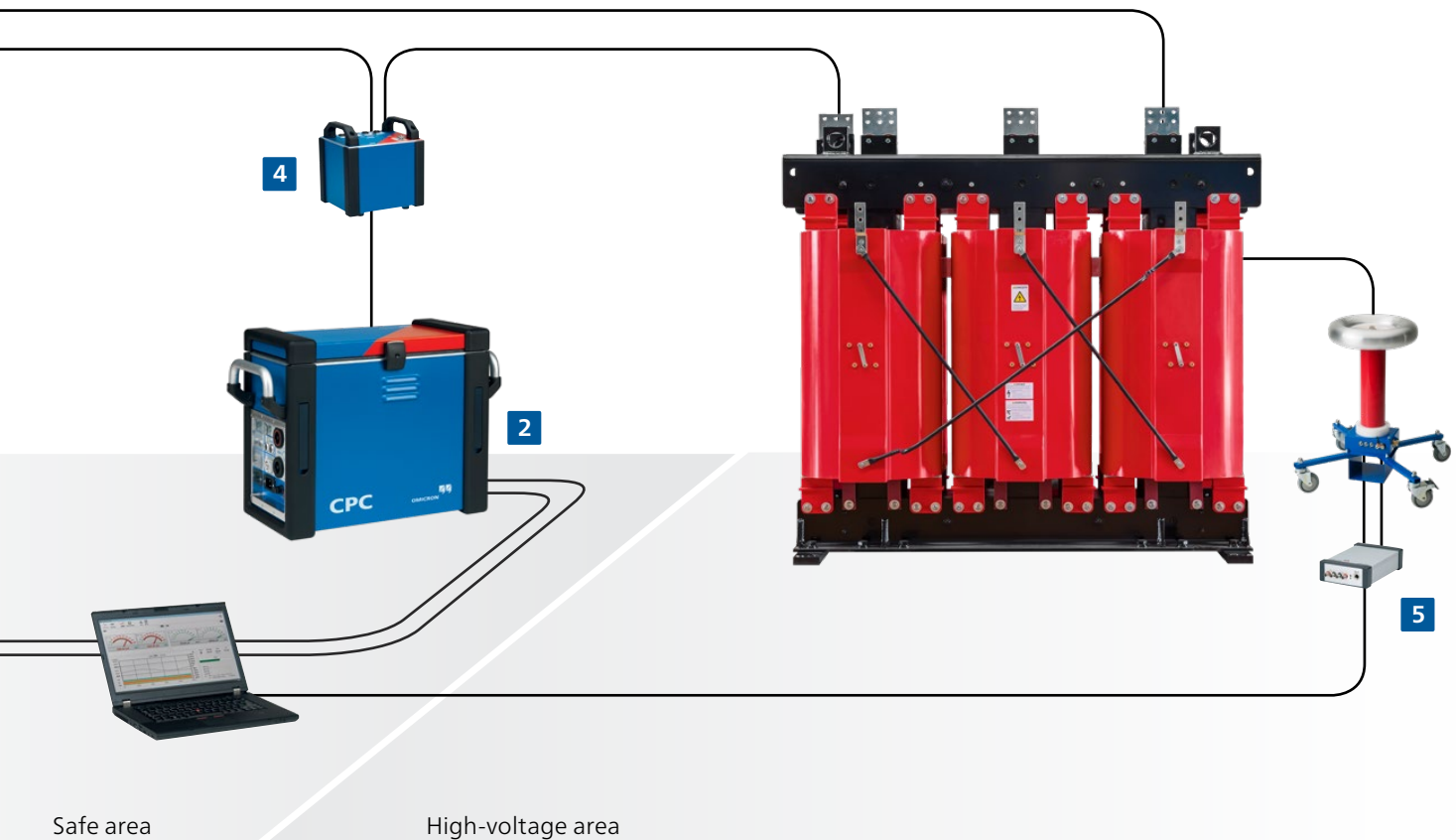
- > Digital synchronization via ethernet from master to slave units
- > TRC1 safely controls up to 3 CPCs (one start and one emergency button for all synchronized devices)
- > Formerly purchased CPCs can be easily extended for synchronization

### 4 Matching transformer

- > Configurable matching transformer to match to different voltage levels on the LV side of a dry type transformer

### 5 PD test equipment

- > High sensitivity
- > Galvanic isolation from test object
- > Field proven reliability
- > Advanced, fully digital filtering
- > Measurement data is recorded and can be subsequently replayed



# Technical specifications and ordering information

## CPC 100/80

### Power supply and mechanical data

Single-phase, nominal	100 V <sub>AC</sub> ... 240 V <sub>AC</sub> , 16 A
Single-phase, permissible	85 V <sub>AC</sub> ... 264 V <sub>AC</sub> (L-N or L-L)
Frequency, nominal	50 Hz / 60 Hz
Power consumption	< 3 500 VA (< 7 000 VA for a time < 10 s)
Connection	IEC 320 / C20
Weight	29 kg / 64 lbs (case without protection cover)
Dimensions (W × H × D)	468 × 394 × 233 mm (18.4 × 15.5 × 9.2 in), cover, without handles.
Operating temperature	-10 °C ... +55 °C / +14 °F ... +131 °F
Storage temperature	-20 °C ... +70 °C / -4 °F ... +158 °F
Humidity range	5 % ... 95 % relative humidity, no condensation

## MTR1

### Technical and mechanical data

U <sub>out</sub>	100 - 600 V (customized)
S <sub>sec</sub>	5000 VA (15 min on, 12 min off)
f	100 - 400 Hz
Weight	19 kg / 41.9 lbs
Dimensions (W × H × D)	262 × 277.5 × 222 mm (10.3 × 10.9 × 8.7 in)

### Environmental conditions

Operating temperature	-10 °C ... +45 °C / 14 °F ... +113 °F
Storage temperature	-20 °C ... +70 °C / -4 °F ... +158 °F
Humidity range	5 % ... 95 % relative humidity, no condensation

## MTR2

### Technical and mechanical data

U <sub>out</sub>	100 - 400 V @ f > 100 Hz
U <sub>out</sub>	0 - 800 V @ f > 200 Hz
S <sub>sec</sub>	6000 VA
f	100 - 400 Hz
Weight	20,64 kg / 45,50 lbs
Dimensions (W × H × D)	262 × 277.5 × 222 mm (10.3 × 10.9 × 8.7 in)

### Environmental conditions

Operating temperature	-10 °C ... +45 °C / 14 °F ... +113 °F
Storage temperature	-20 °C ... +70 °C / -4 °F ... +158 °F
Humidity range	5 % ... 95 % relative humidity, no condensation

Item name	Description	Ordering No.
CPC 100 Basic Package	Package including CPC 100 and all accessories to perform basic checks on primary assets.	P0000658
CPC 80	Peripheral unit including accessories for synchronization of CPCs. Note: Only CPC 100 can be used as controller and peripheral unit.	P0000822
CPC Sync Upgrade Option for existing CPC	Upgrade option including the TRC1 which allows synchronization of up to three CPCs in order to create a powerful source for HV applications.	P0006231
CP Sequencer Test Card	Sequencer test card for testing with different states	P0006782
CP Ramping Test Card	Programmable ramping generator and determination of thresholds	P0006781
MTR1	Customized matching transformer with fixed ratio to match to different voltage levels on the LV side of a dry type transformer	P0001200
MTR2	Matching transformer with adjustable turns ratio. Maximum output voltage is configured to match low voltage rating of transformer under test	P0006353
MPD 600 Set with one channel	Package including acquisition unit, controller, impedance, fiber optic cable, power supply and software package "Basic Package"	P0005891
Coupling Capacitors	MCC 117C: 17 kV, 2.0 nF	P0006465
	MCC 124C: 24 kV, 1.0 nF	P0006466
	MCC 210: 100 kV, 1.0 nF	P0006441

We create customer value through ...

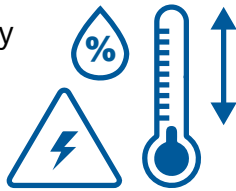
## Quality

You can rely on the highest safety and security standards



Superior reliability with up to

72



hours burn-in tests before delivery

100%

routine testing for all test set components



ISO 9001  
TÜV & EMAS  
ISO 14001  
OHSAS 18001



Compliance with international standards

## Innovation



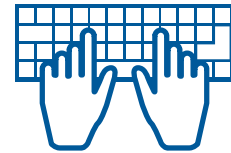
... a product portfolio tailored to my needs

More than

200

developers

keep our solutions up-to-date



More than

15%

of our annual sales is reinvested in research and development



Save up to

70%

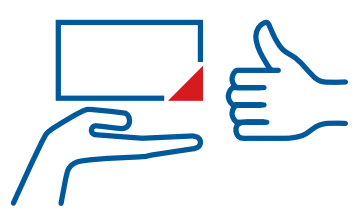
testing time through templates, and automation



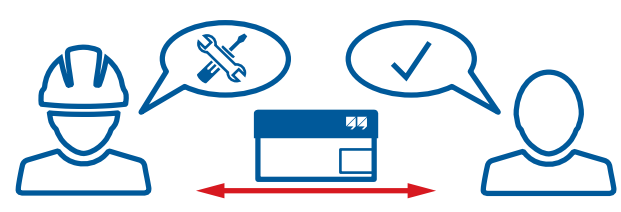
## Support



Professional technical support at any time



Loaner devices help to reduce downtime



Cost-effective and straight-forward repair and calibration



offices worldwide for local contact and support

## Knowledge

More than

300

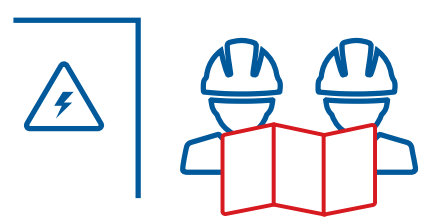


Academy and numerous hands-on trainings per year

Frequently OMICRON hosted user meetings, seminars and conferences



to thousands of technical papers and application notes



Extensive expertise in consulting, testing and diagnostics

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.

The following publications provide further information on the solutions described in this brochure:



CPC 100 Brochure



MPD 600 Brochure

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