

High Power 70 kV Upgrade Option

External high-voltage source (series resonance system) for off-line testing

The High Power 70 kV Upgrade Option is used in combination with the CPC 100 multi-functional testing system and the MPD 600 partial discharge (PD) measurement and analysis system. Together they form an external HV source for off-line measurements on HV equipment, such as cables and switchgear.

Ideal for voltage withstand and PD testing

The High Power 70 kV Upgrade Option forms a series resonant circuit with the test object capacitance to provide users with a lightweight HV source alternative for off-line testing. The system is suitable not only for voltage withstand tests but also PD testing, due to its low interference level.

Operating principle

By using the frequency variable output of the CPC 100, the test frequency is tuned to the point that the capacitive test object and the resonance coil build a series resonance. As a result, tests in the field can be realized up to 70 kV with a maximum current of up to 1.1 A. The test frequency is dependent on the capacitive load of the test object.

A test voltage of 70 kV can be achieved between 50 Hz and 400 Hz, which corresponds to a test object capacitance of up to 45 nF. Higher loads can be energized with lower frequencies and lower voltage. For example, a test object with 192 nF is energized with 25 Hz and can be tested with a maximum voltage up to 35 kV.

The compact and lightweight High Power 70 kV Upgrade Option consists of the EXT1 exciter transformer, the DSH03 series resonance coil and the CC 70kV 5nF high-voltage (HV) capacitor. It also includes a grounding rod and the SAA2 safety system.

System advantages

- > Lightweight HV testing solution:
 - > Serial inductor stand-alone weight: 80 kg
 - > Serial inductor with transport case: 110 kg
- > Powerful 1.1 A at 70 kV
- > Very low interference for PD measurements (typ. <math><5\text{pC}</math>)



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Order No. VEHZ0767

Hardware

- 1 x EXT1 exciter transformer
- 1 x DSH03 series resonance coil
- 1 x CC 70kV 5nF HV capacitor
- 1 x Grounding rod
- 1 x SAA2 safety system

Cables and accessories

- 1x C-Probe 1 current clamp
- 1 x 70kV HV cable Set
- 3 x Grounding cables
- 1 x HV connection cable, long
- 1 x HV connection cable, short
- 1 x Booster cable

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Customers in more than 150 countries rely on the company's ability to supply leading edge technology of excellent quality. Broad application knowledge and extraordinary customer support provided by offices in North America, Europe, South and East Asia, Australia, and the Middle East, together with a worldwide network of distributors and representatives, make the company a market leader in its sector.

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