



9231

High Voltage capacitors for
Partial Discharge or AC
measurement

Datasheet



HAEFELY

Current and voltage – our passion

Designed by



General Description

The capacitors are of sturdy and rugged and are for indoor operation. Insulation is reinforced epoxy fiberglass tube filled with oil.

Decouples partial discharge signals from device under test (DUT) when used with an optional measuring impedance (AKV) or with PD detector DDX 9160/9161 with integrated internal AKV.

Measures AC voltages in the industrial frequency range (when used with an optional secondary unit (SEK)).

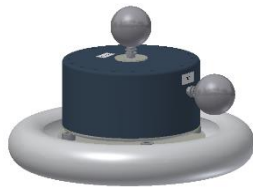
Attenuates interferences coming from the HV side and improving signal to noise ratio (SNR) of the PD measuring circuit (together with an optional HV filter).

The standard design includes a base frame with swivel castors for mobility, termination box with BNC connector including surge protection and an appropriate upper toroid.

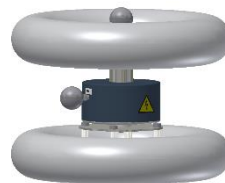
Features	Advantages
<ul style="list-style-type: none"> ▪ Base frame with heavy duty swivel casters ▪ Modular design ▪ Measuring impedance for PD measurement (optional) ▪ Secondary Unit for AC measurement (optional) 	<ul style="list-style-type: none"> ☑ Save room in the HV laboratory – with our compact all in one solution, high voltage capacitor, measuring impedance (optional), secondary unit (optional) high voltage filter (optional) in one single unit, the number of necessary devices for performing a test are drastically reduced.
<ul style="list-style-type: none"> ▪ HV filter (optional) 	<ul style="list-style-type: none"> ☑ Increase your sensitivity – with the optional HV filter, interferences from the HV power supply are sufficiently suppressed and signal to noise ratio of the test circuit is improved.
<ul style="list-style-type: none"> ▪ High stability in capacitance values ▪ Guaranteed optimal frequency bandwidth ▪ PD free (< 1 pC) 	<ul style="list-style-type: none"> ☑ Highest accuracy results – large measurement frequency bandwidth, high stability in capacitance values with frequency and temperature guarantee a consistent and reliable measurement.

High voltage filter (optional)

A half-T filter incorporated with the high voltage electrode not only attenuates any interference from the power supply, but also improves Signal to Noise Ratio of the PD measuring circuit. The filter is protected from overvoltage by a mechanical spark-gap.



Up to 100 kV



200 kV

Applications

- Power and distribution transformers
- Instrument transformers
- Rotating machines
- Switchgears (MV/HV/GIS)
- Bushings
- Cables
- Components testing
- Research and development

Scope of Supply

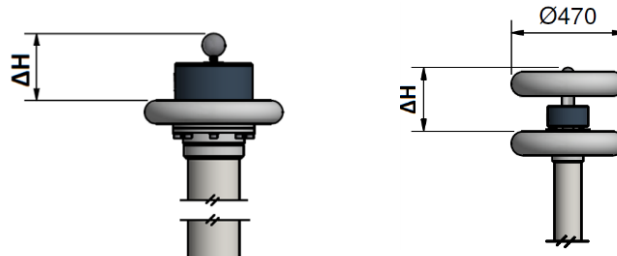
- High voltage coupling capacitor with base frame and wheels
- Test certificate
- Operating manual

Technical Data

High voltage capacitors						
Type	Voltage (kV)	Capacity (nF)	PD Level at U_n (pC)	Height H (mm)	Width W (mm)	Weight (kg)
9231/25/1	25	1	≤ 1	759	600	30.9
9231/50/1	50	1	≤ 1	759	600	30.9
9231/100/1	100	1	≤ 1	1079	600	34.1
9231/100/10	100	10	≤ 1	1679	600	43.3
9231/200/1	200	1	≤ 1	1660	600	44.8

High voltage filter (optional)					
High Voltage filter	Max. current (A)	Inductance (mH)	Typical attenuation (1 nF load; 40 – 1000 kHz) (dB)	Height increasing ¹⁾ ΔH (mm)	Weight increasing ¹⁾ (kg)
9231/HVFIL-3A (≤ 100 kV)	3	110	30	145	5.2
9231/HVFIL-3A (200 kV)	3	110	30	265	7.6

¹⁾ This height and weight must be added to the 9230 capacitors to calculate the total device weight and height with HV filter.



HV filter detail - 9231/25/1 to 9231/100/1

HV filter detail - 9231/200/1

Environmental	
Operating temperature	-5 °C ... +45 °C
Storage temperature	-20 °C ... +50 °C
Humidity	5 ... 90% r.h., non-condensing

Options	
9231/AKV9360	Measuring impedance for DDX 9160 or DDX 9161
9231/AKV9360-SEK	Combined measuring impedance and secondary (voltage) unit for DDX 9160 or DDX 9161
9231/SEK463	Secondary (voltage) unit for AC measurement
9231/HVFIL-3A	High voltage filter 3 A

Global Presence

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V2022.06



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Current and voltage – our passion



HIGH VOLTAGE



INSTRUMENTS



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precision.

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