AKV 9310

Wide band quadripole system for partial discharge measurements

Datasheet

Sold & Serviced in USA by:
HV TECHNOLOGIES, Inc.
8526 Virginia Meadows Dr.
Manassas, VA 20109
(703) 365-2330
www.hvtechnologies.com
hvsales@hvtechnologies.com

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General Description

The AKV 9310 series of quadripole (measuring impedance) is a fully passive measurement system optimized for use with the DDX 9121b series of partial discharge detectors.

The AKV 9310 quadripole is designed for simultaneous measurement of high-frequency discharge pulses as well as the HV test voltage.

The AKV 9310 series of quadripole is equipped with an internal voltage divider and a dedicated 4 mm output connector for an external low-arm device.

It can be optionally equipped with a secondary low-arm resistance allowing measuring the DC voltage (AKV 9310DC) or tuned with a specific CISPR requirements for the RIV measurement (AKV 9310RIV).

Features	Advantages
▪ Passive coupling impedance	☑ No batteries or charger needed.
▪ Compact design, standard BNC outputs and grounded/floating switch	☑ Easy to integrate into test systems
▪ Internal voltage divider ▪ High input current	☑ Brings the synchronization and voltage measurement signal to the PD detector
▪ Built in overvoltage protection	☑ The built-in overvoltage protection will protect the PD detector in case a flash in the test object would happen during the test.

Applications

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

Scope of Supply

- AKV 9310
- Banana cables
- BNC cables
- Test certificate and operating manual

Technical Data

PD measurement system	
PD lower limit frequency	34 kHz[1] (-6 dB) and 7 kHz (-20 dB)
PD upper limit frequency	> 8 MHz
PD input impedance	200 Ω 300 ± 40 Ω (< 200 kHz ... > 4 MHz) according to CISPR for AKV 9310RIV

[1] 55 kHz (-6 dB) for AKV 9310RIV

Voltage measurement system	
Max. current	3 A (RMS)
Max. output voltage	140 V_{RMS} (200 V_{Pk})
Low-arm capacitance	20 µF
Low-arm resistance[2]	60 kΩ

[2] Only AKV 9310DC. Adjustable on request. Information about used RC HV divider required.

Connectors	
Input	2x 4 mm and 1x BNC
Output	2x BNC (PD and voltage)
External Low-arm	1x 4 mm
Grounding	1x 8 mm wing nut

Environmental	
Operating temperature	0 °C … +45 °C
Storage temperature	-20 °C … +60 °C
Humidity	5 ... 80% r.h., non-condensing
Vibration/Shock	3G

Mechanical	
Dimensions (W x D x H)	90 x 160 x 80 mm (3.5 x 6.3 x 3.2 in)
Weight	1.0 kg (2.2 lb)

Applicable Standards	
General	IEC 60270:2000+AMD1:2015
CE conformity	EMC Directive 2014/30/EU and RoHS Directive 2011/65/EU

Ordering information

Models	
AKV 9310T	PD testing under the AC voltage
AKV 9310DC	PD testing under the DC voltage (enables DC voltage measurement)
AKV 9310RIV	RIV testing (compatible also with PD measurement)

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hvsales@hvtechnologies.com

Global Presence

Europe
HAEFELY AG
Birsstrasse 300
4052 Basel
Switzerland

☎ + 41 61 373 4111
sales@haefely.com

China
HAEFELY AG Representative Office
8-1-602, Fortune Street, No. 67
Chaoyang Road, Beijing 100025
China

☎ + 86 10 8578 8099
sales@haefely.com.cn

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