# AKV 9360
# AKV 9360-SEK

## Measuring impedance for partial discharge measurement

*Datasheet*


AKV 9360


AKV 9360-SEK

HAEFELY

Current and voltage – our passion

Designed by Tettex

# General Description

The AKV 9360 is a measuring impedance (sometimes also called coupling device or quadripole). It is a fully passive and optimized for use with the DDX 916x series of partial discharge detectors.

The AKV 9360 splits and condition the partial discharge high-frequency signal and HV test voltage signal (power frequency). It serves as well as a surge and over-voltage protection.

It is equipped with an internal voltage divider and a dedicated 4 mm output connector for an external low-arm device.

It fulfils the NEMA and CISPR requirements for the RIV measurement. It can be optionally equipped with a secondary low-arm resistance allowing measuring the DC voltage (AKV 9360DC).

AKV 9360-SEK provides combination of the measuring impedance and calibrated voltage secondary measuring unit (SEK).

| Features | Advantages |
|---|---|
| ▪ Passive measuring impedance | ☑ No batteries or charger needed. |
| ▪ Compact design, standard BNC outputs and grounded/floating switch feature | ☑ Easy to integrate into test systems |
| ▪ Internal voltage divider<br>▪ 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. |
| ▪ Measuring impedance (AKV) + secondary voltage measuring unit (SEK) in one box | ☑ 2 in 1 solution reduces connections and space |

# 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 9360 or AKV 9360-SEK
- Banana cables
- BNC cables
- Test certificate and operating manual

# Technical Data

| PD measurement system | |
|---|---|
| PD lower limit frequency | 30 kHz (-6 dB) and 15 kHz (-20 dB) |
| PD upper limit frequency | 15 MHz (-6 dB) and 35 MHz (-20 dB) |
| PD input impedance | 300 ± 40 Ω (60 kHz – 2.5 MHz) according to CISPR |
| Max. current | 5 A (RMS) |

| Voltage measurement system | | | |
|---|---|---|---|
| | AKV 9360 | AKV 9360DC | AKV 9360-SEK |
| Output voltage | 140 $V_{RMS}$ (200 $V_{Pk}$) | 140 $V_{RMS}$ (200 $V_{Pk}$) | 140 $V_{RMS}$ (200 $V_{Pk}$)[1)] |
| Low-arm capacitance | 20 µF | 20 µF | Adjustable[2)] |
| Low-arm resistance | Not applicable | Adjustable[3)] | Adjustable[3)] |

[1)] Definable on request. The default value is 140 $V_{RMS}$ (200 $V_{Pk}$)
[2)] Adjustable on request. Information about used C (capacitance) value of the HV divider is required.
[3)] Adjustable on request. Information about used RC (resistance and capacitance) values of the HV divider is required.

| Connectors | | |
|---|---|---|
| | AKV 9360 / AKV 9360DC | AKV 9360-SEK |
| Input | 2x 4 mm | 2x 4 mm |
| Output | 2x BNC (PD and voltage) | 3x BNC (1x PD and 2x voltage) |
| External Low-arm | 1x 4 mm | 1x 4 mm |
| Grounding | 1x 4mm connector or M5 thread | 1x 4mm connector or M5 thread |

| Environmental | |
|---|---|
| Operating temperature | -20 °C … +55 °C |
| Storage temperature | -40 °C … +85 °C |
| Humidity | 5 … 95 % r.h., non-condensing |
| Vibration/Shock | 3G |

| Mechanical | | |
|---|---|---|
| | AKV 9360 / AKV 9360DC | AKV 9360-SEK |
| Dimensions (W x D x H) | 170 x 145 x 55 mm (6.7 x 5.7 x 2.2 in) | 255 x 165 x 85 mm (10 x 6.5 x 3.4 in) |
| Weight | 1.1 kg (2.2 lb) | 2.3 kg (5.1 lbs) |

| 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 9360 | PD/RIV testing under the AC/DC voltage. AC voltage synchronization/indication. |
| AKV 9360DC | PD/RIV testing under the AC/DC voltage. AC/DC voltage synchronization/indication. |
| AKV 9360-SEK | PD/RIV testing under the AC/DC voltage. Calibrated AC/DC voltage measurement. |

# Global Presence


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