KAL 9510

Intermediate Partial Discharge calibrator

Datasheet



HAEFELY

Current and voltage – our passion

Designed by Tettex

General Description

The KAL 9510 has been designed to fulfil the standard requirements of a PD calibrator. Its very wide range (from 1 pC to 50 nC), its small injection capacitor, carefully selected features and intuitive user interface makes the KAL 9510 unique.

The high voltage step generator included in KAL 9510 allows the use of extremely low injection capacitors (1 pF up to 200 pF) as recommended in the current and proposed future standards.

Its fast pulse rise time (< 35 ns) creates a complete flat response of the calibration pulse in the frequency domain far beyond the IEC recommended measuring band.

The PD calibrator is easily controlled from its touch screen and all options are selected by the user-oriented menu.

Features	Advantages
▪ SCS (IEC 17025) calibration certificate (optional)	☑ Guarantees the reliability of the partial discharge measuring chain due to the included traceable test certificate and the optional SCS (IEC 17025) calibration certificate.
▪ Full compliance with IEC 60270:2000+AMD1:2015	☑ Results reliability, plausibility, compliance and repeatability.
▪ Logarithmic PD level selection ▪ Wide Q range (1 pC to 50000 pC) ▪ Selectable pulse polarity	☑ No need for different PD calibrators: The wide output range and pulse polarity selection allows a proper calibration at any test object.
▪ Touch screen ▪ Handheld, Rechargeable battery	☑ Ease of use

Applications

HAEFELY AG is accredited to calibrate and certify PD calibrators from SCS, Switzerland (Swiss equivalent of DKD, Germany). A calibration certificate can be delivered optionally with the KAL 9510.

- Power and distribution transformers
- Instrument transformers
- Rotating machines
- Switchgears (MV/HV/GIS)
- Surge arresters
- Bushings
- Cables (for Double Pulse see KAL 9520)
- Power capacitors
- Components testing
- Research and development

Scope of Supply

- KAL 9510 PD calibrator with rechargeable battery
- Charger and banana connection cables
- Test certificate and operating manual

Technical Data

Signal generation	
Full discharge range	1 pC to 50 nC (logarithmic scale)
Polarity	positive, negative Full range
Discharge tolerance	± 5 % or ± 1 pC whichever is the greater
Rise time [1)]	≤ 60 ns
Time to steady state [1)]	≤ 200 ns
Step voltage duration [1)]	≥ 5 µs
Pulse synchronization	Light synchronization 50/60 Hz Internal clock
PRF (Light synchronization)	2 impulses/cycle
PRF (Internal synchronization)	15 to 250 Hz

[1)] Unipolar step voltage as per IEC 60270:2000+AMD1:2015

Discharge levels	
Injection Capacitance	Discharge level
1 pF	1 pC to 200 pC
10 pF	500 pC to 2 nC
100 pF	5 nC to 20 nC
200 pF	50 nC

Environmental	
Operating temperature	0 °C … +55 °C
Storage temperature	-20 °C … +70 °C
Humidity	5 ... 90% r.h., non-condensing

Mechanical	
Dimensions (W x D x H)	120 x 200 x 42 mm (4.7 x 7.9 x 1.6 in)
Weight	0.8 kg (1.7 lb) – calibrator itself 2.8 kg (6.2 lb) – calibrator including a case and accessories
Charger	100 - 240 V, 40 - 70 Hz

Applicable Standards	
General	IEC 60270:2000+AMD1:2015, IEC 60885-3:2015
CE conformity	EMC Directive 2014/30/EU and RoHS Directive 2011/65/EU

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