



SCS Directory

Accreditation number: SCS 0128

International standard: ISO/IEC 17025:2017
Swiss standard: SN EN ISO/IEC 17025:2018

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Calibration laboratory
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Initial accreditation: 14.05.2012
Current accreditation: 14.05.2022 to 13.05.2027
Scope of accreditation see: www.sas.admin.ch
(Accredited bodies)

Scope of accreditation as of 02.06.2023

Calibration laboratory for electrical quantities

Calibration and Measurement Capability (CMC)

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Capability \pm ¹⁾	Remarks
Direct voltage	0,1 V to 1000 V		0,02 %	Measuring instruments calibration
	1 kV to 180 kV		0,25 %	Calibration of measuring systems
	5 kV to 300 kV		0,4 %	
	1 kV to 375 kV		0,2 %	
	300 kV to 900 kV		1,0 %	Also on site ²⁾
300 kV to 1500 kV		1,0 %		
375 kV to 1875 kV		0,9 %		
Alternating voltage	0,3 V to 1000 V	10 Hz to 10 kHz	0,11 %	Measuring instruments calibration



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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Capability \pm ¹⁾	Remarks
Alternating voltage RMS- and peak voltage	1 kV to 180 kV	50 Hz, 60 Hz	0,25 %	Calibration of measuring sys- tems Also on site ²⁾
	1 kV to 250 kV	50 Hz, 60 Hz	0,2 %	
	5 kV to 200 kV	50 Hz	0,2 %	
	5 kV to 200 kV	16 2/3 Hz, 60 – 300 Hz	0,9 %	
	180 kV to 900 kV	50 Hz, 60 Hz	1,0 %	
	200 kV to 1000 kV	50 Hz	0,9 %	
	200 kV to 1000 kV	16 2/3 Hz, 60 – 300 Hz	1,0 %	
Impulse voltage (LI)	80 V to 1600 V	Load: >250 k Ω 100 pF to 300 pF	0,6 %	Measuring instru- ments calibration Also on site ²⁾ LI = Lightning im- pulse full wave LIC = Lightning impulse chopped SI = Switching im- pulse T ₁ = Front time T ₂ = Time to half value T _c = Time to chop T _p = Time to peak
Time parameters T ₁ T ₂	0,84 μ s		1,7 %	
	60 μ s		1,7 %	
Impulse voltage (LIC)	400 V to 1250 V		0,7 %	
Time parameters T _c	0,50 μ s		1,7 %	
Impulse voltage (SI)	80 V to 1000 V		0,6 %	
Time parameters T _p T ₂	20 μ s		1,7 %	According to IEC 61083-2:2001
	4000 μ s		1,7 %	



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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Capability \pm ¹⁾	Remarks
Impulse voltage (LI)	200 kV to 250 kV 20 kV to 500 kV 20 kV to 800 kV 500 kV to 2500 kV 800 kV to 4000 kV		0,5 % 0,6 % 0,6 % 1,0 % 1,0 %	Calibration of measuring systems Also on site ²⁾ LI = Lightning impulse full wave LIC = Lightning impulse chopped SI = Switching impulse T ₁ = Front time T ₂ = Time to half value T _c = Time to chop T _p = Time to peak
Time parameters T ₁ T ₂	0,8 μ s to 1,6 μ s 40 μ s to 60 μ s		2,1 % 2,1 %	
Impulse voltage (LIC)	20 kV to 800 kV		0,6 %	Also on site ²⁾
Time parameters T _c	0,5 μ s to 6,0 μ s		2,1%	
Impulse voltage (SI)	200 kV to 250 kV 50 kV to 500 kV 50 kV to 600 kV		0,5 % 0,6 % 0,6 %	
Time parameters T _p T ₂	500 kV to 2500 kV 600 kV to 3000 kV		1,0 % 1,0 %	
	200 μ s to 300 μ s 1000 μ s to 4000 μ s		2,1 % 2,1 %	
Apparent charge q ₀	1 pC to 20 pC 20 pC to 5 nC 5 nC to 50 nC		0,04[q ₀]-0,001 pC 0,04[q ₀]-0,1 pC 0,029[q ₀]+45 pC	Calibration of partial discharge calibrators (IEC60270: 2015 Ed. 3.1)
Pulse rise time t _r	5 ns to 100ns 1 pC to 2000 pC 2000 pC to 50000 pC		 -3,08•10 ⁻⁰⁵ [q ₀]+0,76 ns 1,46•10 ⁻⁰¹ [q ₀]+1,16 ns	
Pulse repetition frequency N	0,1 Hz to 50 Hz 50 Hz to 600 Hz		 -2,5•10 ⁻⁰⁶ [N]+2,7•10 ⁻⁰⁵ Hz 7,3•10 ⁻⁰⁸ [N]-2,6•10 ⁻⁰⁶ Hz	



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Capacitance Calibration of capacitors	10 pF bis 146 nF	0,5 kV to 2 kV 50 Hz, 60 Hz	0,02 %	
	10 pF to 146 nF	5 kV to 100 kV 50 Hz, 60 Hz	0,02 %	Also on site ²⁾
	10 pF to 146 nF	5 kV to 500 kV 50 Hz, 60 Hz	0,2 %	Also on site ²⁾
Calibration of measuring bridges	0,01 pF to 850 μ F	50 Hz, 60 Hz 30 μ A bis 1,5 A	0,02 %	
Dissipation factor Calibration of capacitors	1E-05 to 1E-01	50 Hz, 60 Hz	2,0 E-05	
	1E-05 to 1E-01	50 Hz, 60 Hz	2,0 E-05	Calibration of measuring bridges

²⁾ on site calibrations might show higher uncertainties

In case of contradictions in the language versions of the directories, the German version shall apply.

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