Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER

State Secretariat for Economic Affairs SECO
Swiss Accreditation Service SAS

SCS Directory

Accreditation number: SCS 0002

International standard:	ISO/IEC 17025:2005
Swiss standard:	SN EN ISO/IEC 17025:2005

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Initial accreditation:	21.08.2001
Current accreditation:	21.08.2021 to 20.08.2026
Scope of accreditation see:	www.sas.admin.ch (Accredited bodies)

Scope of accreditation as of 21.08.2021

Calibration laboratory for electrical quantities

Calibration and Measurement Capability (CMC)

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
DC Voltage	0 µV ... < 0,22 V		$4{,}7 \cdot 10^{-6}$ + 0,7 µV	
	0,1 V		$4{,}9 \cdot 10^{-6}$	
	0,22 V ... < 2,2 V		$3{,}5 \cdot 10^{-6}$ + 1,2 µV	
Calibration of voltage measurement instruments	1 V		$1{,}1 \cdot 10^{-6}$	
	2,2 V ... < 11 V		$1{,}8 \cdot 10^{-6}$ + 6,0 µV	
	10 V		$0{,}35 \cdot 10^{-6}$	
	11 V ... < 22 V		$1{,}8 \cdot 10^{-6}$ + 9,5 µV	
	22 V ... < 275 V		$3{,}0 \cdot 10^{-6}$ + 120 µV	
	100 V		$1{,}0 \cdot 10^{-6}$	
	275 V ... 1100 V		$3{,}0 \cdot 10^{-6}$ + 465 µV	

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
DC Voltage	1000 V		$1{,}0 \cdot 10^{-6}$	
	1050 V … 10000 V		$0{,}6 \cdot 10^{-3}$ + 60 mV	
	0 µV ... < 0,12 V		$3{,}5 \cdot 10^{-6}$ + 0,6 µV	
	0,1 V		$1{,}5 \cdot 10^{-6}$ + 0,4 µV	
	0,12 V ... < 1,2 V		$2{,}0 \cdot 10^{-6}$ + 0,6 µV	
Calibration of voltage calibrators	1 V		$1{,}0 \cdot 10^{-6}$ + 0,4 µV	
	1,2 V ... < 12 V		$1{,}0 \cdot 10^{-6}$ + 0,6 µV	
	10 V		$0{,}4 \cdot 10^{-6}$	
	12 V ... < 120 V		$3{,}0 \cdot 10^{-6}$ + 70 µV	
	100 V		$1{,}0 \cdot 10^{-6}$ + 55 µV	
	120 V ... 1050 V		$3{,}5 \cdot 10^{-6}$ + 300 µV	
	1000 V		$2{,}0 \cdot 10^{-6}$ + 280 µV	
	1050 V … 10000 V		$0{,}5 \cdot 10^{-3}$ + 50 mV	
DC Current	1 pA … < 20 pA		$609 \cdot 10^{-6}$ + 62 aA	
	20 pA … < 200 pA		$260 \cdot 10^{-6}$ + 0,8 fA	
	200 pA … < 2 nA		$145 \cdot 10^{-6}$ + 5,9 fA	
	2 nA … < 20 nA		$122 \cdot 10^{-6}$ + 63 fA	
	20 nA … < 200 nA		$105 \cdot 10^{-6}$ + 0.6 nA	
	0,1 µA ... 1 µA		$116 \cdot 10^{-6}$ + 1,2 nA	
	> 1 µA ... 10 µA		$14 \cdot 10^{-6}$ + 1,2 nA	
	> 10 µA ... 100 µA		$6{,}8 \cdot 10^{-6}$ + 1,2 nA	
Calibration of ammeters	> 100 µA ... 1 mA		$7{,}1 \cdot 10^{-6}$ + 8,2 nA	
	> 1 mA ... 10 mA		$6{,}7 \cdot 10^{-6}$ + 59 nA	
	> 10 mA ... 100 mA		$11 \cdot 10^{-6}$ + 350 nA	
	> 100 mA ... 2 A		$21 \cdot 10^{-6}$ + 15 µA	
	> 2 A ... 10 A		$35 \cdot 10^{-6}$ + 120 µA	
	> 10 A ... 20 A		$65 \cdot 10^{-6}$ + 120 µA	
	> 20 A ... 200 A		$151 \cdot 10^{-6}$ + 2,32 mA	

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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
Calibration of current clamps	50 A … 500 A 500 A … 2500 A		0,53 % 0,54 %	
DC Current	1 pA … < 2 pA		0,58 % + 0.13 fA	
	2 pA … < 20 pA		$660 \cdot 10^{-6}$ + 0.48 fA	
	20 pA … < 200 pA		$340 \cdot 10^{-6}$ + 4.9 fA	
	200 pA … < 2 nA		$310 \cdot 10^{-6}$ + 47 fA	
	2 nA … < 20 nA		$290 \cdot 10^{-6}$ + 0.49 pA	
	20 nA … < 200 nA		$290 \cdot 10^{-6}$ + 4.7 pA	
	0,1 µA ... 1 µA		$116 \cdot 10^{-6}$ + 0.52 pA	
	> 1 µA ... 10 µA		$13 \cdot 10^{-6}$ + 5.7 pA	
Calibration of current calibrators	> 10 µA ... 100 µA		$3,6 \cdot 10^{-6}$ + 52 pA	
	> 100 µA ... 1 mA		$4,2 \cdot 10^{-6}$ + 0.52 nA	
	> 1 mA ... 10 mA		$3,4 \cdot 10^{-6}$ + 5.2 nA	
	> 10 mA ... 100 mA		$4,7 \cdot 10^{-6}$ + 52 nA	
	> 100 mA ... 1 A		$19 \cdot 10^{-6}$ + 0.52 µA	
	> 1 A ... 3 A		$18 \cdot 10^{-6}$ + 5,2 µA	
	> 3 A ... 10 A		$25 \cdot 10^{-6}$ + 52 µA	
	> 10 A ... 20 A		$62 \cdot 10^{-6}$ + 52 µA	
	> 20 A ... 50 A		$140 \cdot 10^{-6}$ + 520 µA	
	> 50 A … 100 A		$93 \cdot 10^{-6}$ + 75 µA	
	> 100 A … 200 A		$140 \cdot 10^{-6}$ + 520 µA	
	> 200 A ... 600 A		$420 \cdot 10^{-6}$ + 5,2 mA	
DC Power	0,22 µW … 22 kW	**0,1 V ... 1100 V**		
Calibration of power meters		2,2 µA ... 10 µA	$540 \cdot 10^{-6}$	
		> 10 µA ... 22 µA	$130 \cdot 10^{-6}$	
		> 22 µA ... 100 µA	$62 \cdot 10^{-6}$	
		> 100 µA ... 220 µA	$91 \cdot 10^{-6}$	
		> 220 µA ... 1 mA	$48 \cdot 10^{-6}$	
		> 1 mA ... 2.2 mA	$67 \cdot 10^{-6}$	

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		> 2.2 mA ... 10 mA	37•10-6	
		> 10 mA ... 22 mA	48•10-6	
		> 22 mA ... 100 mA	31•10-6	
		> 100 mA ... 220 mA	154•10-6	
		> 220 mA ... 1 A	83•10-6	
		> 1 A ... 2,2 A	37•10-6	
		> 2,2 A ... 10 A	89•10-6	
		> 10 A ... 20 A	79•10-6	
Calibration of power calibrators	0,01 µW … 22 kW	**0,1 V ... 1050 V**		
		0,1 µA ... 1 µA	125•10-6	
		> 1 µA ... 10 µA	20•10-6	
		> 10 µA ... 100 mA	15•10-6	
		> 100 mA ... 3 A	25•10-6	
		> 3 A ... 10 A	45•10-6	
		> 10 A ... 20 A	70•10-6	
DC Resistance	0 mΩ	Measuring voltage	12,3 µΩ	Measurement uncertainties only valid for fixed values
	0,1 mΩ	[V]	19•10-6	
	1 mΩ		19 •10-6	
	0,01 Ω		20•10-6	
Calibration of resistance measurement instruments	0,1 Ω		7,2•10-6	
	1 Ω		3,6•10-6	
	10 Ω		2,5•10-6	
	25 Ω		3,0•10-6	
	100 Ω		1,4•10-6	
	1 kΩ		2,0•10-6	
	10 kΩ		1,4•10-6	
	100 kΩ		4,2•10-6	

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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
DC Resistance	1 MΩ		2,6•10-6	
	10 MΩ		8,2•10-6	
	100 MΩ		7,7•10-6	
	1 GΩ	10 … 100	91•10-6	
	10 GΩ	10	156•10-6	
Calibration of re-sistance measure-ment instruments	10 GΩ	100	70•10-6	
	10 GΩ	500	76•10-6	
	100 GΩ	10	81•10-6	
	100 GΩ	100	81•10-6	
	100 GΩ	500	89•10-6	
	1 TΩ	50	380•10-6	
	1 TΩ	100	420•10-6	
	1 TΩ	500	1,1•10-3	
	10 TΩ	100	350•10-6	
	10 TΩ	500	500•10-6	
	10 TΩ	1000	1,1•10-3	
	100 TΩ	100	4,2•10-3	
	100 TΩ	500	3,3•10-3	
	100 TΩ	900	1,4•10-3	
DC Resistance	0,1 mΩ		77•10-6	Measurement uncer-tain-ties only valid for fixed values
	1 mΩ		33•10-6	
	0,01 Ω		34•10-6	
Calibration of resis-tors	0,1 Ω; 1 Ω		20•10-6	
	10 Ω		4,2•10-6	
	25 Ω		2,8•10-6	
	100 Ω		1,7•10-6	
	1 kΩ		2,3•10-6	
	10 kΩ		2,2•10-6	
	100 kΩ		4,6•10-6	
	1 MΩ		3,3•10-6	

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	10 MΩ		$8{,}9 \cdot 10^{-6}$	
	100 MΩ		$14 \cdot 10^{-6}$	
	1 GΩ		$120 \cdot 10^{-6}$	
	10 GΩ	10 V	$160 \cdot 10^{-6}$	
	10 GΩ	100 V	$70 \cdot 10^{-6}$	
	10 GΩ	500 V	$77 \cdot 10^{-6}$	
	100 GΩ	10 V	$93 \cdot 10^{-6}$	
	100 GΩ	100 V	$81 \cdot 10^{-6}$	
	100 GΩ	500 V	$90 \cdot 10^{-6}$	
	1 TΩ	50 V	$380 \cdot 10^{-6}$	
	1 TΩ	100 V	$440 \cdot 10^{-6}$	
	1 TΩ	500 V	$1{,}1 \cdot 10^{-3}$	
	10 TΩ	100 V	$1{,}5 \cdot 10^{-3}$	
	10 TΩ	500 V	$610 \cdot 10^{-6}$	
	10 TΩ	1000 V	$1{,}1 \cdot 10^{-3}$	
	100 TΩ	100 V	$4{,}8 \cdot 10^{-3}$	
	100 TΩ	500 V	$3{,}6 \cdot 10^{-3}$	
	100 TΩ	1000 V	$2{,}3 \cdot 10^{-3}$	
Calibration of non decadic resistors	0,0 Ω ... < 2 Ω		$6{,}6 \cdot 10^{-6}$+3,0 μΩ	
	2 Ω ... < 20 Ω		$3{,}2 \cdot 10^{-6}$ + 12 μΩ	
	20 Ω ... < 200 Ω		$1{,}7 \cdot 10^{-6}$ + 110 μΩ	
	0,2 kΩ ... < 2 kΩ		$2{,}2 \cdot 10^{-6}$ + 1,1 mΩ	
	2 kΩ ... < 20 kΩ		$2{,}2 \cdot 10^{-6}$+11 mΩ	
	20 kΩ ... < 200 kΩ		$4{,}3 \cdot 10^{-6}$ + 110 mΩ	
	0,2 MΩ ... < 2 MΩ		$3{,}1 \cdot 10^{-6}$ + 13 Ω	
	2 MΩ ... < 20 MΩ		$8{,}4 \cdot 10^{-6}$ + 13 Ω	
	20 MΩ ... < 200 MΩ		$14 \cdot 10^{-6}$ + 410 Ω	
	0,2 GΩ ... <2 GΩ		$1{,}7 \cdot 10^{-3}$ + 39 kΩ	

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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1]	Remarks
	2 GΩ ... <20 GΩ		1,7•10^{-3} + 3,9 MΩ	
RTD electrically simulated	-200 °C … -0 °C		0,059 °C	
	> 0 °C … 100 °C		0,082 °C	
	> 100 °C … 300 °C		0,10 °C	
	> 300 °C … 400 °C		0,12 °C	
	> 400 °C … 630 °C		0,14 °C	
	> 630 °C … 800 °C		0,27 °C	
RTD electrically measured	-200 °C … -0 °C		4,2 m°C	
	> 0 °C … 800 °C		4,7 m°C	
			AC/DC transfer	***AC measure***
AC Voltage	2 mV	10 Hz	2,8•10^{-3}	*2,8•10^{-3}*
		20 Hz; 40 Hz;50 Hz; 70 Hz; 100 Hz	2,0•10^{-3}	*2,1•10^{-3}*
[1] **AC - DC Voltage transfer**		30 Hz; 500 Hz	2,0•10^{-3}	*2,1•10^{-3}*
		1 kHz; 10 kHz; 20 kHz; 50 kHz	2,0•10^{-3}	*2,1•10^{-3}*
		70 kHz	1,4•10^{-3}	*1,4•10^{-3}*
		100 kHz	2,4•10^{-3}	*2,4•10^{-3}*
		200 kHz	1,8•10^{-3}	*1,8•10^{-3}*
Calibration of voltage calibrators		300 kHz	3,5•10^{-3}	*3,5•10^{-3}*
		500 kHz	5,6•10^{-3}	*5,6•10^{-3}*
		700 kHz	3,5•10^{-3}	*3,6•10^{-3}*
		800 kHz	5,9•10^{-3}	*5,9•10^{-3}*
		1 MHz	6,3•10^{-3}	*6,3•10^{-3}*
	6 mV	10 Hz	1,57•10^{-3}	*1,57•10^{-3}*
		20 Hz; 30 Hz	1,13•10^{-3}	*1,14•10^{-3}*
		40 Hz	1,13•10^{-3}	*1,14•10^{-3}*
		50 Hz; 70 Hz; 100 Hz	1,13•10^{-3}	*1,14•10^{-3}*

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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
		500 Hz; 1 kHz;		
		10 kHz; 20 kHz;		
		50 kHz	$1{,}13 \cdot 10^{-3}$	*$1{,}14 \cdot 10^{-3}$*
		70 kHz; 100 kHz	$1{,}35 \cdot 10^{-3}$	*$1{,}36 \cdot 10^{-3}$*
		200 kHz	$1{,}75 \cdot 10^{-3}$	*$1{,}76 \cdot 10^{-3}$*
		300 kHz	$2{,}91 \cdot 10^{-3}$	*$2{,}91 \cdot 10^{-3}$*
		500 kHz	$3{,}11 \cdot 10^{-3}$	*$3{,}12 \cdot 10^{-3}$*
		700 kHz	$3{,}54 \cdot 10^{-3}$	*$3{,}54 \cdot 10^{-3}$*
			AC/DC transfer	***AC measure***
AC Voltage	6 mV	800 kHz	$3{,}61 \cdot 10^{-3}$	*$3{,}62 \cdot 10^{-3}$*
		1 MHz	$3{,}67 \cdot 10^{-3}$	*$3{,}67 \cdot 10^{-3}$*
	10 mV	10 Hz	$410 \cdot 10^{-6}$	*$410 \cdot 10^{-6}$*
		20 Hz; 40 Hz	$360 \cdot 10^{-6}$	*$360 \cdot 10^{-6}$*
		30 Hz; 500 Hz	$271 \cdot 10^{-6}$	*$280 \cdot 10^{-6}$*
		50 Hz; 70 Hz; 100 Hz;1 kHz; 10 kHz; 20 kHz	$353 \cdot 10^{-6}$	*$360 \cdot 10^{-6}$*
		50 kHz	$378 \cdot 10^{-6}$	*$385 \cdot 10^{-6}$*
		70 kHz	$231 \cdot 10^{-6}$	*$245 \cdot 10^{-6}$*
		100 kHz	$626 \cdot 10^{-6}$	*$630 \cdot 10^{-6}$*
		200 kHz	$529 \cdot 10^{-6}$	*$535 \cdot 10^{-6}$*
**** Calibration of voltage calibrators***		300 kHz	$963 \cdot 10^{-6}$	*$970 \cdot 10^{-6}$*
		500 kHz	$1{,}5 \cdot 10^{-3}$	*$1{,}5 \cdot 10^{-3}$*
		700 kHz	$1{,}2 \cdot 10^{-3}$	*$1{,}2 \cdot 10^{-3}$*
		800 kHz	$1{,}8 \cdot 10^{-3}$	*$1{,}8 \cdot 10^{-3}$*
		1 MHz	$1{,}9 \cdot 10^{-3}$	*$1{,}9 \cdot 10^{-3}$*
	20 mV	10 Hz	$361 \cdot 10^{-6}$	*$365 \cdot 10^{-6}$*
		20 Hz	$251 \cdot 10^{-6}$	*$255 \cdot 10^{-6}$*
		30 Hz; 500 Hz	$223 \cdot 10^{-6}$	*$230 \cdot 10^{-6}$*

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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
		40 Hz; 50 Hz,70 Hz;		
		100 Hz; 1 kHz;		
		10 kHz; 20 kHz	$214 \cdot 10^{-6}$	*$220 \cdot 10^{-6}$*
		50 kHz	$276 \cdot 10^{-6}$	*$280 \cdot 10^{-6}$*
		70 kHz	$370 \cdot 10^{-6}$	*$375 \cdot 10^{-6}$*
		100 kHz	$573 \cdot 10^{-6}$	*$575 \cdot 10^{-6}$*
			AC/DC transfer	***AC measure***
AC Voltage	20 mV	200 kHz	$529 \cdot 10^{-6}$	*$530 \cdot 10^{-6}$*
		300 kHz	$915 \cdot 10^{-6}$	*$920 \cdot 10^{-6}$*
		500 kHz	$1{,}4 \cdot 10^{-3}$	*$1{,}4 \cdot 10^{-3}$*
		700 kHz	$1{,}04 \cdot 10^{-3}$	*$1{,}04 \cdot 10^{-3}$*
		800 kHz	$1{,}6 \cdot 10^{-3}$	*$1{,}6 \cdot 10^{-3}$*
		1 MHz	$1{,}7 \cdot 10^{-3}$	*$1{,}7 \cdot 10^{-3}$*
	60 mV	10 Hz	$336 \cdot 10^{-6}$	*$340 \cdot 10^{-6}$*
		20 Hz; 30 Hz	$206 \cdot 10^{-6}$	*$210 \cdot 10^{-6}$*
		40 Hz; 50 Hz; 70 Hz		
		100 Hz; 500 Hz		
		1 kHz; 10 kHz; 20 kHz	$151 \cdot 10^{-6}$	*$155 \cdot 10^{-6}$*
		50 kHz	$206 \cdot 10^{-6}$	*$210 \cdot 10^{-6}$*
		70 kHz	$342 \cdot 10^{-6}$	*$345 \cdot 10^{-6}$*
**** Calibration of voltage calibrators***		100 kHz; 200 kHz	$417 \cdot 10^{-6}$	*$420 \cdot 10^{-6}$*
		500 kHz	$809 \cdot 10^{-6}$	*$810 \cdot 10^{-6}$*
		700 kHz; 800 kHz		
		1 MHz	$1{,}35 \cdot 10^{-3}$	*$1{,}35 \cdot 10^{-3}$*
	100 mV	10 Hz	$263 \cdot 10^{-6}$	*$265 \cdot 10^{-6}$*
		20 Hz	$115 \cdot 10^{-6}$	*$115 \cdot 10^{-6}$*
		30 Hz	$125 \cdot 10^{-6}$	*$130 \cdot 10^{-6}$*
		40 Hz; 50 Hz;70 Hz		
		100 Hz; 500 Hz		

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		1 kHz; 10 kHz; 20 kHz	$68 \cdot 10^{-6}$	$70 \cdot 10^{-6}$
		50 kHz; 70 kHz	$127 \cdot 10^{-6}$	$130 \cdot 10^{-6}$
		100 kHz	$188 \cdot 10^{-6}$	$190 \cdot 10^{-6}$
			AC/DC transfer	***AC measure***
AC Voltage	100 mV	200 kHz	$357 \cdot 10^{-6}$	$360 \cdot 10^{-6}$
		300 kHz	$583 \cdot 10^{-6}$	$585 \cdot 10^{-6}$
		500 kHz	$748 \cdot 10^{-6}$	$750 \cdot 10^{-6}$
		700 kHz	$446 \cdot 10^{-6}$	$450 \cdot 10^{-6}$
		800 kHz; 1 MHz	$752 \cdot 10^{-6}$	$755 \cdot 10^{-6}$
	200 mV	10 Hz	$249 \cdot 10^{-6}$	$250 \cdot 10^{-6}$
		20 Hz	$102 \cdot 10^{-6}$	$105 \cdot 10^{-6}$
		30 Hz	$123 \cdot 10^{-6}$	$125 \cdot 10^{-6}$
		40 Hz; 50 Hz;70 Hz;		
		100 Hz	$51 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
		500 Hz	$62 \cdot 10^{-6}$	$65 \cdot 10^{-6}$
		1 kHz; 10 kHz; 20 kHz	$51 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
		50 kHz; 70 kHz	$135 \cdot 10^{-6}$	$135 \cdot 10^{-6}$
		100 kHz	$187 \cdot 10^{-6}$	$190 \cdot 10^{-6}$
**** Calibration of voltage calibrators***		200 kHz	$352 \cdot 10^{-6}$	$355 \cdot 10^{-6}$
		300 kHz	$579 \cdot 10^{-6}$	$580 \cdot 10^{-6}$
		500 kHz	$744 \cdot 10^{-6}$	$745 \cdot 10^{-6}$
		700 kHz	$492 \cdot 10^{-6}$	$495 \cdot 10^{-6}$
		800 kHz	$707 \cdot 10^{-6}$	$710 \cdot 10^{-6}$
		1 MHz	$752 \cdot 10^{-6}$	$755 \cdot 10^{-6}$

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			AC/DC transfer	***AC measure***
	400 mV	10 Hz	$210 \cdot 10^{-6}$	$210 \cdot 10^{-6}$
		20 Hz; 30 Hz;	$60 \cdot 10^{-6}$	$60 \cdot 10^{-6}$
		40 Hz; 50 Hz; 70 Hz		
		100 Hz; 500 Hz		
		1 kHz; 10 kHz		
AC Voltage		20 kHz	$37 \cdot 10^{-6}$	$40 \cdot 10^{-6}$
		50 kHz	$74 \cdot 10^{-6}$	$75 \cdot 10^{-6}$
		70 kHz	$110 \cdot 10^{-6}$	$110 \cdot 10^{-6}$
		100 kHz	$110 \cdot 10^{-6}$	$110 \cdot 10^{-6}$
		200 kHz	$310 \cdot 10^{-6}$	$315 \cdot 10^{-6}$
		300 kHz	$391 \cdot 10^{-6}$	$395 \cdot 10^{-6}$
		500 kHz	$417 \cdot 10^{-6}$	$420 \cdot 10^{-6}$
Calibration of voltage calibrators		700 kHz	$422 \cdot 10^{-6}$	$425 \cdot 10^{-6}$
		800 kHz	$420 \cdot 10^{-6}$	$420 \cdot 10^{-6}$
		1 MHz	$320 \cdot 10^{-6}$	$320 \cdot 10^{-6}$
	600 mV	10 Hz	$248 \cdot 10^{-6}$	$250 \cdot 10^{-6}$
		20 Hz	$88 \cdot 10^{-6}$	$90 \cdot 10^{-6}$
		30 Hz	$57 \cdot 10^{-6}$	$60 \cdot 10^{-6}$
		40 Hz	$38 \cdot 10^{-6}$	$40 \cdot 10^{-6}$
		50 Hz; 70 Hz	$36 \cdot 10^{-6}$	$40 \cdot 10^{-6}$
		100 Hz	$32 \cdot 10^{-6}$	$35 \cdot 10^{-6}$
		500 Hz	$22 \cdot 10^{-6}$	$25 \cdot 10^{-6}$
		1 kHz; 10 kHz, 20 kHz	$32 \cdot 10^{-6}$	$35 \cdot 10^{-6}$
		50 kHz	$57 \cdot 10^{-6}$	$60 \cdot 10^{-6}$
		70 kHz	$54 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
		100 kHz	$75 \cdot 10^{-6}$	$75 \cdot 10^{-6}$
		200 kHz	$103 \cdot 10^{-6}$	$105 \cdot 10^{-6}$

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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
			AC/DC transfer	***AC measure***
		300 kHz	$240 \cdot 10^{-6}$	$245 \cdot 10^{-6}$
		500 kHz	$532 \cdot 10^{-6}$	$535 \cdot 10^{-6}$
		700 kHz; 800 kHz	$648 \cdot 10^{-6}$	$650 \cdot 10^{-6}$
		1 MHz	$683 \cdot 10^{-6}$	$685 \cdot 10^{-6}$
AC Voltage	700 mV	10 Hz	$147 \cdot 10^{-6}$	$150 \cdot 10^{-6}$
		20 Hz	$72 \cdot 10^{-6}$	$75 \cdot 10^{-6}$
		30 Hz	$62 \cdot 10^{-6}$	$65 \cdot 10^{-6}$
		40 Hz	$33 \cdot 10^{-6}$	$35 \cdot 10^{-6}$
		50 Hz; 70 Hz; 100 Hz	$31 \cdot 10^{-6}$	$35 \cdot 10^{-6}$
		500 Hz; 1 kHz		
		10 kHz; 20 kHz	$22 \cdot 10^{-6}$	$25 \cdot 10^{-6}$
		50 kHz	$41 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		70 kHz	$52 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
		100 kHz	$54 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
		200 kHz	$103 \cdot 10^{-6}$	$105 \cdot 10^{-6}$
Calibration of voltage calibrators		300 kHz	$275 \cdot 10^{-6}$	$280 \cdot 10^{-6}$
		500 kHz	$295 \cdot 10^{-6}$	$295 \cdot 10^{-6}$
		700 kHz	$396 \cdot 10^{-6}$	$400 \cdot 10^{-6}$
		800 kHz; 1 MHz	$394 \cdot 10^{-6}$	$395 \cdot 10^{-6}$
	1 V	10 Hz	$242 \cdot 10^{-6}$	$245 \cdot 10^{-6}$
		20 Hz	$79 \cdot 10^{-6}$	$80 \cdot 10^{-6}$
		30 Hz	$72 \cdot 10^{-6}$	$75 \cdot 10^{-6}$
		40 Hz	$41 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		50 Hz; 70 Hz	$38 \cdot 10^{-6}$	$40 \cdot 10^{-6}$
		100 Hz; 500 Hz;		
		1 kHz; 10 kHz; 20 kHz	$26 \cdot 10^{-6}$	$30 \cdot 10^{-6}$
		50 kHz	$52 \cdot 10^{-6}$	$55 \cdot 10^{-6}$

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
			AC/DC transfer	***AC measure***
AC Voltage	1 V	70 kHz	$49 \cdot 10^{-6}$	$50 \cdot 10^{-6}$
		100 kHz	$68 \cdot 10^{-6}$	$70 \cdot 10^{-6}$
		200 kHz	$109 \cdot 10^{-6}$	$110 \cdot 10^{-6}$
		300 kHz	$230 \cdot 10^{-6}$	$230 \cdot 10^{-6}$
		500 kHz	$536 \cdot 10^{-6}$	$540 \cdot 10^{-6}$
		700 kHz	$341 \cdot 10^{-6}$	$345 \cdot 10^{-6}$
		800 kHz	$535 \cdot 10^{-6}$	$535 \cdot 10^{-6}$
		1 MHz	$569 \cdot 10^{-6}$	$570 \cdot 10^{-6}$
	2 V	10 Hz	$242 \cdot 10^{-6}$	$245 \cdot 10^{-6}$
		20 Hz	$79 \cdot 10^{-6}$	$80 \cdot 10^{-6}$
		30 Hz	$72 \cdot 10^{-6}$	$75 \cdot 10^{-6}$
		40 Hz	$35 \cdot 10^{-6}$	$40 \cdot 10^{-6}$
		50 Hz; 70 Hz	$33 \cdot 10^{-6}$	$35 \cdot 10^{-6}$
		100 Hz	$24 \cdot 10^{-6}$	$25 \cdot 10^{-6}$
		500 Hz	$24 \cdot 10^{-6}$	$25 \cdot 10^{-6}$
		1 kHz; 10 kHz; 20 kHz	$19 \cdot 10^{-6}$	$20 \cdot 10^{-6}$
		50 kHz	$52 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
		70 kHz	$48 \cdot 10^{-6}$	$50 \cdot 10^{-6}$
Calibration of voltage calibrators		100 kHz	$68 \cdot 10^{-6}$	$70 \cdot 10^{-6}$
		200 kHz	$104 \cdot 10^{-6}$	$105 \cdot 10^{-6}$
		300 kHz	$230 \cdot 10^{-6}$	$230 \cdot 10^{-6}$
		500 kHz	$536 \cdot 10^{-6}$	$540 \cdot 10^{-6}$
		700 kHz	$341 \cdot 10^{-6}$	$345 \cdot 10^{-6}$
		800 kHz	$557 \cdot 10^{-6}$	$560 \cdot 10^{-6}$
		1 MHz	$569 \cdot 10^{-6}$	$570 \cdot 10^{-6}$
	3 V	10 Hz	$186 \cdot 10^{-6}$	$190 \cdot 10^{-6}$
		20 Hz	$63 \cdot 10^{-6}$	$65 \cdot 10^{-6}$

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
			AC/DC transfer	***AC measure***
	3 V	30 Hz	$52 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
AC Voltage		40 Hz; 50 Hz; 70 Hz	$27 \cdot 10^{-6}$	$30 \cdot 10^{-6}$
		100 Hz	$39 \cdot 10^{-6}$	$40 \cdot 10^{-6}$
		500 Hz; 1 kHz;	$24 \cdot 10^{-6}$	$25 \cdot 10^{-6}$
		10 kHz; 20 kHz	$24 \cdot 10^{-6}$	$25 \cdot 10^{-6}$
		50 kHz	$39 \cdot 10^{-6}$	$40 \cdot 10^{-6}$
		70 kHz	$50 \cdot 10^{-6}$	$50 \cdot 10^{-6}$
Calibration of voltage calibrators		100 kHz	$54 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
		200 kHz	$94 \cdot 10^{-6}$	$95 \cdot 10^{-6}$
		300 kHz	$286 \cdot 10^{-6}$	$290 \cdot 10^{-6}$
		500 kHz	$306 \cdot 10^{-6}$	$310 \cdot 10^{-6}$
		700 kHz	$337 \cdot 10^{-6}$	$340 \cdot 10^{-6}$
		800 kHz	$265 \cdot 10^{-6}$	$265 \cdot 10^{-6}$
		1 MHz	$270 \cdot 10^{-6}$	$270 \cdot 10^{-6}$
	4 V	10 Hz	$228 \cdot 10^{-6}$	$230 \cdot 10^{-6}$
		20 Hz	$70 \cdot 10^{-6}$	$70 \cdot 10^{-6}$
		30 Hz	$54 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
		40 Hz	$28 \cdot 10^{-6}$	$30 \cdot 10^{-6}$
		50 Hz; 70 Hz; 100 Hz	$27 \cdot 10^{-6}$	$30 \cdot 10^{-6}$
		1 kHz	$16 \cdot 10^{-6}$	$20 \cdot 10^{-6}$
		500Hz;10 kHz; 20 kHz	$24 \cdot 10^{-6}$	$25 \cdot 10^{-6}$
		50 kHz	$39 \cdot 10^{-6}$	$40 \cdot 10^{-6}$
		70 kHz	$50 \cdot 10^{-6}$	$50 \cdot 10^{-6}$
		100 kHz	$54 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
		200 kHz	$94 \cdot 10^{-6}$	$95 \cdot 10^{-6}$
		300 kHz	$286 \cdot 10^{-6}$	$290 \cdot 10^{-6}$
		500 kHz	$306 \cdot 10^{-6}$	$310 \cdot 10^{-6}$

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
			AC/DC transfer	***AC measure***
		700 kHz	$337 \cdot 10^{-6}$	$340 \cdot 10^{-6}$
		800 kHz	$345 \cdot 10^{-6}$	$345 \cdot 10^{-6}$
		1 MHz	$352 \cdot 10^{-6}$	$355 \cdot 10^{-6}$
	5 V	10 Hz	$283 \cdot 10^{-6}$	$285 \cdot 10^{-6}$
		20 Hz	$80 \cdot 10^{-6}$	$80 \cdot 10^{-6}$
		30 Hz	$56 \cdot 10^{-6}$	$60 \cdot 10^{-6}$
		40 Hz	$30 \cdot 10^{-6}$	$30 \cdot 10^{-6}$
		50 Hz	$28 \cdot 10^{-6}$	$30 \cdot 10^{-6}$
		70 Hz; 100 Hz	$27 \cdot 10^{-6}$	$30 \cdot 10^{-6}$
		500 Hz; 1 kHz; 10 kHz; 20 kHz	$24 \cdot 10^{-6}$	$25 \cdot 10^{-6}$
	5 V	50 kHz	$35 \cdot 10^{-6}$	$35 \cdot 10^{-6}$
Calibration of voltage calibrators		70 kHz; 100 kHz	$45 \cdot 10^{-6}$	$50 \cdot 10^{-6}$
		200 kHz	$94 \cdot 10^{-6}$	$95 \cdot 10^{-6}$
		300 kHz	$286 \cdot 10^{-6}$	$290 \cdot 10^{-6}$
		500 kHz	$306 \cdot 10^{-6}$	$310 \cdot 10^{-6}$
		700 kHz	$337 \cdot 10^{-6}$	$340 \cdot 10^{-6}$
		800 kHz	$345 \cdot 10^{-6}$	$345 \cdot 10^{-6}$
		1 MHz	$352 \cdot 10^{-6}$	$355 \cdot 10^{-6}$
	6 V	10 Hz	$220 \cdot 10^{-6}$	$220 \cdot 10^{-6}$
		20 Hz	$70 \cdot 10^{-6}$	$70 \cdot 10^{-6}$
		30 Hz	$65 \cdot 10^{-6}$	$65 \cdot 10^{-6}$
		40 Hz	$29 \cdot 10^{-6}$	$30 \cdot 10^{-6}$
		50 Hz; 70 Hz	$28 \cdot 10^{-6}$	$30 \cdot 10^{-6}$
		100 Hz; 500 Hz; 1 kHz; 10 kHz; 20 kHz	$15 \cdot 10^{-6}$	$15 \cdot 10^{-6}$

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SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
			AC/DC transfer	***AC measure***
AC Voltage	6 V	50 kHz	$47 \cdot 10^{-6}$	$50 \cdot 10^{-6}$
		70 kHz	$55 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
		100 kHz	$60 \cdot 10^{-6}$	$60 \cdot 10^{-6}$
		200 kHz	$130 \cdot 10^{-6}$	$130 \cdot 10^{-6}$
		300 kHz	$140 \cdot 10^{-6}$	$140 \cdot 10^{-6}$
		500 kHz	$500 \cdot 10^{-6}$	$500 \cdot 10^{-6}$
		700 kHz; 800 kHz	$520 \cdot 10^{-6}$	$520 \cdot 10^{-6}$
		1 MHz	$535 \cdot 10^{-6}$	$535 \cdot 10^{-6}$
	7 V	10 Hz	$404 \cdot 10^{-6}$	$405 \cdot 10^{-6}$
		20 Hz	$108 \cdot 10^{-6}$	$110 \cdot 10^{-6}$
Calibration of voltage calibrators		30 Hz	$63 \cdot 10^{-6}$	$65 \cdot 10^{-6}$
		40 Hz	$32 \cdot 10^{-6}$	$35 \cdot 10^{-6}$
		50 Hz	$28 \cdot 10^{-6}$	$30 \cdot 10^{-6}$
		70 Hz	$25 \cdot 10^{-6}$	$25 \cdot 10^{-6}$
		100 Hz	$24 \cdot 10^{-6}$	$25 \cdot 10^{-6}$
		500 Hz; 1 kHz		
		10 kHz; 20 kHz	$18 \cdot 10^{-6}$	$20 \cdot 10^{-6}$
		50 kHz	$32 \cdot 10^{-6}$	$35 \cdot 10^{-6}$
		70 kHz; 100 kHz	$42 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		200 kHz	$94 \cdot 10^{-6}$	$95 \cdot 10^{-6}$
		300 kHz	$286 \cdot 10^{-6}$	$290 \cdot 10^{-6}$
		500 kHz	$306 \cdot 10^{-6}$	$310 \cdot 10^{-6}$
		700 kHz; 800 kHz; 1 MHz	$337 \cdot 10^{-6}$	$340 \cdot 10^{-6}$
	10 V	10 Hz	$242 \cdot 10^{-6}$	$245 \cdot 10^{-6}$
		20 Hz	$79 \cdot 10^{-6}$	$80 \cdot 10^{-6}$
		30 Hz	$58 \cdot 10^{-6}$	$60 \cdot 10^{-6}$
		40 Hz	$45 \cdot 10^{-6}$	$45 \cdot 10^{-6}$

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
			AC/DC transfer	***AC measure***
AC Voltage	10 V	50 Hz; 70 Hz	$44 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		100 Hz	$37 \cdot 10^{-6}$	$40 \cdot 10^{-6}$
		500 Hz	$27 \cdot 10^{-6}$	$30 \cdot 10^{-6}$
		1 kHz; 10 kHz; 20 kHz	$29 \cdot 10^{-6}$	$30 \cdot 10^{-6}$
		50 kHz	$52 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
		70 kHz	$44 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
Calibration of voltage calibrators		100 kHz	$64 \cdot 10^{-6}$	$65 \cdot 10^{-6}$
		200 kHz	$107 \cdot 10^{-6}$	$110 \cdot 10^{-6}$
		300 kHz	$233 \cdot 10^{-6}$	$235 \cdot 10^{-6}$
		500 kHz	$536 \cdot 10^{-6}$	$540 \cdot 10^{-6}$
		700 kHz	$554 \cdot 10^{-6}$	$555 \cdot 10^{-6}$
		800 kHz	$585 \cdot 10^{-6}$	$585 \cdot 10^{-6}$
		1 MHz	$609 \cdot 10^{-6}$	$610 \cdot 10^{-6}$
	20 V	10 Hz	$242 \cdot 10^{-6}$	$245 \cdot 10^{-6}$
		20 Hz	$79 \cdot 10^{-6}$	$80 \cdot 10^{-6}$
		30 Hz	$67 \cdot 10^{-6}$	$70 \cdot 10^{-6}$
		40 Hz	$40 \cdot 10^{-6}$	$40 \cdot 10^{-6}$
		50 Hz	$44 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		70 Hz	$43 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		100 Hz	$33 \cdot 10^{-6}$	$35 \cdot 10^{-6}$
		500 Hz	$25 \cdot 10^{-6}$	$30 \cdot 10^{-6}$
		1 kHz; 10 kHz; 20 kHz	$24 \cdot 10^{-6}$	$25 \cdot 10^{-6}$
		50 kHz	$52 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
	20 V	70 kHz	$44 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		100 kHz	$64 \cdot 10^{-6}$	$65 \cdot 10^{-6}$
		200 kHz	$106 \cdot 10^{-6}$	$110 \cdot 10^{-6}$
		300 kHz	$233 \cdot 10^{-6}$	$235 \cdot 10^{-6}$

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
			AC/DC transfer	***AC measure***
AC Voltage	20 V	500 kHz	$536 \cdot 10^{-6}$	$540 \cdot 10^{-6}$
		700 kHz	$354 \cdot 10^{-6}$	$355 \cdot 10^{-6}$
		800 kHz	$578 \cdot 10^{-6}$	$580 \cdot 10^{-6}$
		1 MHz	$617 \cdot 10^{-6}$	$620 \cdot 10^{-6}$
	30 V	10 Hz	$187 \cdot 10^{-6}$	$190 \cdot 10^{-6}$
		20 Hz	$63 \cdot 10^{-6}$	$65 \cdot 10^{-6}$
		30 Hz	$59 \cdot 10^{-6}$	$60 \cdot 10^{-6}$
		40 Hz; 50 Hz; 70 Hz		
		100 Hz	$44 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
Calibration of voltage calibrators		500 Hz; 1 kHz; 10 kHz; 20 kHz	$30 \cdot 10^{-6}$	$35 \cdot 10^{-6}$
		50 kHz	$45 \cdot 10^{-6}$	$50 \cdot 10^{-6}$
		70 kHz	$58 \cdot 10^{-6}$	$60 \cdot 10^{-6}$
		100 kHz	$67 \cdot 10^{-6}$	$70 \cdot 10^{-6}$
	40 V	10 Hz	$270 \cdot 10^{-6}$	$270 \cdot 10^{-6}$
		20 Hz	$78 \cdot 10^{-6}$	$80 \cdot 10^{-6}$
		30 Hz	$62 \cdot 10^{-6}$	$65 \cdot 10^{-6}$
		40 Hz	$45 \cdot 10^{-6}$	$50 \cdot 10^{-6}$
		50 Hz; 70 Hz	$44 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		100 Hz	$44 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		500 Hz; 1 kHz; 10 kHz; 20 kHz	$30 \cdot 10^{-6}$	$35 \cdot 10^{-6}$
		50 kHz	$45 \cdot 10^{-6}$	$50 \cdot 10^{-6}$
		70 kHz	$58 \cdot 10^{-6}$	$60 \cdot 10^{-6}$
		100 kHz	$67 \cdot 10^{-6}$	$70 \cdot 10^{-6}$

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
			AC/DC transfer	***AC measure***
AC Voltage	50 V	10 Hz	$286 \cdot 10^{-6}$	$290 \cdot 10^{-6}$
		20 Hz	$82 \cdot 10^{-6}$	$85 \cdot 10^{-6}$
		30 Hz	$64 \cdot 10^{-6}$	$65 \cdot 10^{-6}$
		40 Hz	$46 \cdot 10^{-6}$	$50 \cdot 10^{-6}$
		50 Hz	$45 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		70 Hz	$44 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		100 Hz	$44 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
Calibration of voltage calibrators		500 Hz; 1 kHz; 10 kHz; 20 kHz	$30 \cdot 10^{-6}$	$35 \cdot 10^{-6}$
		50 kHz	$45 \cdot 10^{-6}$	$50 \cdot 10^{-6}$
		70 kHz	$58 \cdot 10^{-6}$	$60 \cdot 10^{-6}$
		100 kHz	$67 \cdot 10^{-6}$	$70 \cdot 10^{-6}$
	60 V	10 Hz	$242 \cdot 10^{-6}$	$245 \cdot 10^{-6}$
		20 Hz	$79 \cdot 10^{-6}$	$80 \cdot 10^{-6}$
		30 Hz	$68 \cdot 10^{-6}$	$70 \cdot 10^{-6}$
		40 Hz	$40 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		50 Hz	$44 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		70 Hz	$43 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		100 Hz	$36 \cdot 10^{-6}$	$40 \cdot 10^{-6}$
		500 Hz	$28 \cdot 10^{-6}$	$30 \cdot 10^{-6}$
		1 kHz; 10 kHz; 20 kHz	$29 \cdot 10^{-6}$	$30 \cdot 10^{-6}$
		50 kHz	$64 \cdot 10^{-6}$	$65 \cdot 10^{-6}$
		70 kHz	$55 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
		100 kHz	$87 \cdot 10^{-6}$	$90 \cdot 10^{-6}$

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
			AC/DC transfer	***AC measure***
AC Voltage	70 V	10 Hz	$416 \cdot 10^{-6}$	$420 \cdot 10^{-6}$
		20 Hz	$114 \cdot 10^{-6}$	$115 \cdot 10^{-6}$
		30 Hz	$73 \cdot 10^{-6}$	$75 \cdot 10^{-6}$
		40 Hz	$51 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
		50 Hz	$46 \cdot 10^{-6}$	$50 \cdot 10^{-6}$
		70 Hz	$44 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		100 Hz	$43 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		500 Hz; 1 kHz; 10 kHz; 20 kHz	$28 \cdot 10^{-6}$	$30 \cdot 10^{-6}$
Calibration of voltage calibrators		50 kHz	$43 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		70 kHz	$55 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
		100 kHz	$66 \cdot 10^{-6}$	$70 \cdot 10^{-6}$
	100 V	10 Hz	$242 \cdot 10^{-6}$	$245 \cdot 10^{-6}$
		20 Hz	$85 \cdot 10^{-6}$	$85 \cdot 10^{-6}$
		30 Hz	$60 \cdot 10^{-6}$	$60 \cdot 10^{-6}$
		40 Hz	$45 \cdot 10^{-6}$	$50 \cdot 10^{-6}$
		50 Hz; 70 Hz	$44 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		100 Hz	$45 \cdot 10^{-6}$	$50 \cdot 10^{-6}$
		500 Hz	$32 \cdot 10^{-6}$	$35 \cdot 10^{-6}$
		1 kHz; 10 kHz; 20 kHz	$43 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		50 kHz	$85 \cdot 10^{-6}$	$85 \cdot 10^{-6}$
		70 kHz	$67 \cdot 10^{-6}$	$70 \cdot 10^{-6}$
		100 kHz	$96 \cdot 10^{-6}$	$100 \cdot 10^{-6}$

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
AC Voltage	200 V	10 Hz	$242 \cdot 10^{-6}$	$245 \cdot 10^{-6}$
		20 Hz	$79 \cdot 10^{-6}$	$80 \cdot 10^{-6}$
		30 Hz	$67 \cdot 10^{-6}$	$70 \cdot 10^{-6}$
		40 Hz	$42 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		50 Hz	$46 \cdot 10^{-6}$	$50 \cdot 10^{-6}$
		70 Hz	$45 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		100 Hz	$42 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		500 Hz	$30 \cdot 10^{-6}$	$35 \cdot 10^{-6}$
		1 kHz; 10 kHz; 20 kHz	$39 \cdot 10^{-6}$	$40 \cdot 10^{-6}$
		50 kHz	$79 \cdot 10^{-6}$	$80 \cdot 10^{-6}$
		70 kHz	$67 \cdot 10^{-6}$	$70 \cdot 10^{-6}$
		100 kHz	$96 \cdot 10^{-6}$	$100 \cdot 10^{-6}$
	300 V	10 Hz	$164 \cdot 10^{-6}$	$165 \cdot 10^{-6}$
		20 Hz; 30 Hz	$77 \cdot 10^{-6}$	$80 \cdot 10^{-6}$
Calibration of voltage calibrators		40 Hz; 50 Hz;70 Hz; 100 Hz; 500 Hz;		
		1 kHz; 10 kHz; 20 kHz	$54 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
		50 kHz	$65 \cdot 10^{-6}$	$70 \cdot 10^{-6}$
		70 kHz	$119 \cdot 10^{-6}$	$120 \cdot 10^{-6}$
		100 kHz	$145 \cdot 10^{-6}$	$145 \cdot 10^{-6}$
	500 V	10 Hz	$186 \cdot 10^{-6}$	$190 \cdot 10^{-6}$
		20 Hz	$80 \cdot 10^{-6}$	$80 \cdot 10^{-6}$
		30 Hz	$78 \cdot 10^{-6}$	$80 \cdot 10^{-6}$

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
			AC/DC transfer	***AC measure***
AC Voltage	500 V	40 Hz; 50 Hz; 70 Hz; 100 Hz; 500 Hz;		
		1 kHz; 10 kHz; 20 kHz	$42 \cdot 10^{-6}$	$45 \cdot 10^{-6}$
		50 kHz	$65 \cdot 10^{-6}$	$70 \cdot 10^{-6}$
		70 kHz	$119 \cdot 10^{-6}$	12010^{-6}
		100 kHz	$145 \cdot 10^{-6}$	$145 \cdot 10^{-6}$
	600 V	10 Hz	$210 \cdot 10^{-6}$	$210 \cdot 10^{-6}$
		20 Hz	$83 \cdot 10^{-6}$	$85 \cdot 10^{-6}$
		30 Hz	$78 \cdot 10^{-6}$	$80 \cdot 10^{-6}$
		40 Hz; 50 Hz; 70 Hz 100 Hz; 500 Hz		
Calibration of voltage calibrators		1 kHz; 10 kHz; 20 kHz	$55 \cdot 10^{-6}$	$55 \cdot 10^{-6}$
		50 kHz	$65 \cdot 10^{-6}$	$65 \cdot 10^{-6}$
		70 kHz	$119 \cdot 10^{-6}$	$120 \cdot 10^{-6}$
		100 kHz	$145 \cdot 10^{-6}$	$145 \cdot 10^{-6}$
	700 V	10 Hz	$240 \cdot 10^{-6}$	$240 \cdot 10^{-6}$
		20 Hz	$106 \cdot 10^{-6}$	$110 \cdot 10^{-6}$
		30 Hz	$100 \cdot 10^{-6}$	$100 \cdot 10^{-6}$
		40 Hz; 50 Hz; 70 Hz; 100 Hz; 500 Hz; 1 kHz;		
		10 kHz; 20 kHz	$79 \cdot 10^{-6}$	$80 \cdot 10^{-6}$
		50 kHz	$88 \cdot 10^{-6}$	$90 \cdot 10^{-6}$
		70 kHz	$119 \cdot 10^{-6}$	$120 \cdot 10^{-6}$
		100 kHz	$145 \cdot 10^{-6}$	$145 \cdot 10^{-6}$

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
			AC/DC transfer	***AC measure***
AC Voltage	1000 V	10 Hz	$339 \cdot 10^{-6}$	$340 \cdot 10^{-6}$
		20 Hz	$124 \cdot 10^{-6}$	$125 \cdot 10^{-6}$
		30 Hz	$105 \cdot 10^{-6}$	$105 \cdot 10^{-6}$
		40 Hz	$60 \cdot 10^{-6}$	$65 \cdot 10^{-6}$
		50 Hz; 70 Hz	$80 \cdot 10^{-6}$	$80 \cdot 10^{-6}$
		100 Hz	$60 \cdot 10^{-6}$	$65 \cdot 10^{-6}$
Calibration of voltage calibrators		500 Hz	$79 \cdot 10^{-6}$	$80 \cdot 10^{-6}$
		1 kHz; 10 kHz; 20 kHz	$60 \cdot 10^{-6}$	$65 \cdot 10^{-6}$
		50 kHz	$90 \cdot 10^{-6}$	$90 \cdot 10^{-6}$
		70 kHz	$119 \cdot 10^{-6}$	$120 \cdot 10^{-6}$
		100 kHz	$145 \cdot 10^{-6}$	$145 \cdot 10^{-6}$
	1050 V … 10000 V	50 Hz … 60 Hz	$1{,}6 \cdot 10^{-3}$ + 130 mV	
AC Voltage	10 mV …< 100 mV	30 Hz	$387 \cdot 10^{-6}$ + 28 µV	
		400 Hz	$173 \cdot 10^{-6}$ + 4 µV	
Calibration of non-sinusoidal voltage (rms value)		1000 Hz	$174 \cdot 10^{-6}$ + 4 µV	
		20 kHz	$534 \cdot 10^{-6}$ + 4 µV	
		50 kHz	$1280 \cdot 10^{-6}$ + 4 µV	
	0.1 V … < 1 V	30 Hz	$326 \cdot 10^{-6}$ + 30 µV	
		400 Hz	$108 \cdot 10^{-6}$ + 30 µV	
		1000 Hz	$110 \cdot 10^{-6}$ + 30 µV	
		20 kHz	$516 \cdot 10^{-6}$ + 30 µV	
		50 kHz	$1270 \cdot 10^{-6}$ + 30 µV	
	1 V … < 10 V	30 Hz	$292 \cdot 10^{-6}$ + 30 µV	
		400 Hz	$89 \cdot 10^{-6}$ + 30 µV	
		1000 Hz	$91 \cdot 10^{-6}$ + 30 µV	
		20 kHz	$513 \cdot 10^{-6}$ + 30 µV	
		50 kHz	$1270 \cdot 10^{-6}$ + 30 µV	

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
AC Voltage	10 V … < 100 V	30 Hz	$377 \cdot 10^{-6}$ + 30 µV	
		400 Hz	$237 \cdot 10^{-6}$ + 30 µV	
		1000 Hz	$238 \cdot 10^{-6}$ + 30 µV	
		20 kHz	$539 \cdot 10^{-6}$ + 30 µV	
		50 kHz	$1290 \cdot 10^{-6}$ + 30 µV	
	100 V … 1000 V	30 Hz	$599 \cdot 10^{-6}$ + 30 µV	
		400 Hz	$486 \cdot 10^{-6}$ + 30 µV	
		1000 Hz	$487 \cdot 10^{-6}$ + 30 µV	
		20 kHz	$859 \cdot 10^{-6}$ + 30 µV	
		50 kHz	$1850 \cdot 10^{-6}$ + 30 µV	
	2,2 mV ... < 10 mV	10 Hz ... 20 Hz	$2{,}75 \cdot 10^{-3}$ + 6 µV	
		> 20 Hz ... 30 Hz	$1{,}19 \cdot 10^{-3}$ + 6 µV	
		> 30 Hz ... 40 Hz	$2{,}02 \cdot 10^{-3}$ + 6 µV	
Calibration of voltage measurement instruments		> 40 Hz ... 100 Hz	$2{,}02 \cdot 10^{-3}$ + 3 µV	
		> 100 Hz ... 500 Hz	$1{,}19 \cdot 10^{-3}$ + 3 µV	
		> 500 Hz ... 50 kHz	$2{,}02 \cdot 10^{-3}$ + 3 µV	
		> 50 kHz ... 70 kHz	$1{,}4 \cdot 10^{-3}$ + 4 µV	
		> 70 kHz ... 100 kHz	$2{,}39 \cdot 10^{-3}$ + 4 µV	
		> 100 kHz...200 kHz	$1{,}78 \cdot 10^{-3}$ + 6 µV	
		> 200 kHz ...300 kHz	$3{,}47 \cdot 10^{-3}$ + 6 µV	
		> 300 kHz ...500 kHz	$5{,}59 \cdot 10^{-3}$ + 12 µV	
	2,2 mV ... < 10 mV	> 500 kHz ...700 kHz	$3{,}51 \cdot 10^{-3}$ + 18 µV	
		> 700 kHz ...800 kHz	$5{,}86 \cdot 10^{-3}$ + 18 µV	
		> 800 kHz ... 1 MHz	$6{,}21 \cdot 10^{-3}$ + 18 µV	
	10 mV ... < 22 mV	10 Hz ... 20 Hz	$409 \cdot 10^{-6}$ + 6 µV	
		> 20 Hz ... 30 Hz	$157 \cdot 10^{-6}$ + 6 µV	
		> 30 Hz ... 40 Hz	$360 \cdot 10^{-6}$ + 6 µV	
		> 40 Hz ... 100 Hz	$360 \cdot 10^{-6}$ + 3 µV	
		> 100 Hz ... 500 Hz	$279 \cdot 10^{-6}$ + 3 µV	

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
AC Voltage	10 mV ... < 22 mV	> 500 Hz ... 20 kHz	$360 \cdot 10^{-6}$ + 3 µV	
		> 20 kHz ... 50 kHz	$384 \cdot 10^{-6}$ + 3 µV	
		> 50 kHz ... 70 kHz	$241 \cdot 10^{-6}$ + 4 µV	
		> 70 kHz ... 100 kHz	$630 \cdot 10^{-6}$ + 4 µV	
		>100 kHz ...200 kHz	$533 \cdot 10^{-6}$ + 6 µV	
		>200 kHz...300 kHz	$966 \cdot 10^{-6}$ + 6 µV	
		>300 kHz...500 kHz	$1{,}5 \cdot 10^{-3}$ + 12 µV	
		>500 kHz...700 kHz	$1{,}77 \cdot 10^{-6}$ + 18 µV	
		>700 kHz...800 kHz	$1{,}77 \cdot 10^{-3}$ + 18 µV	
		> 800 kHz ... 1 MHz	$1{,}88 \cdot 10^{-3}$ + 18 µV	
Calibration of voltage measurement instruments	22 mV ... < 100 mV	10 Hz ... 20 Hz	$378 \cdot 10^{-6}$ + 24 µV	
		> 20 Hz ... 30 Hz	$226 \cdot 10^{-6}$ + 18 µV	
		> 30 Hz ... 40 Hz	$178 \cdot 10^{-6}$ + 18 µV	
		> 40 Hz ... 20 kHz	$152 \cdot 10^{-6}$ + 3 µV	
		> 20 kHz ... 50 kHz	$207 \cdot 10^{-6}$ + 3 µV	
		> 50 kHz ... 70 kHz	$343 \cdot 10^{-6}$ + 3 µV	
		> 70 kHz ... 100 kHz	$358 \cdot 10^{-6}$ + 3 µV	
		> 100 kHz...200 kHz	$418 \cdot 10^{-6}$ + 5 µV	
		> 200 kHz...300 kHz	$755 \cdot 10^{-6}$ + 5 µV	
	22 mV ... < 100 mV	> 300 kHz...500 kHz	$817 \cdot 10^{-6}$ + 12 µV	
		> 500 kHz ... 1 MHz	$1{,}37 \cdot 10^{-3}$ + 24 µV	
	100 mV ... < 220 mV	10 Hz ... 20 Hz	$315 \cdot 10^{-6}$ + 24 µV	
		> 20 Hz ... 30 Hz	$156 \cdot 10^{-6}$ + 18 µV	
		> 30 Hz ... 40 Hz	$115 \cdot 10^{-6}$ + 18 µV	
		> 40 Hz ... 20 kHz	$70 \cdot 10^{-6}$ + 3 µV	
		> 20 kHz ... 70 kHz	$128 \cdot 10^{-6}$ + 3 µV	
		> 70 kHz ... 100 kHz	$189 \cdot 10^{-6}$ + 3 µV	
		> 100 kHz...200 kHz	$359 \cdot 10^{-6}$ + 5 µV	
		> 200 kHz...300 kHz	$583 \cdot 10^{-6}$ + 5 µV	

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
AC Voltage	100 mV ... < 220 mV	> 300 kHz...500 kHz	$757 \cdot 10^{-6}$ + 12 µV	
		> 500 kHz...700 kHz	$502 \cdot 10^{-6}$ + 24 µV	
		> 700 kHz ... 1 MHz	$786 \cdot 10^{-6}$ + 24 µV	
	220 mV ... < 1 V	10 Hz ... 20 Hz	$303 \cdot 10^{-6}$ + 24 µV	
		> 20 Hz ... 30 Hz	$110 \cdot 10^{-6}$ + 18 µV	
		> 30 Hz ... 40 Hz	$101 \cdot 10^{-6}$ + 18 µV	
Calibration of voltage measurement instruments		> 40 Hz ... 70 Hz	$41 \cdot 10^{-6}$ + 7 µV	
		> 70 Hz ... 100 Hz	$38 \cdot 10^{-6}$ + 7 µV	
		> 100 Hz ... 500 Hz	$30 \cdot 10^{-6}$ + 7 µV	
		> 500 Hz ... 20 kHz	$26 \cdot 10^{-6}$ + 7 µV	
		> 20 kHz ... 50 kHz	$66 \cdot 10^{-6}$ + 13 µV	
		> 50 kHz ... 70 kHz	$148 \cdot 10^{-6}$ + 20 µV	
		> 70 kHz ... 100 kHz	$156 \cdot 10^{-6}$ + 20 µV	
		> 100 kHz...200 kHz	$364 \cdot 10^{-6}$ + 12 µV	
		> 200 kHz...300 kHz	$417 \cdot 10^{-6}$ + 12 µV	
		> 300 kHz...500 kHz	$880 \cdot 10^{-6}$ + 24 µV	
		> 500 kHz ... 1 MHz	$1{,}51 \cdot 10^{-3}$ + 58 µV	
	1 V ... < 2,2 V	10 Hz ... 20 Hz	$298 \cdot 10^{-6}$ + 24 µV	
		> 20 Hz ... 30 Hz	$118 \cdot 10^{-6}$ + 18 µV	
		> 30 Hz ... 40 Hz	$100 \cdot 10^{-6}$ + 18 µV	
		> 40 Hz ... 70 Hz	$38 \cdot 10^{-6}$ + 7 µV	
		> 70 Hz ... 100 Hz	$29 \cdot 10^{-6}$ + 7 µV	
		> 100 Hz ... 500 Hz	$29 \cdot 10^{-6}$ + 7 µV	
		> 500 Hz ... 20 kHz	$26 \cdot 10^{-6}$ + 7 µV	
		> 20 kHz ... 50 kHz	$66 \cdot 10^{-6}$ + 13 µV	
		> 50 kHz ... 70 kHz	$147 \cdot 10^{-6}$ + 20 µV	
		> 70 kHz ... 100 kHz	$156 \cdot 10^{-6}$ + 20 µV	
		> 100 kHz...200 kHz	$364 \cdot 10^{-6}$ + 12 µV	
		> 200 kHz...300 kHz	$417 \cdot 10^{-6}$ + 12 µV	

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
AC Voltage	1 V ... < 2,2 V	> 300 kHz...500 kHz	$880 \cdot 10^{-6}$ + 24 µV	
		> 500 kHz ... 1 MHz	$1{,}51 \cdot 10^{-3}$ + 58 µV	
	2,2 V ... < 10 V	10 Hz ... 20 Hz	$280 \cdot 10^{-6}$ + 33 µV	
		> 20 Hz ... 30 Hz	$114 \cdot 10^{-6}$ + 29 µV	
		> 30 Hz ... 40 Hz	$98 \cdot 10^{-6}$ + 29 µV	
		> 40 Hz ... 70 Hz	$34 \cdot 10^{-6}$ + 36 µV	
Calibration of voltage measurement instruments		> 70 Hz ... 20 kHz	$23 \cdot 10^{-6}$ + 36 µV	
		> 20 kHz ... 50 kHz	$61 \cdot 10^{-6}$ + 59 µV	
		> 50 kHz ... 70 kHz	$109 \cdot 10^{-6}$ + 94 µV	
		> 70 kHz ... 100 kHz	$111 \cdot 10^{-6}$ + 94 µV	
		> 100 kHz...200 kHz	$177 \cdot 10^{-6}$ + 809 µV	
		> 200 kHz...300 kHz	$184 \cdot 10^{-6}$ + 809 µV	
		> 300 kHz...500 kHz	$554 \cdot 10^{-6}$ + 2 mV	
		> 500 kHz ... 1 MHz	$891 \cdot 10^{-6}$ + 4 mV	
	10 V ... < 22 V	10 Hz ... 20 Hz	$298 \cdot 10^{-6}$ + 33 µV	
		> 20 Hz ... 30 Hz	$115 \cdot 10^{-6}$ + 29 µV	
		> 30 Hz ... 40 Hz	$102 \cdot 10^{-6}$ + 29 µV	
		> 40 Hz ... 50 Hz	$48 \cdot 10^{-6}$ + 36 µV	
		> 50 Hz ... 70 Hz	$47 \cdot 10^{-6}$ + 36 µV	
		> 70 Hz ... 100 Hz	$38 \cdot 10^{-6}$ + 36 µV	
		> 100 Hz ... 500 Hz	$32 \cdot 10^{-6}$ + 36 µV	
		> 500 Hz ... 20 kHz	$31 \cdot 10^{-6}$ + 36 µV	
		> 20 kHz ... 50 kHz	$65 \cdot 10^{-6}$ + 59 µV	
		> 50 kHz ... 70 kHz	$104 \cdot 10^{-6}$ + 94 µV	
		> 70 kHz ... 100 kHz	$114 \cdot 10^{-6}$ + 94 µV	
		> 100 kHz...200 kHz	$161 \cdot 10^{-6}$ + 809 µV	
		> 200 kHz...300 kHz	$262 \cdot 10^{-6}$ + 809 µV	
		> 300 kHz...500 kHz	$589 \cdot 10^{-6}$ + 2 mV	
		> 500 kHz...700 kHz	$798 \cdot 10^{-6}$ + 4 mV	

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SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
AC Voltage	10 V ... < 22 V	> 700 kHz...800 kHz	$919 \cdot 10^{-6}$ + 4 mV	
		> 800 kHz ... 1 MHz	$944 \cdot 10^{-6}$ + 4 mV	
	22 V ... < 100 V	10 Hz ... 20 Hz	$298 \cdot 10^{-6}$ + 327 µV	
Calibration of voltage measurement instruments		> 20 Hz ... 30 Hz	$116 \cdot 10^{-6}$ + 289 µV	
		> 30 Hz ... 40 Hz	$102 \cdot 10^{-6}$ + 289 µV	
		> 40 Hz ... 50 Hz	$49 \cdot 10^{-6}$ + 359 µV	
		> 50 Hz ... 70 Hz	$47 \cdot 10^{-6}$ + 359 µV	
		> 70 Hz ... 100 Hz	$41 \cdot 10^{-6}$ + 359 µV	
		> 100 Hz ... 500 Hz	$34 \cdot 10^{-6}$ + 359 µV	
		> 500 Hz ... 20 kHz	$35 \cdot 10^{-6}$ + 359 µV	
		> 20 kHz ... 50 kHz	$76 \cdot 10^{-6}$ + 703 µV	
		> 50 kHz ... 70 kHz	$109 \cdot 10^{-6}$ + 4 mV	
		> 70 kHz ... 100 kHz	$128 \cdot 10^{-6}$ + 4 mV	
	100 V ... < 220 V	10 Hz ... 20 Hz	$298 \cdot 10^{-6}$ + 327 µV	
		> 20 Hz ... 30 Hz	$115 \cdot 10^{-6}$ + 289 µV	
		> 30 Hz ... 40 Hz	$103 \cdot 10^{-6}$ + 289 µV	
		> 40 Hz ... 50 Hz	$50 \cdot 10^{-6}$ + 359 µV	
		> 50 Hz ... 70 Hz	$49 \cdot 10^{-6}$ + 359 µV	
		> 70 Hz ... 100 Hz	$47 \cdot 10^{-6}$ + 359 µV	
		> 100 Hz ... 500 Hz	$36 \cdot 10^{-6}$ + 359 µV	
		> 500 Hz ... 20 kHz	$44 \cdot 10^{-6}$ + 3359 µV	
		> 20 kHz ... 50 kHz	$88 \cdot 10^{-6}$ + 703 µV	
		> 50 kHz ... 70 kHz	$116 \cdot 10^{-6}$ + 4 mV	
		> 70 kHz ... 100 kHz	$135 \cdot 10^{-6}$ + 4 mV	
	220 V ... < 500 V	10 Hz ... 20 Hz	$255 \cdot 10^{-6}$ + 8 mV	
		> 20 Hz ... 30 Hz	$150 \cdot 10^{-6}$ + 8 mV	
		> 30 Hz ... 50 Hz	$135 \cdot 10^{-6}$ + 8 mV	
		> 50 Hz ... 1 kHz	$61 \cdot 10^{-6}$ + 1.5 mV	
		> 1 kHz ... 20 kHz	$140 \cdot 10^{-6}$ + 13 mV	

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SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
AC Voltage	220 V ... < 500 V	> 20 kHz ... 50 kHz	$155 \cdot 10^{-6}$ + 13 mV	
		> 50 kHz ... 70 kHz	$160 \cdot 10^{-6}$ + 13 mV	
		> 70 kHz ... 100 kHz	$166 \cdot 10^{-6}$ + 13 mV	
	500 V ... 1100 V	10 Hz ... 20 Hz	$380 \cdot 10^{-6}$ + 9 mV	
Calibration of voltage measurement instruments		> 20 Hz ... 30 Hz	$158 \cdot 10^{-6}$ + 9 mV	
		> 30 Hz ... 50 Hz	$150 \cdot 10^{-6}$ + 9 mV	
		> 50 Hz ... 1 kHz	$84 \cdot 10^{-6}$ + 1.5 mV	
		> 1 kHz ... 20 kHz	$150 \cdot 10^{-6}$ + 9 mV	
		> 20 kHz ... 50 kHz	$165 \cdot 10^{-6}$ + 9 mV	
		> 50 kHz ... 70 kHz	$205 \cdot 10^{-6}$ + 9 mV	
		> 70 kHz ... 100 kHz	$240 \cdot 10^{-6}$ + 9 mV	
	1050 V – 10000 V	50 Hz … 60 Hz	$1{,}7 \cdot 10^{-3}$ + 140 mV	
AC Current	0,01 mA ... 1 mA	20 Hz ... 40 Hz	$80 \cdot 10^{-6}$	
		> 40 Hz ... 5 kHz	$70 \cdot 10^{-6}$	
		> 5kHz … 10kHz	$70 \cdot 10^{-6}$	
Calibration of current calibrators	> 1 mA ... 10 mA	20 Hz ... 10 kHz	$70 \cdot 10^{-6}$	
		> 40 Hz ... 5 kHz	$50 \cdot 10^{-6}$	
		> 5kHz … 10kHz	$50 \cdot 10^{-6}$	
	> 10 mA ... 20 mA	20 Hz ... 10 kHz	$80 \cdot 10^{-6}$	
		> 40 Hz ... 5 kHz	$70 \cdot 10^{-6}$	
		> 5kHz … 10kHz	$50 \cdot 10^{-6}$	
	> 20 mA ... 50 mA	20 Hz ... 40 Hz	$80 \cdot 10^{-6}$	
		> 40 Hz ... 5 kHz	$60 \cdot 10^{-6}$	
		> 5kHz … 10kHz	$60 \cdot 10^{-6}$	
	> 50 mA ... 100 mA	20 Hz ... 40 Hz	$300 \cdot 10^{-6}$	
		> 40 Hz ... 5 kHz	$290 \cdot 10^{-6}$	
		> 5kHz … 10kHz	$50 \cdot 10^{-6}$	

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SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
AC Current	> 100 mA ... 200 mA	20 Hz ... 40 Hz	$170 \cdot 10^{-6}$	
		> 40 Hz ... 5 kHz	$160 \cdot 10^{-6}$	
		> 5kHz … 10kHz	$160 \cdot 10^{-6}$	
	> 200 mA ... 500 mA	20 Hz ... 40 Hz	$110 \cdot 10^{-6}$	
		> 40 Hz ... 5 kHz	$100 \cdot 10^{-6}$	
		> 5kHz … 10kHz	$90 \cdot 10^{-6}$	
	> 500 mA ... 1 A	20 Hz ... 40 Hz	$90 \cdot 10^{-6}$	
		> 40 Hz ... 5 kHz	$70 \cdot 10^{-6}$	
		> 5kHz … 10kHz	$90 \cdot 10^{-6}$	
Calibration of current calibrators	> 1 A ... 2 A	20 Hz ... 40 Hz	$80 \cdot 10^{-6}$	
		> 40 Hz ... 5 kHz	$60 \cdot 10^{-6}$	
		> 5kHz … 10kHz	$60 \cdot 10^{-6}$	
	> 2 A ... 5 A	20 Hz ... 40 Hz	$120 \cdot 10^{-6}$	
		> 40 Hz ... 5 kHz	$110 \cdot 10^{-6}$	
		> 5kHz … 10kHz	$110 \cdot 10^{-6}$	
	> 5 A ... 10 A	20 Hz ... 40 Hz	$90 \cdot 10^{-6}$	
		> 40 Hz ... 5 kHz	$80 \cdot 10^{-6}$	
		> 5kHz … 10kHz	$80 \cdot 10^{-6}$	
	> 10 A ... 20 A	20 Hz ... 40 Hz	$110 \cdot 10^{-6}$	
		> 40 Hz ... 5 kHz	$100 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$100 \cdot 10^{-6}$	
	> 20 A ... 50 A	20 Hz ... 40 Hz	$280 \cdot 10^{-6}$	
		> 40 Hz ... 5 kHz	$280 \cdot 10^{-6}$	
		> 5kHz … 10kHz	$280 \cdot 10^{-6}$	
	> 50 A ... 100 A	20 Hz ... 40 Hz	$210 \cdot 10^{-6}$	
		> 40 Hz ... 5 kHz	$210 \cdot 10^{-6}$	
		> 5kHz … 10kHz	$210 \cdot 10^{-6}$	

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SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
AC Current	0,1 mA ... 0,2 mA	20 Hz ... 40 Hz	$230 \cdot 10^{-6}$	
		> 40 Hz ... 1 kHz	$180 \cdot 10^{-6}$	
		> 1 kHz ... 5 kHz	$330 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$1{,}63 \cdot 10^{-3}$	
	> 0,2 mA ... 1 mA	20 Hz ... 40 Hz	$150 \cdot 10^{-6}$	
		> 40 Hz ... 1 kHz	$90 \cdot 10^{-6}$	
		> 1 kHz ... 5 kHz	$190 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$1{,}05 \cdot 10^{-3}$	
	> 1 mA ... 2 mA	20 Hz ... 40 Hz	$130 \cdot 10^{-6}$	
		> 40 Hz ... 1 kHz	$70 \cdot 10^{-6}$	
		> 1 kHz ... 5 kHz	$100 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$580 \cdot 10^{-6}$	
	> 2 mA ... 3 mA	20 Hz ... 40 Hz	$170 \cdot 10^{-6}$	
		> 40 Hz ... 1 kHz	$120 \cdot 10^{-6}$	
Calibration of current measurement instruments		> 1 kHz ... 5 kHz	$370 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$1{,}05 \cdot 10^{-3}$	
	> 3 mA ... 5 mA	20 Hz ... 40 Hz	$160 \cdot 10^{-6}$	
		> 40 Hz ... 1 kHz	$120 \cdot 10^{-6}$	
		> 1 kHz ... 5 kHz	$270 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$860 \cdot 10^{-6}$	
	> 5 mA ... 10 mA	20 Hz ... 40 Hz	$130 \cdot 10^{-6}$	
		> 40 Hz ... 1 kHz	$70 \cdot 10^{-6}$	
		> 1 kHz ... 5 kHz	$180 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$700 \cdot 10^{-6}$	
	> 10 mA ... 20 mA	20 Hz ... 40 Hz	$120 \cdot 10^{-6}$	
		> 40 Hz ... 1 kHz	$80 \cdot 10^{-6}$	
		> 1 kHz ... 5 kHz	$140 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$580 \cdot 10^{-6}$	

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
AC Current	> 20 mA ... 30 mA	20 Hz ... 40 Hz	$140 \cdot 10^{-6}$	
		> 40 Hz ... 1 kHz	$70 \cdot 10^{-6}$	
		> 1 kHz ... 5 kHz	$240 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$760 \cdot 10^{-6}$	
	> 30 mA ... 50 mA	20 Hz ... 40 Hz	$140 \cdot 10^{-6}$	
		> 40 Hz ... 1 kHz	$80 \cdot 10^{-6}$	
		> 1 kHz ... 5 kHz	$190 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$660 \cdot 10^{-6}$	
	> 50 mA ... 100 mA	20 Hz ... 40 Hz	$130 \cdot 10^{-6}$	
		> 40 Hz ... 1 kHz	$70 \cdot 10^{-6}$	
		> 1 kHz ... 5 kHz	$140 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$580 \cdot 10^{-6}$	
	> 100 mA ... 200 mA	20 Hz ... 40 Hz	$310 \cdot 10^{-6}$	
		> 40 Hz ... 1 kHz	$300 \cdot 10^{-6}$	
		> 1 kHz ... 5 kHz	$310 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$550 \cdot 10^{-6}$	
	> 200 mA ... 300 mA	20 Hz ... 40 Hz	$140 \cdot 10^{-6}$	
		> 40 Hz ... 1 kHz	$140 \cdot 10^{-6}$	
		> 1 kHz ... 5 kHz	$230 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$1{,}22 \cdot 10^{-3}$	
Calibration of current measurement instruments	> 300 mA ... 500 mA	20 Hz ... 40 Hz	$140 \cdot 10^{-6}$	
		> 40 Hz ... 1 kHz	$130 \cdot 10^{-6}$	
		> 1 kHz ... 5 kHz	$200 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$1{,}12 \cdot 10^{-3}$	
	> 500 mA ... 1 A	20 Hz ... 40 Hz	$110 \cdot 10^{-6}$	
		> 40 Hz ... 1 kHz	$100 \cdot 10^{-6}$	
		> 1 kHz ... 5 kHz	$160 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$1{,}05 \cdot 10^{-3}$	

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
AC Current	> 1 A ... 2,2 A	20 Hz ... 40 Hz	$100 \cdot 10^{-6}$	
		> 40 Hz ... 1 kHz	$90 \cdot 10^{-6}$	
		> 1 kHz ... 5 kHz	$130 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$990 \cdot 10^{-6}$	
	> 2,2 A ... 3 A	20 Hz ... 5 kHz	$320 \cdot 10^{-6}$	
		> 5 kHz ... 10 kHz	$260 \cdot 10^{-6}$	
	> 3 A ... 5 A	20 Hz ... 40 Hz	$160 \cdot 10^{-6}$	
		> 40 Hz ... 10 kHz	$150 \cdot 10^{-6}$	
	> 5 A ... 10 A	20 Hz ... 40 Hz	$120 \cdot 10^{-6}$	
Calibration of current measurement instruments		> 40 Hz ... 1 kHz	$110 \cdot 10^{-6}$	
		> 1 kHz ... 10 kHz	$120 \cdot 10^{-6}$	
	> 10 A ... 20 A	20 Hz ... 40 Hz	$130 \cdot 10^{-6}$	
		> 40 Hz ... 10 kHz	$120 \cdot 10^{-6}$	
	> 20 A … 100 A	10 Hz … 850 Hz	$310 \cdot 10^{-6}$	
		> 850 Hz … 3 kHz	$330 \cdot 10^{-6}$	
		> 3 kHz … 9 kHz	$380 \cdot 10^{-6}$	
	> 100 A … 240 A	10 Hz … 850 Hz	$310 \cdot 10^{-6}$	
		> 850 Hz … 6 kHz	$320 \cdot 10^{-6}$	
		> 6 kHz … 9 kHz	5,6 %	
AC Current	> 50 A … 500 A	10 Hz … 1 kHz	0,55 %	
Calibration of current clamps		> 1 kHz … 3 kHz	0,55 %	
	> 500 A … 1000 A	10 Hz … 300 Hz	0,55 %	
	> 500 A … 3000 A	300 Hz … 1 kHz	0,55 %	
Calibration of rogowski coils	100 A … 1000 A	10 Hz … 850 Hz	0,55 %	
		> 850 Hz … 3 kHz	0,55 %	
		> 3 kHz … 6 kHz	0,55 %	
	100 A … 650 A	> 6 kHz … 10 kHz	10,7 %	
	> 1 kA … 6 kA	10 Hz … 600 Hz	0,65 %	
	> 1 kA … 5,75 kA	> 600 Hz … 1 kHz	0,65 %	
	> 1 kA … 4,6 kA	> 1 kHz … 3 kHz	0,65 %	

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

SCS Directory

Accreditation number: SCS 0002

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
AC Current	> 1 kA … 1,25 kA	> 3 kHz … 6 kHz	0,65 %	
AC Power		**cos φ (c, i)**		
50 ... 60 Hz		[°]		
Calibration of power measurement instruments	10 mW ... 50,4 kW	0	613 •10-6	Uncertainty related to active power
	1 V ... 1008 V	15	615 •10-6	
	0,01 A ... 50 A	30	622 •10-6	
		45	638 •10-6	
		60	684 •10-6	
		75	895 •10-6	
		85	2087 •10-6	
	0,08 W ... 50,4 kW	0	118 •10-6	
	9,2 V ... 1008 V	15	118 •10-6	
	0,1 A ... 50 A	30	120 •10-6	
		45	125 •10-6	
		60	137 •10-6	
		75	191 •10-6	
		85	474 •10-6	
Phase angle	φ	**U_{AC}:**10 V… 1008 V **I_{AC} :**0.05 A … 5 A **Frequency:**		
	0,00° … 360°	16 … <45 Hz	0,0034°	
	0,00° … 360°	45 … 65 Hz	0,0028°	
Calibration of phase meters	0,00° … 360°	>65 … 69 Hz	0,0034°	
	0,00° … 360°	> 69 … 180 Hz	0,0072°	
	0,00° … 360°	> 180 … 450 Hz	0,018°	
	0,00° … 360°	> 450 … 850 Hz	0,033°	
	0,00° … 360°	> 0.85 … 3 kHz	0,120°	
	0,00° … 360°	> 3 kHz … 6kHz	0,230°	

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
Phase angle	φ	**U_{AC}:** 0.115 V… 1008 V **I_{AC}:** 1.25 mA … 50 A **Frequency:**		
	0,00° … 360°	16 … 69	0,010°	
	0,00° … 360°	> 69 … 180	0,017°	
Calibration of phase meters	0,00° … 360°	> 180 … 450	0,050°	
	0,00° … 360°	> 450 … 850	0,070°	
	0,00° … 360°	> 850 … 3 kHz	0,20°	
	0,00° … 360°	> 3 kHz … 6kHz	0,45°	
Phase angle	φ	**U_{AC1}:** 10 V… 1008 V **U_{AC2} :** 50 mV … 10 V **Frequency:**		
	0,00° … 360°	16 Hz … < 45 Hz	0,0034°	
	0,00° … 360°	45 Hz … 65 Hz	0,0028°	
	0,00° … 360 °	> 65 Hz … 69 Hz	0,0034°	
Calibration of phase meters	0,00° … 360°	> 69 … 180	0,0072°	
	0,00° … 360°	> 180 … 450	0,018°	
	0,00° … 360°	> 450 … 850	0,033°	
	0,00° … 360°	> 850 … 3 kHz	0,12°	
	0,00° … 360°	> 3 kHz … 6 kHz	0,23°	
Phase angle	φ	**U_{AC1}:** **0.**115 V… 1008 V **U_{AC2} :** 1.25 mV … 10 V **Frequency:**		
	0,00° … 360°	16 Hz … < 69 Hz	0,010°	
	0,00° … 360°	> 69 … 180	0,017°	
Calibration of phase meters	0,00° … 360°	> 180 … 450	0,050°	
	0,00° … 360°	> 450 … 850	0,070°	
	0,00° … 360°	> 850 … 3 kHz	0,20°	
	0,00° … 360°	> 3 kHz … 6 kHz	0,45°	

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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
Phase angle	φ	**U_{AC}**		
Measurement of phase	0° ... 360°	0,1 V...10 V 50 Hz ... 60 Hz	0,065°	Same signals
Capacitance				
Calibration of capacitances and measurement instruments	10 pF; 100 pF; 1000 pF	1 kHz	$105 \cdot 10^{-6}$	Only fix values
	10 nF; 100 nF; 1 µF; 10 µF	1 kHz	$370 \cdot 10^{-6}$	
	10 pF … < 100 pF	1 kHz	$2{,}55 \cdot 10^{-3}$	
	100 pF … < 1 nF	1 kHz	$520 \cdot 10^{-6}$	
	1 nF … < 6.4 nF	1 kHz	$310 \cdot 10^{-6}$	
	6.4 nF … < 100 nF	1 kHz	$700 \cdot 10^{-6}$	
	100 nF … < 1.6 µF	1 kHz	$760 \cdot 10^{-6}$	
	1,6 µF … < 100 µF	1 kHz	$580 \cdot 10^{-6}$	
Calibration of capacitances. Constant current charging/discharging method.	220 µF … 110 mF		$845 \cdot 10^{-6}$	
Inductance	50 µH	1 kHz	$2{,}2 \cdot 10^{-3}$	Only fix values
	100 µH	1 kHz	$1{,}4 \cdot 10^{-3}$	
	500 µH	1 kHz	$425 \cdot 10^{-6}$	
Calibration of inductances	1 mH	1 kHz	$380 \cdot 10^{-6}$	
	5 mH	1 kHz	$300 \cdot 10^{-6}$	
	10 mH	1 kHz	$290 \cdot 10^{-6}$	
	50 mH; 100 mH; 500 mH; 1 H; 5 H; 10 H	1 kHz	$280 \cdot 10^{-6}$	
Inductance	50 µH	1 kHz	$2.51 \cdot 10^{-3}$	Only fix values
	100 µH	1 kHz	$1.2 \cdot 10^{-3}$	
Calibration of inductance measurement instruments	500 µH	1 kHz	$520 \cdot 10^{-6}$	
	1 mH	1 kHz	$380 \cdot 10^{-6}$	
	5 mH	1 kHz	$300 \cdot 10^{-6}$	

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Inductance	10 mH	1 kHz	$210 \cdot 10^{-6}$	
Calibration of inductance measurement instruments	50 mH; 100 mH; 500 mH; 1 H; 5 H; 10 H	1 kHz	$285 \cdot 10^{-6}$	
Frequency				Measurement duration 24 h Amplitude 100 mV ... 1 V
Calibration of frequency counters	10 Hz ... 4 GHz		$2{,}1 \cdot 10^{-12}$	
Calibration of frequency generators	10 MHz		$1{,}16 \cdot 10^{-12}$	Measurement duration 24 h Amplitude 30 mV ... 5 V
	100 kHz ... < 1 MHz		$13 \cdot 10^{-12}$ + 10 µHz	
	1 MHz … < 10 MHz		$13 \cdot 10^{-12}$ + 100 µHz	
	10 MHz…<100 MHz		$13 \cdot 10^{-12}$ + 1 mHz	
	100 MHz…<2,7GHz		$13 \cdot 10^{-12}$ + 10 mHz	
Time interval	10 µs ... < 100 µs		$12 \cdot 10^{-12}$ + 587 ps	Amplitude 30 mV ... 5 V
	100 µs ... < 1 ms		$12 \cdot 10^{-12}$ + 587 ps	
	1 ms ... < 10 ms		$12 \cdot 10^{-12}$ + 587 ps	
	10 ms ... < 100 ms		$12 \cdot 10^{-12}$ + 587 ps	
	100 ms ... 1 s		$12 \cdot 10^{-12}$ + 587 ps	
Revolution	0.6 ... 100 U/min		$1{,}0 \cdot 10^{-6}$ + 0.03min^{-1}	Optical
	100 ... 1000 min^{-1}		$1{,}0 \cdot 10^{-6}$ + 0.11min^{-1}	
	1000 ... 10000min^{-1}		$1{,}0 \cdot 10^{-6}$ + 0.34min^{-1}	
	10 ... 100 kmin^{-1}		$1{,}0 \cdot 10^{-6}$ + 1.1 min^{-1}	
Calibration of oscilloscopes	1 mV ... 25 mV	1 kHz	$0{,}3 \cdot 10^{-3}$ + 30 µV	Into 1 MΩ
	> 25 mV … 110 mV	1 kHz	$0{,}3 \cdot 10^{-3}$ + 30 µV	
Square wave signal amplitude	> 110 mV … 2,2 V	1 kHz	$0{,}3 \cdot 10^{-3}$ + 30 µV	
	> 2,2 V … 11 V	1 kHz	$0{,}3 \cdot 10^{-3}$ + 31 µV	
	> 11 V … 130 V	1 kHz	$0{,}3 \cdot 10^{-3}$ + 302 µV	
	1 mV ... 25 mV	1 kHz	$2{,}9 \cdot 10^{-3}$ + 47 µV	Into 50 Ω
	> 25 mV … 110 mV	1 kHz	$2{,}9 \cdot 10^{-3}$ + 47 µV	
	> 110 mV … 2,2 V	1 kHz	$2{,}9 \cdot 10^{-3}$ + 47 µV	
	> 2,2 V … 6,6 V	1 kHz	$2{,}9 \cdot 10^{-3}$ + 47 µV	

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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
Time marker	0,5 ns ... 10 µs		$0{,}38 \cdot 10^{-6}$ + 29 ps	
	20 µs ... 1 ms		$0{,}38 \cdot 10^{-6}$ + 0,69 ns	
	2 ms ... 10 ms		$0{,}38 \cdot 10^{-6}$ + 1,9 ns	
	20 ms		$0{,}38 \cdot 10^{-6}$ + 3,5 ns	
	50 ms … 0,1 s		$2{,}9 \cdot 10^{-6}$ + 18 ns	
	0,2 s … 5 s		$2{,}9 \cdot 10^{-6}$ + 1,2 µs	
Risetime of oscillo-scopes	150 … < 300 ps 0.3 ... 1000 ns		33,5 % + 23 ps 4,5 % + 23 ps	Calibrator: tr=12.8 ps ±17,3ps
Risetime of pulsgen-erators	150 ... <300 ps 0.3 ... 1000 ns	50 mVpp ... 3,5 Vpp 50 mVpp ... 3,5 Vpp	6,09 % + 16 ps 2,84 % + 16 ps	Oszilloscope: tr = 78.6 ps ± 3,3 ps
			50 Ω	Unit under test:
Calibration of flat-ness of oscillo-scopes	5 mVpp ... 5 Vpp	50 kHz ... 100 MHz	4,9 % + 300 µV	50 Ω: VSWR ≤ 1,5 calibrated to U_{INC}
		>100MHz...300MHz	5,4 % + 300 µV	
		>300MHz...500MHz	6,6 % + 300 µV	
		>500MHz...600MHz	7,0 % + 300 µV	
	5 mVpp ... 3.5 Vpp	>600MHz…1,6GHz	8,5 % + 300 µV	
		>1,6GHz...2,1 GHz	9,5 % + 300 µV	
			1 MΩ ‖ 7 pF	Unit under test:
Calibration of flat-ness of oscillo-scopes	5 mVpp ... 5 Vpp	50 kHz ... 100 MHz	7,0 % + 300 µV	1 MΩ: C_{IN} ≤ 10 pF calibrated to U_{Last}
		>100MHz...200MHz	13,5 % + 300 µV	
RF Amplitude				
Calibration of oscil-loscope Calibrators	2 mVrms ... 5 Vrms	9 kHz ... 4 GHz	2.8 % + 210 pV	VSWR < 1,2 N Connector
	2 mVrms ... 5 Vrms	9 kHz ... 4 GHz	3.7 % + 210 pV	VSWR < 1,35 BNC Connector
RF Power	10nW … 63mW	9kHz … 4 GHz	5,04 % + 130 pW	VSWR < 1,2 N Stecker
RF Power	1 µW … 100 mW	9 kHz … 4 GHz	1,9 % + 37 nW	VSWR < 2
Calibration of RF Sources		> 4 GHz … 9 GHz	2,7 % … 37 nW	9kHz … 33 GHz: 3,5 mm Connector
		> 9 GHz … 25 GHz	5,2 % + 37 nW	
		> 25 GHz …35 GHz	8,8 % + 37 nW	9kHz … 40 GHz: 2,92 mm Connector
		> 35 GHz …40 GHz	5,3 % … 37 nW	

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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty ± [1)]	Remarks
RF Power Calibration of RF Power Sensors	1,26 µW…50,12mW	9kHz … 2 GHz > 2 GHz … 8 GHz > 8 GHz … 12 GHz > 12 GHz …17 GHz > 17 GHz …24 GHz > 24 GHz …27 GHz	2,4 % + 37 nW 2,5 % + 37 nW 2,9 % + 37 nW 3,0 % + 37 nW 2,8 % + 37 nW 3,2 % + 37 nW	VSWR < 1,25 2,92 mm Stecker oder 3,5 mm Stecker
Calibration of Flickemeter	P_{st}: 1, 2, 3	120 V / 230 V 50 Hz / 60 Hz 1 – 4800 CPM	0,29%	IEC 61000-4-15, Tab. 5 Ed. 1.1, 2003 Ed. 2.0, 2010

The dimensionless parts of the measurement uncertainty are relative values, referred to the measured value.

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

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