

**Accredited entity according to ČSN EN ISO/IEC 17025:2018:**

**HES, s.r.o.**  
CAB number 2273, Calibration Laboratory  
U Dráhy 411/11, 664 49 Ostopovice

**CMC for the field of measured quantity: Pressure**

Ord. number <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the measurand	Lowest stated expanded measurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work-place	
		min	unit	max	unit						
1*	Deformation manometers, pointer manometers, digital manometers, pressure converters, pressure measuring chains, pressure calibrators, barometers, aircraft pressure altimeters, pressure airspeed indicators and aircraft pressure calibrators					gas absolute pressure	7 Pa 8 Pa 12 Pa 16 Pa 20 Pa 24 Pa 32 Pa	Comparison with a standard digital manometer	TP40, TP41, TP42, TP43		
		1 kPa	to	30 kPa							
		30 kPa	to	107 kPa							
		107 kPa	to	130 kPa							
		130 kPa	to	173 kPa							
		173 kPa	to	225 kPa							
		225 kPa	to	270 kPa							
		270 kPa	to	350 kPa							
						gas negative gauge pressure	2.4 Pa 32 Pa 45 Pa	Comparison with a standard digital manometer	TP40, TP41, TP42, TP43		
		0 kPa	to	2.5 kPa							
		2.5 kPa	to	35 kPa							
		35 kPa	to	100 kPa							
						gas positive gauge pressure	2.4 Pa 0.011 %	Comparison with a standard piston manometer	TP40, TP41, TP42, TP43		
		0 kPa	to	20 kPa							
		20 kPa	to	200 kPa							
						gas positive gauge pressure	0.17 kPa 0.43 kPa	Comparison with a standard digital manometer	TP40, TP41, TP42, TP43		
		0.2 MPa	to	0.7 MPa							
		0.7 MPa	to	3.5 MPa							

**The Appendix is an integral part of  
Certificate of Accreditation No. 362/2023 of 7. 7. 2023**

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		min	unit	max	unit					
		3.5 MPa	to	20 MPa		liquid (water, alcohol, oil)	positive gauge pressure	4.7 kPa 21 kPa	Comparison with a standard digital manometer	TP40, TP41, TP42, TP43
		20 MPa	to	30 MPa						
		0 kPa	to	2.5 kPa				2.4 Pa 32 Pa		
		2.5 kPa	to	35 kPa				2.1 kPa		
		35 kPa	to	100 kPa		liquid (water, alcohol, oil)	positive gauge pressure	0.22 kPa 0.018 %	Comparison with a standard piston manometer	TP40, TP41, TP42, TP43
		0.1 MPa	to	1.2 MPa						
		1.2 MPa	to	12 MPa						
		12 MPa	to	35 MPa				21 kPa 40 kPa		
		35 MPa	to	70 MPa						

<sup>1</sup> Asterisk at the ordinal number identifies the calibrations, which the Laboratory is qualified to carry out outside the permanent laboratory premises.

<sup>2</sup> The expanded measurement uncertainty is in accordance with ILAC-P14 and EA-4/02 M a part of CMC and it is the lowest value of the respective uncertainty. If not stated otherwise, its coverage probability is approx. 95 %. If not stated otherwise, the uncertainty values stated without a unit are relative to the measured value. The uncertainty value stated herein is based on the best conditions achievable by the laboratory; the uncertainty value of a specific calibration may be higher depending on the conditions of such a calibration. For identical extreme values of adjacent ranges, the lower uncertainty value always applies.

<sup>3</sup> If the document identifying the calibration procedure is dated, only these specific procedures are used. If the document identifying the calibration procedure is not dated, the latest edition of the specified procedure is used (including any changes).

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**CMC for the field of measured quantity: Temperature**

Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the measurand	Lowest stated expanded measurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work place					
		min	unit	max	unit										
1*	Direct indicating thermometers and temperature measuring chains, electronic and analogue thermometers, resistance thermometers, thermoelectric thermometers and thermocouples	-196 °C					0.32 °C	Comparison with a standard resistance sensor in a nitrogen vessel	TP44.1						
		-80 °C	to	-30 °C			0.20 °C								
		-30 °C	to	0 °C			0.07 °C								
		0 °C	to	50 °C			0.04 °C								
		50 °C	to	140 °C			0.06 °C	Comparison with a standard resistance sensor in liquid bath.	TP44.1						
		140 °C to 300 °C					0.34 °C								
		300 °C to 600 °C					0.62 °C								
		600 °C to 1,000 °C					3.5 °C								
		-196 °C					0.3 °C	Comparison with a standard resistance sensor in a calibrating oven	TP44.1						
		-80 °C	to	-30 °C			0.15 °C								
		-30 °C	to	0 °C			0.07 °C								
		0 °C	to	50 °C			0.03 °C								
2*	Resistance temperature sensors, resistance thermometers	50 °C to 140 °C					0.06 °C	Comparison with a standard resistance sensor in liquid bath.	TP44.2						
		140 °C to 300 °C													
		-196 °C													

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		min	unit	max	unit						
		300 °C	to	600 °C			0.5 °C				
3*	Thermoelectric cells, thermocouples	600 °C	to	1,000 °C			3.5 °C				
		-196 °C					4.0 °C	Comparison with a standard resistance sensor in a nitrogen vessel	TP44.3		
		-80 °C	to	-30 °C			1.5 °C	Comparison with a standard resistance sensor in liquid bath.	TP44.3		
		-30 °C	to	0 °C			0.9 °C				
		0 °C to 140 °C					0.7 °C				
4*	Non-contact thermometers and measuring chains of non-contact thermometers, thermal cameras, infrared thermometers	140 °C to 300 °C					0.8 °C	Comparison with a standard resistance sensor in a calibrating oven	TP44.3		
		300 °C	to	600 °C			1.5 °C				
		600 °C	to	1,000 °C			1.7 °C				
		-25 °C to 0 °C					3.5 °C				
		0 °C	to	50 °C			1.9 °C	Comparison with a reference non-contact thermometer on a black body	TP44.4,		
		50 °C	to	100 °C			1.3 °C		TP44.5		
5*	Temperature / Calibration of electrical part of temperature simulators, electrical parts of temperature gauges using thermocouples:  Type B	50 °C to 100 °C					1.6 °C				
		100 °C	to	300 °C			2.0 °C				
		300 °C to 500 °C					2.5 °C				
		600 °C to 800 °C					0.44 °C	Direct generation and measurement by a calibrator, of equivalent DC voltage	TP1, TP21		

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		min	unit	max	unit					
	Type C	800	°C	to	1,000	°C	0.34 °C			
		1,000	°C	to	1,550	°C				
		1,550	°C	to	1,820	°C				
	Type E	0	°C	to	150	°C	0.30 °C			
		150	°C	to	650	°C	0.26 °C			
		650	°C	to	1,000	°C	0.31 °C			
		1,000	°C	to	1,800	°C	0.50 °C			
		1,800	°C	to	2,316	°C	0.84 °C			
	Type J	-250	°C	to	-100	°C	0.50 °C			
		-100	°C	to	-25	°C	0.16 °C			
		-25	°C	to	350	°C	0.14 °C			
		350	°C	to	650	°C	0.16 °C			
		650	°C	to	1,000	°C	0.21 °C			
	Type K	-210	°C	to	-100	°C	0.27 °C			
		-100	°C	to	-30	°C	0.16 °C			
		-30	°C	to	150	°C	0.14 °C			
		150	°C	to	760	°C	0.17 °C			
		760	°C	to	1,200	°C	0.23 °C			
	Type L	-200	°C	to	-100	°C	0.33 °C			
		-100	°C	to	-25	°C	0.18 °C			
		-25	°C	to	120	°C	0.16 °C			
		120	°C	to	1,000	°C	0.26 °C			
		1,000	°C	to	1,372	°C	0.40 °C			
		-200	°C	to	-100	°C	0.37 °C			
		-100	°C	to	800	°C	0.26 °C			
		800	°C	to	900	°C	0.17 °C			

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		min	unit	max	unit							
	Type N	-200	°C	to	-100	°C		0.40 °C				
		-100	°C	to	-25	°C						
		-25	°C	to	120	°C						
		120	°C	to	410	°C						
		410	°C	to	1,300	°C						
	Type R	0	°C	to	250	°C		0.57 °C				
		250	°C	to	400	°C						
		400	°C	to	1,000	°C						
		1,000	°C	to	1,767	°C						
	Type S	0	°C	to	250	°C		0.47 °C				
		250	°C	to	1,000	°C						
		1,000	°C	to	1,400	°C						
		1,400	°C	to	1,767	°C						
	Type T	-250	°C	to	-150	°C		0.63 °C				
		-150	°C	to	0	°C						
		0	°C	to	120	°C						
		120	°C	to	400	°C						
	Type U	-200	°C	to	0	°C		0.57 °C				
		0	°C	to	600	°C						
	RTD type Pt 385, 100 Ω	-200	°C	to	0	°C		0.05 °C				
		0	°C	to	100	°C						
		100	°C	to	300	°C						
		300	°C	to	400	°C						

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		min	unit	max	unit					
RTD type Pt 3926, 100 Ω	RTD type Pt 3916, 100 Ω	400 °C	to	630 °C			0.12 °C			
		630 °C	to	800 °C			0.23 °C			
		-200 °C	to	0 °C			0.05 °C			
		0 °C	to	100 °C			0.07 °C			
		100 °C	to	300 °C			0.09 °C			
		300 °C	to	400 °C			0.10 °C			
	RTD type Pt 385, 200 Ω	400 °C	to	630 °C			0.12 °C			
		-200 °C	to	-190 °C			0.25 °C			
		-190 °C	to	-80 °C			0.04 °C			
		-80 °C	to	0 °C			0.05 °C			
		0 °C	to	100 °C			0.06 °C			
		100 °C	to	260 °C			0.07 °C			
RTD type Pt 385, 500 Ω	RTD type Pt 385, 500 Ω	260 °C	to	300 °C			0.08 °C			
		300 °C	to	400 °C			0.09 °C			
		400 °C	to	600 °C			0.10 °C			
		600 °C	to	630 °C			0.23 °C			
		-200 °C	to	100 °C			0.04 °C			
		100 °C	to	260 °C			0.05 °C			
		260 °C	to	300 °C			0.12 °C			
		300 °C	to	400 °C			0.13 °C			
		400 °C	to	600 °C			0.14 °C			
		600 °C	to	630 °C			0.16 °C			
	RTD type Pt 385, 500 Ω	-200 °C	to	-80 °C			0.04 °C			
		-80 °C	to	100 °C			0.05 °C			
		100 °C	to	260 °C			0.06 °C			
		260 °C	to	400 °C			0.08 °C			

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		min	unit	max	unit					
	RTD type Pt 385, 1,000 Ω	400	°C	to	600	°C	0.09 °C			
		600	°C	to	630	°C	0.11 °C			
		-200	°C	to	0	°C	0.03 °C			
		0	°C	to	100	°C	0.04 °C			
		100	°C	to	260	°C	0.05 °C			
		260	°C	to	300	°C	0.06 °C			
	RTD type PtNi 385 120 Ω	300	°C	to	600	°C	0.07 °C			
		600	°C	to	630	°C	0.23 °C			
		-80	°C	to	100	°C	0.08 °C			
	Cu 427, 10 Ω	100	°C	to	260	°C	0.14 °C			
		-100	°C	to	260	°C	0.30 °C			
	Temperature / Calibration of electric part of temperature simulators using RTD sensors						Direct measurement by a multimeter, equivalent resistance measurement	TP5, TP21		
		PRT 25 Ω	-200	°C	to	0	°C			
			0	°C	to	660	°C			
		PRT 100 Ω	-200	°C	to	0	°C			
			0	°C	to	232	°C			
			232	°C	to	400	°C			
			400	°C	to	660	°C			
							0.004 °C			
							0.010 °C			
							0.003 °C			
							0.005 °C			
							0.007 °C			
							0.50 °C			

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**CMC for the field of measured quantity: Electrical quantities**

Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place
		min	unit	max	unit					
1*	DC voltage / DC voltage sources	0 mV	to	20 mV			0.20 µV	Direct measurement using a multimeter	TP1, TP21	
		20 mV	to	30 mV			0.00096 %			
		30 mV	to	40 mV			0.00079 %			
		40 mV	to	50 mV			0.00071 %			
		50 mV	to	90 mV			0.00066 %			
		90 mV	to	190 mV			0.00057 %			
		190 mV	to	300 mV			0.00051 %			
		300 mV	to	500 mV			0.00044 %			
		500 mV	to	1 V			0.00039 %			
		1 V	to	2 V			0.00035 %			
		2 V	to	3 V			0.00051 %			
		3 V	to	5 V			0.00044 %			
		5 V	to	10 V			0.00039 %			
		10 V	to	20 V			0.00035 %			
		20 V	to	30 V			0.00066 %			
		30 V	to	50 V			0.00059 %			
		50 V	to	100 V			0.00054 %			
		100 V	to	200 V			0.00050 %			
		200 V	to	250 V			0.00071 %			
		250 V	to	400 V			0.00066 %			
		400 V	to	600 V			0.00059 %			
		600 V	to	1,050 V			0.00054 %			

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		min	unit	max	unit					
	DC Voltage / DC voltage meters, electrical parts of pH meters	0 mV	to	20 mV			0.8 µV	Direct generation with a calibrator	TP1, TP21	
		20 mV	to	25 mV			0.0039 %			
		25 mV	to	30 mV			0.0033 %			
		30 mV	to	35 mV			0.0029 %			
		35 mV	to	45 mV			0.0026 %			
		45 mV	to	70 mV			0.0022 %			
		70 mV	to	100 mV			0.0017 %			
		100 mV	to	150 mV			0.0015 %			
		150 mV	to	300 mV			0.0013 %			
		300 mV	to	400 mV			0.0011 %			
		400 mV	to	500 mV			0.00097 %			
		500 mV	to	1 V			0.00092 %			
		1 V	to	1.5 V			0.00082 %			
		1.5 V	to	2.2 V			0.00079 %			
		2.2 V	to	3 V			0.00087 %			
		3 V	to	4.5 V			0.00083 %			
		4.5 V	to	9 V			0.00079 %			
		9 V	to	11 V			0.00075 %			
		11 V	to	22 V			0.00077 %			
		22 V	to	45 V			0.0012 %			
		45 V	to	60 V			0.0010 %			
		60 V	to	100 V			0.00095 %			
		100 V	to	150 V			0.00090 %			
		150 V	to	220 V			0.00087 %			
		220 V	to	350 V			0.0012 %			

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		min	unit					
		350 V	to	1,100 V		0.0011 %		
2*	AC voltage / AC voltage sources	1.2 mV	to	2 mV	10 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 20 kHz 20 kHz to 50 kHz 50 kHz to 100 kHz	4.4 µV 2.1 µV 2.3 µV 3.8 µV 13 µV	Direct measurement using a multimeter	TP2, TP21
		2 mV	to	4 mV	10 Hz to 100 Hz 100 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 50 kHz 30 kHz to 100 kHz	4.6 µV 2.5 µV 4.5 µV 6.3 µV 23 µV		
		4 mV	to	10 mV	10 Hz to 40 Hz 40 Hz to 100 Hz 100 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz	5.4 µV 5.2 µV 3.1 µV 5.1 µV 12 µV 28 µV		
		10 mV	to	15 mV	10 Hz to 40 Hz 40 Hz to 100 Hz 100 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz	6.0 µV 5.7 µV 3.6 µV 5.6 µV 13 µV 31 µV		
		15 mV	to	20 mV	10 Hz to 40 Hz 40 Hz to 100 Hz	6.7 µV 6.3 µV		

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		min	unit					
				100 Hz to 2 kHz	4.2 µV			
				2 kHz to 10 kHz	6.2 µV			
				10 kHz to 30 kHz	11 µV			
				30 kHz to 100 kHz	23 µV			
				100 kHz to 300 kHz	82 µV			
				300 kHz to 1 MHz	0.19 mV			
		20 mV	to	30 mV	10 Hz to 40 Hz 40 Hz to 100 Hz 100 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz	0.034 % 0.032 % 0.021 % 0.031 % 0.053 % 0.12 % 0.41 % 1.3 %		
		30 mV	to	50 mV	10 Hz to 40 Hz 40 Hz to 100 Hz 100 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz	0.027 % 0.025 % 0.018 % 0.024 % 0.047 % 0.11 % 0.39 % 1.3 %		
		50 mV	to	100 mV	10 Hz to 40 Hz 40 Hz to 100 Hz 100 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30 kHz	0.022 % 0.020 % 0.015 % 0.019 % 0.044 %		

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		min	unit					
				30 kHz to 100 kHz	0.11 %			
				100 kHz to 300 kHz	0.38 %			
				300 kHz to 1 MHz	1.3 %			
		100 mV to 150 mV		10 Hz to 40 Hz	0.018 %			
				40 Hz to 100 Hz	0.016 %			
				100 Hz to 2 kHz	0.013 %			
				2 kHz to 10 kHz	0.015 %			
				10 kHz to 30 kHz	0.039 %			
				30 kHz to 100 kHz	0.091 %			
				100 kHz to 300 kHz	0.45 %			
				300 kHz to 1 MHz	1.3 %			
		150 mV to 200 mV		10 Hz to 40 Hz	0.016 %			
				40 Hz to 100 Hz	0.014 %			
				100 Hz to 2 kHz	0.012 %			
				2 kHz to 10 kHz	0.014 %			
				10 kHz to 30 kHz	0.036 %			
				30 kHz to 100 kHz	0.084 %			
				100 kHz to 300 kHz	0.43 %			
				300 kHz to 1 MHz	1.3 %			
		200 mV to 300 mV		10 Hz to 40 Hz	0.021 %			
				40 Hz to 100 Hz	0.019 %			
				100 Hz to 2 kHz	0.017 %			
				2 kHz to 10 kHz	0.019 %			
				10 kHz to 30 kHz	0.041 %			
				30 kHz to 100 kHz	0.11 %			
				100 kHz to 300 kHz	0.41 %			
				300 kHz to 1 MHz	1.3 %			

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U Dráhy 411/11, 664 49 Ostopovice

Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place
		min	unit					
		300 mV	to	500 mV	10 Hz to 40 Hz 40 Hz to 100 Hz 100 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz	0.018 % 0.016 % 0.014 % 0.016 % 0.034 % 0.11 % 0.39 % 1.3 %		
		500 mV	to	1 V	10 Hz to 40 Hz 40 Hz to 100 Hz 100 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz	0.015 % 0.013 % 0.011 % 0.013 % 0.029 % 0.091 % 0.38 % 1.2 %		
		1 V	to	1.5 V	10 Hz to 40 Hz 40 Hz to 100 Hz 100 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz	0.013 % 0.011 % 0.0086 % 0.011 % 0.025 % 0.071 % 0.45 % 1.3 %		
		1.5 V	to	2 V	10 Hz to 40 Hz 40 Hz to 100 Hz 100 Hz to 2 kHz	0.012 % 0.0099 % 0.0079 %		

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		min	unit					
				2 kHz to 10 kHz	0.010 %			
				10 kHz to 30 kHz	0.024 %			
				30 kHz to 100 kHz	0.065 %			
				100 kHz to 300 kHz	0.43 %			
				300 kHz to 1 MHz	1.3 %			
		2 V to 3 V		10 Hz to 40 Hz	0.021 %			
				40 Hz to 100 Hz	0.019 %			
				100 Hz to 2 kHz	0.017 %			
				2 kHz to 10 kHz	0.019 %			
				10 kHz to 30 kHz	0.041 %			
				30 kHz to 100 kHz	0.11 %			
				100 kHz to 300 kHz	0.41 %			
				300 kHz to 1 MHz	1.3 %			
		3 V to 5 V		10 Hz to 40 Hz	0.018 %			
				40 Hz to 100 Hz	0.016 %			
				100 Hz to 2 kHz	0.014 %			
				2 kHz to 10 kHz	0.016 %			
				10 kHz to 30 kHz	0.034 %			
				30 kHz to 100 kHz	0.11 %			
				100 kHz to 300 kHz	0.39 %			
				300 kHz to 1 MHz	1.3 %			
		5 V to 10 V		10 Hz to 40 Hz	0.015 %			
				40 Hz to 100 Hz	0.013 %			
				100 Hz to 2 kHz	0.011 %			
				2 kHz to 10 kHz	0.013 %			
				10 kHz to 30 kHz	0.029 %			
				30 kHz to 100 kHz	0.091 %			

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		min	unit					
				100 kHz to 300 kHz	0.38 %			
				300 kHz to 1 MHz	1.2 %			
		10 V	to	15 V	10 Hz to 40 Hz 40 Hz to 100 Hz 100 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz	0.013 % 0.011 % 0.0086 % 0.011 % 0.025 % 0.071 % 0.51 % 3.1 %		
		15 V	to	20 V	10 Hz to 40 Hz 40 Hz to 100 Hz 100 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz	0.012 % 0.0099 % 0.0079 % 0.010 % 0.024 % 0.065 % 0.44 % 2.4 %		
		20 V	to	30 V	10 Hz to 40 Hz 40 Hz to 100 Hz 100 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz	0.021% 0.019 % 0.017 % 0.019 % 0.041 % 0.16 %		
		30 V	to	50 V	10 Hz to 40 Hz 40 Hz to 100 Hz 100 Hz to 2 kHz	0.018 % 0.016 % 0.014 %		

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		min	unit					
				2 kHz to 10 kHz	0.016 %			
				10 kHz to 30 kHz	0.034 %			
				30 kHz to 100 kHz	0.12 %			
		50 V	to	100 V	10 Hz to 40 Hz	0.015 %		
					40 Hz to 100 Hz	0.013 %		
					100 Hz to 2 kHz	0.011 %		
					2 kHz to 10 kHz	0.013 %		
					10 kHz to 30 kHz	0.029 %		
					30 kHz to 100 kHz	0.091 %		
		100 V	to	150 V	10 Hz to 40 Hz	0.013 %		
					40 Hz to 100 Hz	0.011 %		
					100 Hz to 2 kHz	0.0086 %		
					2 kHz to 10 kHz	0.011 %		
					10 kHz to 30 kHz	0.025 %		
					30 kHz to 100 kHz	0.071 %		
		150 V	to	200 V	10 Hz to 40 Hz	0.012 %		
					40 Hz to 100 Hz	0.0099 %		
					100 Hz to 2 kHz	0.0079 %		
					2 kHz to 10 kHz	0.010 %		
					10 kHz to 30 kHz	0.024 %		
					30 kHz to 100 kHz	0.065 %		
		200 V	to	300 V	40 Hz to 10 kHz	0.020 %		
					10 kHz to 30 kHz	0.041 %		
					30 kHz to 100 kHz	0.11 %		
		300 V	to	400 V	40 Hz to 10 kHz	0.017 %		
					10 kHz to 30 kHz	0.034 %		
					30 kHz to 100 kHz	0.077 %		

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		min	unit					
		400	V	to	500	V	40 Hz to 10 kHz	0.016 %
					10	kHz	10 kHz to 20 kHz	0.035 %
					20	kHz	20 kHz to 30 kHz	0.039 %
					30	kHz	30 kHz to 100 kHz	0.063 %
		500	V	to	600	V	40 Hz to 10 kHz	0.017 %
					10	kHz	10 kHz to 20 kHz	0.040 %
					20	kHz	20 kHz to 30 kHz	0.049 %
					30	kHz	30 kHz to 100 kHz	0.065 %
		600	V	to	700	V	40 Hz to 10 kHz	0.019 %
					10	kHz	10 kHz to 20 kHz	0.049 %
					20	kHz	20 kHz to 30 kHz	0.065 %
					30	kHz	30 kHz to 100 kHz	0.077 %
		700	V	to	800	V	40 Hz to 10 kHz	0.023 %
					10	kHz	10 kHz to 20 kHz	0.061 %
					20	kHz	20 kHz to 30 kHz	0.086 %
					30	kHz	30 kHz to 100 kHz	0.095 %
		800	V	to	900	V	40 Hz to 10 kHz	0.027 %
					10	kHz	10 kHz to 20 kHz	0.076 %
					20	kHz	20 kHz to 100 kHz	0.12 %
		900	V	to	1,000	V	40 Hz to 10 kHz	0.032 %
					10	kHz	10 kHz to 20 kHz	0.094 %
					20	kHz	20 kHz to 100 kHz	0.15 %
		1,000	V	to	1,050	V	40 Hz to 10 kHz	0.034 %
					10	kHz	10 kHz to 20 kHz	0.11 %
					20	kHz	20 kHz to 100 kHz	0.16 %

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		min	unit					
AC voltage / DC voltage meters	0.22 mV to 0.5 mV	10 Hz to 50 kHz		4.9 µV	Direct generation with a calibrator	TP2, TP21		
		50 kHz to 100 kHz		7.6 µV				
	0.5 mV to 1 mV	10 Hz to 20 Hz		5.5 µV				
		20 Hz to 40 Hz		5.2 µV				
		40 Hz to 20 kHz		5.1 µV				
		20 kHz to 50 kHz		5.3 µV				
		50 kHz to 100 kHz		8.5 µV				
	1 mV to 2.2 mV	10 Hz to 20 Hz		5.9 µV				
		20 Hz to 20 kHz		5.2 µV				
		20 kHz to 50 kHz		5.6 µV				
		50 kHz to 100 kHz		9.1 µV				
		100 kHz to 300 kHz		16 µV				
		300 kHz to 500 kHz		30 µV				
		500 kHz to 1 MHz		34 µV				
	2.2 mV to 3 mV	10 Hz to 20 Hz		6.8 µV				
		20 Hz to 40 Hz		5.8 µV				
		40 Hz to 20 kHz		5.5 µV				
		20 kHz to 50 kHz		6.3 µV				
		50 kHz to 100 kHz		9.7 µV				
		100 kHz to 300 kHz		16 µV				
		300 kHz to 500 kHz		31 µV				
		500 kHz to 1 MHz		36 µV				
	3 mV to 5 mV	10 Hz to 20 Hz		8.0 µV				
		20 Hz to 40 Hz		6.4 µV				
		40 Hz to 20 kHz		5.9 µV				
		20 kHz to 50 kHz		7.1 µV				

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		min	unit					
				50 kHz to 100 kHz	12 µV			
				100 kHz to 300 kHz	18 µV			
				300 kHz to 500 kHz	35 µV			
				500 kHz to 1 MHz	43 µV			
		5 mV to 10 mV		10 Hz to 20 Hz	12 µV			
				20 Hz to 40 Hz	8.0 µV			
				40 Hz to 20 kHz	7.1 µV			
				20 kHz to 50 kHz	9.4 µV			
				50 kHz to 100 kHz	17 µV			
				100 kHz to 300 kHz	25 µV			
				300 kHz to 500 kHz	44 µV			
				500 kHz to 1 MHz	61 µV			
		10 mV to 15 mV		10 Hz to 20 Hz	14 µV			
				20 Hz to 40 Hz	8.8 µV			
				40 Hz to 20 kHz	7.3 µV			
				20 kHz to 50 kHz	12 µV			
				50 kHz to 100 kHz	21 µV			
				100 kHz to 300 kHz	31 µV			
				300 kHz to 500 kHz	54 µV			
				500 kHz to 1 MHz	78 µV			
		15 mV to 22 mV		10 Hz to 20 Hz	18 µV			
				20 Hz to 40 Hz	10 µV			
				40 Hz to 20 kHz	7.7 µV			
				20 kHz to 50 kHz	14 µV			
				50 kHz to 100 kHz	27 µV			
				100 kHz to 300 kHz	39 µV			
				300 kHz to 500 kHz	67 µV			

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		min	unit					
				500 kHz to 1 MHz	0.11 mV			
		22 mV	to	30 mV	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 20 kHz 20 kHz to 50 kHz 50 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 500 kHz 500 kHz to 1 MHz	0.12 % 0.059 % 0.048 % 0.072 % 0.21 % 0.24 % 0.35 % 0.72 %		
		30 mV	to	50 mV	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 20 kHz 20 kHz to 50 kHz 50 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 500 kHz 500 kHz to 1 MHz	0.099 % 0.049 % 0.039 % 0.062 % 0.18 % 0.21 % 0.31 % 0.62 %		
		50 mV	to	100 mV	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 20 kHz 20 kHz to 50 kHz 50 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 500 kHz 500 kHz to 1 MHz	0.082 % 0.039 % 0.029 % 0.052 % 0.15 % 0.18 % 0.27 % 0.51 %		
		100 mV	to	150 mV	10 Hz to 20 Hz 20 Hz to 40 Hz	0.069 % 0.031 %		

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		min	unit					
				40 Hz to 20 kHz	0.021%			
				20 kHz to 50 kHz	0.045 %			
				50 kHz to 100 kHz	0.12 %			
				100 kHz to 300 kHz	0.15 %			
				300 kHz to 500 kHz	0.23 %			
				500 kHz to 1 MHz	0.44 %			
		150 mV	to	220 mV	10 Hz to 20 Hz	0.065 %		
					20 Hz to 40 Hz	0.028 %		
					40 Hz to 20 kHz	0.017 %		
					20 kHz to 50 kHz	0.039 %		
					50 kHz to 100 kHz	0.11 %		
					100 kHz to 300 kHz	0.13 %		
					300 kHz to 500 kHz	0.21 %		
					500 kHz to 1 MHz	0.41 %		
		220 mV	to	300 mV	10 Hz to 20 Hz	0.087 %		
					20 Hz to 40 Hz	0.028 %		
					40 Hz to 20 kHz	0.011 %		
					20 kHz to 50 kHz	0.020 %		
					50 kHz to 100 kHz	0.058 %		
					100 kHz to 300 kHz	0.11 %		
					300 kHz to 500 kHz	0.28 %		
					500 kHz to 1 MHz	0.61 %		
		300 mV	to	500 mV	10 Hz to 20 Hz	0.078 %		
					20 Hz to 40 Hz	0.025 %		
					40 Hz to 20 kHz	0.010 %		
					20 kHz to 50 kHz	0.018 %		
					50 kHz to 100 kHz	0.049 %		

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		min	unit					
				100 kHz to 300 kHz	0.088 %			
				300 kHz to 500 kHz	0.23 %			
				500 kHz to 1 MHz	0.51 %			
		500 mV to 1 V		10 Hz to 20 Hz	0.067 %			
				20 Hz to 40 Hz	0.022 %			
				40 Hz to 20 kHz	0.0092 %			
				20 kHz to 50 kHz	0.016 %			
				50 kHz to 100 kHz	0.040 %			
				100 kHz to 300 kHz	0.071 %			
				300 kHz to 500 kHz	0.19 %			
				500 kHz to 1 MHz	0.40 %			
		1 V to 1.5 V		10 Hz to 20 Hz	0.059 %			
				20 Hz to 40 Hz	0.019 %			
				40 Hz to 20 kHz	0.0086 %			
				20 kHz to 50 kHz	0.015 %			
				50 kHz to 100 kHz	0.033 %			
				100 kHz to 300 kHz	0.058 %			
				300 kHz to 500 kHz	0.16 %			
				500 kHz to 1 MHz	0.32 %			
		1.5 V to 2.2 V		10 Hz to 20 Hz	0.056 %			
				20 Hz to 40 Hz	0.019 %			
				40 Hz to 20 kHz	0.0084 %			
				20 kHz to 50 kHz	0.014 %			
				50 kHz to 100 kHz	0.030 %			
				100 kHz to 300 kHz	0.053 %			
				300 kHz to 500 kHz	0.15 %			
				500 kHz to 1 MHz	0.29 %			

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		min	unit					
		2.2 V	to	3 V	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 20 kHz 20 kHz to 50 kHz 50 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 500 kHz 500 kHz to 1 MHz	0.087 % 0.028 % 0.011 % 0.020 % 0.042 % 0.12 % 0.33 % 0.67 %		
		3 V	to	5 V	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 20 kHz 20 kHz to 50 kHz 50 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 500 kHz 500 kHz to 1 MHz	0.078 % 0.025 % 0.099 % 0.018 % 0.030 % 0.11 % 0.28 % 0.56 %		
		5 V	to	10 V	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 20 kHz 20 kHz to 50 kHz 50 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 500 kHz 500 kHz to 1 MHz	0.067 % 0.022 % 0.0091 % 0.016 % 0.033 % 0.081 % 0.23 % 0.45 %		
		10 V	to	15 V	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 20 kHz	0.059 % 0.019 % 0.0086 %		

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		min	unit					
				20 kHz to 50 kHz	0.014 %			
				50 kHz to 100 kHz	0.029 %			
				100 kHz to 300 kHz	0.066 %			
				300 kHz to 500 kHz	0.19 %			
				500 kHz to 1 MHz	0.37 %			
		15 V	to	22 V	10 Hz to 20 Hz	0.056 %		
					20 Hz to 40 Hz	0.019 %		
					40 Hz to 20 kHz	0.087 %		
					20 kHz to 50 kHz	0.014 %		
					50 kHz to 100 kHz	0.029 %		
					100 kHz to 300 kHz	0.061 %		
					300 kHz to 500 kHz	0.18 %		
					500 kHz to 1 MHz	0.34 %		
		22 V	to	30 V	10 Hz to 20 Hz	0.087 %		
					20 Hz to 40 Hz	0.028 %		
					40 Hz to 20 kHz	0.013 %		
					20 kHz to 50 kHz	0.039 %		
					50 kHz to 100 kHz	0.087 %		
		30 V	to	50 V	10 Hz to 20 Hz	0.078 %		
					20 Hz to 40 Hz	0.025 %		
					40 Hz to 20 kHz	0.012 %		
					20 kHz to 50 kHz	0.034 %		
					50 kHz to 100 kHz	0.078 %		
		50 V	to	100 V	10 Hz to 20 Hz	0.067 %		
					20 Hz to 40 Hz	0.022 %		
					40 Hz to 20 kHz	0.011 %		
					20 kHz to 50 kHz	0.030 %		

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		min	unit					
				50 kHz to 100 kHz	0.067 %			
		100 V	to	150 V	10 Hz to 20 Hz	0.059 %		
					20 Hz to 40 Hz	0.019 %		
					40 Hz to 20 kHz	0.010 %		
					20 kHz to 50 kHz	0.026 %		
					50 kHz to 100 kHz	0.059 %		
		150 V	to	220 V	10 Hz to 20 Hz	0.057 %		
					20 Hz to 40 Hz	0.019 %		
					40 Hz to 20 kHz	0.011 %		
					20 kHz to 50 kHz	0.027 %		
		220 V	to	300 V	50 kHz to 100 kHz	0.065 %		
				10 Hz to 50 Hz	0.030 %			
				50 Hz to 1 kHz	0.012 %			
				1 kHz to 10 kHz	0.026 %			
				10 kHz to 30 kHz	0.042 %			
		300 V	to	400 V	10 Hz to 50 Hz	0.030 %		
				50 Hz to 1 kHz	0.012 %			
				1 kHz to 10 kHz	0.026 %			
				10 kHz to 30 kHz	0.042 %			
		400 V	to	500 V	10 Hz to 50 Hz	0.028 %		
				50 Hz to 1 kHz	0.012 %			
				1 kHz to 10 kHz	0.025 %			
				10 kHz to 30 kHz	0.045 %			
		500 V	to	600 V	10 Hz to 50 Hz	0.027 %		
				50 Hz to 1 kHz	0.011 %			
				1 kHz to 10 kHz	0.023 %			
				10 kHz to 30 kHz	0.053 %			

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		min	unit					
		600 V	to	700 V	10 Hz to 50 Hz	0.028 %		
					50 Hz to 1 kHz	0.012 %		
					1 kHz to 10 kHz	0.025 %		
					10 kHz to 30 kHz	0.068 %		
		700 V	to	800 V	10 Hz to 50 Hz	0.030 %		
					50 Hz to 1 kHz	0.011 %		
					1 kHz to 10 kHz	0.028 %		
					10 kHz to 30 kHz	0.089 %		
		800 V	to	1,050 V	10 Hz to 50 Hz	0.040 %		
					50 Hz to 1 kHz	0.010 %		
					1 kHz to 10 kHz	0.038 %		
					10 kHz to 30 kHz	0.17 %		
3*	DC current / DC current sources	0 nA	to	1 µA		0.42 nA	Direct measurement with a multimeter or indirect measurement with a current shunt	TP3, TP21
		1 µA	to	5 µA		0.47 nA		
		5 µA	to	10 µA		0.53 nA		
		10 µA	to	15 µA		0.59 nA		
		15 µA	to	20 µA		0.65 nA		
		20 µA	to	30 µA		0.0033 %		
		30 µA	to	50 µA		0.0026 %		
		50 µA	to	60 µA		0.0021 %		
		60 µA	to	90 µA		0.0019 %		
		90 µA	to	140 µA		0.0017 %		
		140 µA	to	200 µA		0.0015 %		
		200 µA	to	250 µA		0.0033 %		

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		min	unit					
		250	µA	to	300	µA		0.0029 %
		300	µA	to	400	µA		0.0026 %
		400	µA	to	500	µA		0.0023 %
		500	µA	to	600	µA		0.0021 %
		600	µA	to	900	µA		0.0019 %
		900	µA	to	1.1	mA		0.0017 %
		1.1	mA	to	2	mA		0.0016 %
		2	mA	to	2.5	mA		0.0034 %
		2.5	mA	to	3	mA		0.0030 %
		3	mA	to	4	mA		0.0027 %
		4	mA	to	5	mA		0.0024 %
		5	mA	to	6	mA		0.0022 %
		6	mA	to	9	mA		0.0020 %
		9	mA	to	11	mA		0.0018 %
		11	mA	to	20	mA		0.0017 %
		20	mA	to	25	mA		0.0077 %
		25	mA	to	30	mA		0.0069 %
		30	mA	to	40	mA		0.0064 %
		40	mA	to	50	mA		0.0057 %
		50	mA	to	60	mA		0.0053 %
		60	mA	to	70	mA		0.0050 %
		70	mA	to	90	mA		0.0048 %
		90	mA	to	100	mA		0.0046 %
		100	mA	to	130	mA		0.0045 %
		130	mA	to	190	mA		0.0043 %
		190	mA	to	200	mA		0.0041 %
		200	mA	to	250	mA		0.026 %

**The Appendix is an integral part of  
Certificate of Accreditation No. 362/2023 of 7. 7. 2023**

**Accredited entity according to ČSN EN ISO/IEC 17025:2018:**

**HES, s.r.o.**  
CAB number 2273, Calibration Laboratory  
U Dráhy 411/11, 664 49 Ostopovice

Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place
		min	unit					
	DC current / DC current meters	250 mA	to	300 mA	0.024 % 0.023 % 0.022 % 0.020 % 0.019 % 0.018 % 0.020 % 0.040 % 0.2 % 0.3 %		Direct generation with a calibrator	TP3, TP21
		300 mA	to	400 mA				
		400 mA	to	600 mA				
		600 mA	to	900 mA				
		900 mA	to	1.7 A				
		1.7 A	to	2 A				
		2 A	to	60 A				
		60 A	to	200 A				
		200 A	to	300 A				
		300 A	to	600 A				

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		min	unit					
		700	µA	to	800 µA	0.0063 %		
		800	µA	to	1 mA	0.0061 %		
		1	mA	to	1.3 mA	0.0059 %		
		1.3	mA	to	1.9 mA	0.0057 %		
		1.9	mA	to	2.2 mA	0.0055 %		
		2.2	mA	to	3 mA	0.0088 %		
		3	mA	to	4 mA	0.0078 %		
		4	mA	to	5 mA	0.0071 %		
		5	mA	to	6 mA	0.0067 %		
		6	mA	to	7 mA	0.0065 %		
		7	mA	to	8 mA	0.0063 %		
		8	mA	to	10 mA	0.0061 %		
		10	mA	to	13 mA	0.0059 %		
		13	mA	to	19 mA	0.0057 %		
		19	mA	to	22 mA	0.0055 %		
		22	mA	to	30 mA	0.0098 %		
		30	mA	to	40 mA	0.0088 %		
		40	mA	to	50 mA	0.0082 %		
		50	mA	to	60 mA	0.0077 %		
		60	mA	to	70 mA	0.0075 %		
		70	mA	to	80 mA	0.0073 %		
		80	mA	to	180 mA	0.0072 %		
		180	mA	to	220 mA	0.0075 %		
		220	mA	to	300 mA	0.020 %		
		300	mA	to	400 mA	0.017 %		
		400	mA	to	600 mA	0.015 %		
		600	mA	to	900 mA	0.013 %		

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		min	unit					
		900 mA	to	1 A	0.011 % 0.012 % 0.013 % 0.014 % 0.015 % 0.044 % 0.041 % 0.038 % 0.037 % 0.036 % 0.035 % 0.034 % 0.033 % 0.043 %			
		1 A	to	1.4 A				
		1.4 A	to	1.8 A				
		1.8 A	to	2 A				
		2 A	to	2.2 A				
		2.2 A	to	3 A				
		3 A	to	4 A				
		4 A	to	5 A				
		5 A	to	6 A				
		6 A	to	7 A				
		7 A	to	8 A				
		8 A	to	11 A				
		11 A	to	20.2 A				
		20.2 A	to	23 A				
		23 A	to	30 A				
		30 A	to	1,000 A	0.4 %	Indirect generation with a current coil calibrator	TP3, TP21	
4*	AC current / AC current sources	10 µA	to	20 µA				
		20 µA	to	30 µA	10 Hz to 10 kHz	30 nA 0.15 % 0.12 % 0.098 % 0.088 % 0.081 %	Direct measurement with a multimeter or indirect measurement with a current shunt, current transformer	TP4, TP21
		30 µA	to	40 µA	10 Hz to 10 kHz			
		40 µA	to	50 µA	10 Hz to 10 kHz			
		50 µA	to	60 µA	10 Hz to 10 kHz			
		60 µA	to	70 µA	10 Hz to 10 kHz			

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		min	unit					
		70 µA	to	80 µA	10 Hz to 10 kHz	0.077 %		
		80 µA	to	90 mA	10 Hz to 10 kHz	0.073 %		
		90 µA	to	100 µA	10 Hz to 10 kHz	0.070 %		
		100 µA	to	110 µA	10 Hz to 10 kHz	0.068 %		
		110 µA	to	130 µA	10 Hz to 10 kHz	0.066 %		
		130 µA	to	150 µA	10 Hz to 10 kHz	0.063 %		
		150 µA	to	180 µA	10 Hz to 10 kHz	0.061 %		
		180 µA	to	200 µA	10 Hz to 10 kHz	0.059 %		
		200 µA	to	250 µA	10 Hz to 10 kHz	0.13 %		
		250 µA	to	300 µA	10 Hz to 10 kHz	0.11 %		
		300 µA	to	400 µA	10 Hz to 10 kHz	0.095 %		
		400 µA	to	500 µA	10 Hz to 10 kHz	0.079 %		
		500 µA	to	600 µA	10 Hz to 10 kHz	0.069 %		
		600 µA	to	700 µA	10 Hz to 10 kHz	0.062 %		
		700 µA	to	800 µA	10 Hz to 10 kHz	0.057 %		
		800 µA	to	900 µA	10 Hz to 10 kHz	0.054 %		
		900 µA	to	1 mA	10 Hz to 10 kHz	0.051 %		
		1 mA	to	1.1 mA	10 Hz to 10 kHz	0.049 %		
		1.1 mA	to	1.2 mA	10 Hz to 10 kHz	0.047 %		
		1.2 mA	to	1.4 mA	10 Hz to 10 kHz	0.045 %		
		1.4 mA	to	1.6 mA	10 Hz to 10 kHz	0.043 %		
		1.6 mA	to	1.9 mA	10 Hz to 10 kHz	0.041 %		
		1.9 mA	to	2 mA	10 Hz to 10 kHz	0.039 %		
		2 mA	to	2.5 mA	10 Hz to 10 kHz	0.13 %		
		2.5 mA	to	3 mA	10 Hz to 10 kHz	0.11 %		
		3 mA	to	4 mA	10 Hz to 10 kHz	0.095 %		
		4 mA	to	5 mA	10 Hz to 10 kHz	0.079 %		

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		min	unit					
		5 mA	to	6 mA	10 Hz to 10 kHz	0.069 %		
		6 mA	to	7 mA	10 Hz to 10 kHz	0.062 %		
		7 mA	to	8 mA	10 Hz to 10 kHz	0.057 %		
		8 mA	to	9 mA	10 Hz to 10 kHz	0.054 %		
		9 mA	to	10 mA	10 Hz to 10 kHz	0.051 %		
		10 mA	to	11 mA	10 Hz to 10 kHz	0.049 %		
		11 mA	to	12 mA	10 Hz to 10 kHz	0.047 %		
		12 mA	to	14 mA	10 Hz to 10 kHz	0.045 %		
		14 mA	to	16 mA	10 Hz to 10 kHz	0.043 %		
		16 mA	to	19 mA	10 Hz to 10 kHz	0.041 %		
		19 mA	to	20 mA	10 Hz to 10 kHz	0.039 %		
		20 mA	to	25 mA	10 Hz to 10 kHz	0.13 %		
		25 mA	to	30 mA	10 Hz to 10 kHz	0.11 %		
		30 mA	to	40 mA	10 Hz to 10 kHz	0.092 %		
		40 mA	to	50 mA	10 Hz to 10 kHz	0.076 %		
		50 mA	to	60 mA	10 Hz to 10 kHz	0.066 %		
		60 mA	to	70 mA	10 Hz to 10 kHz	0.059 %		
		70 mA	to	80 mA	10 Hz to 10 kHz	0.054 %		
		80 mA	to	90 mA	10 Hz to 10 kHz	0.051 %		
		90 mA	to	100 mA	10 Hz to 10 kHz	0.048 %		
		100 mA	to	110 mA	10 Hz to 10 kHz	0.046 %		
		110 mA	to	120 mA	10 Hz to 10 kHz	0.044 %		
		120 mA	to	140 mA	10 Hz to 10 kHz	0.042 %		
		140 mA	to	160 mA	10 Hz to 10 kHz	0.040 %		
		160 mA	to	190 mA	10 Hz to 10 kHz	0.038 %		
		190 mA	to	200 mA	10 Hz to 10 kHz	0.036 %		
		200 mA	to	250 mA	10 Hz to 2 kHz	0.17 %		

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		min	unit					
		250 mA	to	300 mA	2 kHz to 10 kHz 10 Hz to 2 kHz 2 kHz to 10 kHz	0.18 % 0.15 % 0.16 %		
		300 mA	to	400 mA	10 Hz to 2 kHz 2 kHz to 10 kHz	0.13 % 0.14 %		
		400 mA	to	500 mA	10 Hz to 2 kHz 2 kHz to 10 kHz	0.12 % 0.13 %		
		500 mA	to	600 mA	10 Hz to 2 kHz 2 kHz to 10 kHz	0.11 % 0.12 %		
		600 mA	to	700 mA	10 Hz to 2 kHz 2 kHz to 10 kHz	0.094 % 0.11 %		
		700 mA	to	800 mA	10 Hz to 2 kHz 2 kHz to 10 kHz	0.089 % 0.099 %		
		800 mA	to	900 mA	10 Hz to 2 kHz 2 kHz to 10 kHz	0.086 % 0.096 %		
		900 mA	to	1 A	10 Hz to 2 kHz 2 kHz to 10 kHz	0.083 % 0.093 %		
		1 A	to	1.1 A	10 Hz to 2 kHz 2 kHz to 10 kHz	0.081 % 0.091 %		
		1.1 A	to	1.2 A	10 Hz to 2 kHz 2 kHz to 10 kHz	0.079 % 0.089 %		
		1.2 A	to	1.3 A	10 Hz to 2 kHz 2 kHz to 10 kHz	0.077 % 0.087 %		
		1.3 A	to	1.4 A	10 Hz to 2 kHz 2 kHz to 10 kHz	0.076 % 0.087 %		
		1.4 A	to	1.5 A	10 Hz to 2 kHz 2 kHz to 10 kHz	0.076 % 0.085 %		

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Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place
		min	unit					
		1.5 A	to	1.6 A	10 Hz to 2 kHz	0.074 %		
					2 kHz to 10 kHz	0.085 %		
		1.6 A	to	1.7 A	10 Hz to 2 kHz	0.074 %		
					2 kHz to 10 kHz	0.083 %		
		1.7 A	to	2 A	10 Hz to 2 kHz	0.072 %		
					2 kHz to 10 kHz	0.083 %		
		2 A	to	2.5 A	10 Hz to 2 kHz	0.19 %		
					2 kHz to 10 kHz	0.36 %		
		2.5 A	to	3 A	10 Hz to 2 kHz	0.16 %		
					2 kHz to 10 kHz	0.34 %		
		3 A	to	4 A	10 Hz to 2 kHz	0.15 %		
					2 kHz to 10 kHz	0.32 %		
		4 A	to	5 A	10 Hz to 2 kHz	0.14 %		
					2 kHz to 10 kHz	0.31 %		
		5 A	to	6 A	10 Hz to 2 kHz	0.13 %		
					2 kHz to 10 kHz	0.30 %		
		6 A	to	7 A	10 Hz to 2 kHz	0.12 %		
					2 kHz to 10 kHz	0.29 %		
		7 A	to	11 A	10 Hz to 2 kHz	0.11 %		
					2 kHz to 10 kHz	0.28 %		
		11 A	to	20 A	10 Hz to 2 kHz	0.10 %		
					2 kHz to 10 kHz	0.27 %		
		2 A	to	4 A	50 Hz	0.12 %		
					50 Hz	0.05 %		
		4 A	to	10 A				
		10 A	to	1,200 A	50 Hz	0.04 %		

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		min	unit					
	AC current / AC current meters	10 µA	to	20 µA	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	40 nA 28 nA 18 nA 47 nA 97 nA	Direct generation with a calibrator	TP4, TP21
		20 µA	to	30 µA	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.20 % 0.14 % 0.095 % 0.26 % 0.57 %		
		30 µA	to	40 µA	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.16 % 0.11 % 0.069 % 0.20 % 0.43 %		
		40 µA	to	50 µA	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.14 % 0.086 % 0.055 % 0.17 % 0.37 %		
		50 µA	to	60 µA	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.13 % 0.076 % 0.048 % 0.15 % 0.33 %		
		60 µA	to	80 µA	10 Hz to 20 Hz	0.12 %		

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		min	unit					
				20 Hz to 40 Hz	0.070 %			
				40 Hz to 1 kHz	0.042 %			
				1 kHz to 5 kHz	0.13 %			
				5 kHz to 10 kHz	0.30 %			
		80 µA	to	100 µA	10 Hz to 20 Hz	0.099 %		
					20 Hz to 40 Hz	0.061 %		
					40 Hz to 1 kHz	0.036 %		
					1 kHz to 5 kHz	0.12 %		
					5 kHz to 10 kHz	0.27 %		
		100 µA	to	130 µA	10 Hz to 20 Hz	0.096 %		
					20 Hz to 40 Hz	0.056 %		
					40 Hz to 1 kHz	0.032 %		
					1 kHz to 5 kHz	0.11 %		
					5 kHz to 10 kHz	0.25 %		
		130 µA	to	180 µA	10 Hz to 20 Hz	0.090 %		
					20 Hz to 40 Hz	0.052 %		
					40 Hz to 1 kHz	0.029 %		
					1 kHz to 5 kHz	0.092 %		
					5 kHz to 10 kHz	0.23 %		
		180 µA	to	220 µA	10 Hz to 20 Hz	0.085 %		
					20 Hz to 40 Hz	0.048 %		
					40 Hz to 1 kHz	0.025 %		
					1 kHz to 5 kHz	0.084 %		
					5 kHz to 10 kHz	0.21 %		
		220 µA	to	300 µA	10 Hz to 20 Hz	0.089 %		
					20 Hz to 40 Hz	0.052 %		
					40 Hz to 1 kHz	0.032 %		

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		min	unit					
				1 kHz to 5 kHz	0.25 %			
				5 kHz to 10 kHz	0.53 %			
		300 µA	to	400 µA	10 Hz to 20 Hz	0.084 %		
					20 Hz to 40 Hz	0.048 %		
					40 Hz to 1 kHz	0.028 %		
					1 kHz to 5 kHz	0.20 %		
					5 kHz to 10 kHz	0.43 %		
		400 µA	to	500 µA	10 Hz to 20 Hz	0.081 %		
					20 Hz to 40 Hz	0.045 %		
					40 Hz to 1 kHz	0.025 %		
					1 kHz to 5 kHz	0.17 %		
		500 µA	to	600 µA	5 kHz to 10 kHz	0.37 %		
					10 Hz to 20 Hz	0.079 %		
					20 Hz to 40 Hz	0.044 %		
					40 Hz to 1 kHz	0.023 %		
					1 kHz to 5 kHz	0.15 %		
		600 µA	to	800 µA	5 kHz to 10 kHz	0.33 %		
					10 Hz to 20 Hz	0.078 %		
					20 Hz to 40 Hz	0.043 %		
					40 Hz to 1 kHz	0.022 %		
					1 kHz to 5 kHz	0.13 %		
		800 µA	to	1 mA	5 kHz to 10 kHz	0.30 %		
					10 Hz to 20 Hz	0.076 %		
					20 Hz to 40 Hz	0.041 %		
					40 Hz to 1 kHz	0.021 %		
					1 kHz to 5 kHz	0.12 %		
					5 kHz to 10 kHz	0.27 %		

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		min	unit					
		1 mA	to	1.3 mA	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.075 % 0.040 % 0.020 % 0.11 % 0.25 %		
		1.3 mA	to	1.8 mA	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.074 % 0.039 % 0.019 % 0.092 % 0.23 %		
		1.8 mA	to	2.2 mA	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.073 % 0.074 % 0.019 % 0.084 % 0.21 %		
		2.2 mA	to	3 mA	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.089 % 0.052 % 0.032 % 0.25 % 0.53 %		
		3 mA	to	4 mA	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.084 % 0.048 % 0.028 % 0.20 % 0.43 %		
		4 mA	to	5 mA	10 Hz to 20 Hz 20 Hz to 40 Hz	0.081 % 0.045 %		

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		min	unit					
				40 Hz to 1 kHz	0.025 %			
				1 kHz to 5 kHz	0.17 %			
				5 kHz to 10 kHz	0.37 %			
		5 mA	to	6 mA	10 Hz to 20 Hz	0.079 %		
					20 Hz to 40 Hz	0.043 %		
					40 Hz to 1 kHz	0.023 %		
					1 kHz to 5 kHz	0.15 %		
					5 kHz to 10 kHz	0.33 %		
		6 mA	to	8 mA	10 Hz to 20 Hz	0.078 %		
					20 Hz to 40 Hz	0.042 %		
					40 Hz to 1 kHz	0.022 %		
					1 kHz to 5 kHz	0.13 %		
					5 kHz to 10 kHz	0.30 %		
		8 mA	to	10 mA	10 Hz to 20 Hz	0.076 %		
					20 Hz to 40 Hz	0.041 %		
					40 Hz to 1 kHz	0.021%		
					1 kHz to 5 kHz	0.12 %		
					5 kHz to 10 kHz	0.27 %		
		10 mA	to	13 mA	10 Hz to 20 Hz	0.075 %		
					20 Hz to 40 Hz	0.040 %		
					40 Hz to 1 kHz	0.020 %		
					1 kHz to 5 kHz	0.11 %		
					5 kHz to 10 kHz	0.25 %		
		13 mA	to	18 mA	10 Hz to 20 Hz	0.074 %		
					20 Hz to 40 Hz	0.039 %		
					40 Hz to 1 kHz	0.019 %		
					1 kHz to 5 kHz	0.092 %		

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		min	unit					
		18 mA	to	22 mA	5 kHz to 10 kHz 10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.23 % 0.073 % 0.039 % 0.019 % 0.084 % 0.21 %		
		22 mA	to	30 mA	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.089 % 0.052 % 0.032 % 0.25 % 0.53 %		
		30 mA	to	40 mA	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.084 % 0.048 % 0.028 % 0.20 % 0.43 %		
		40 mA	to	50 mA	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.081 % 0.045 % 0.025 % 0.17 % 0.37 %		
		50 mA	to	60 mA	10 Hz to 20 Hz 20 Hz to 40 Hz 40 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.079 % 0.043 % 0.023 % 0.15 % 0.33 %		
		60 mA	to	80 mA	10 Hz to 20 Hz	0.078 %		

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Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place
		min	unit					
				20 Hz to 40 Hz	0.042 %			
				40 Hz to 1 kHz	0.022 %			
				1 kHz to 5 kHz	0.13 %			
				5 kHz to 10 kHz	0.30 %			
		80 mA	to	100 mA	10 Hz to 20 Hz	0.076 %		
					20 Hz to 40 Hz	0.041 %		
					40 Hz to 1 kHz	0.021%		
					1 kHz to 5 kHz	0.12 %		
					5 kHz to 10 kHz	0.27 %		
		100 mA	to	130 mA	10 Hz to 20 Hz	0.075 %		
					20 Hz to 40 Hz	0.040 %		
					40 Hz to 1 kHz	0.020 %		
					1 kHz to 5 kHz	0.11 %		
					5 kHz to 10 kHz	0.25 %		
		130 mA	to	180 mA	10 Hz to 20 Hz	0.074 %		
					20 Hz to 40 Hz	0.039 %		
					40 Hz to 1 kHz	0.019 %		
					1 kHz to 5 kHz	0.092 %		
					5 kHz to 10 kHz	0.24 %		
		180 mA	to	220 mA	10 Hz to 20 Hz	0.073 %		
					20 Hz to 40 Hz	0.038 %		
					40 Hz to 1 kHz	0.019 %		
					1 kHz to 5 kHz	0.084 %		
					5 kHz to 10 kHz	0.21 %		
		220 mA	to	300 mA	20 Hz to 1 kHz	0.082 %		
					1 kHz to 5 kHz	0.12 %		
					5 kHz to 10 kHz	0.93 %		

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Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place
		min	unit					
		300 mA	to	400 mA	20 Hz to 1 kHz	0.078 %		
					1 kHz to 5 kHz	0.11 %		
					5 kHz to 10 kHz	0.91 %		
		400 mA	to	500 mA	20 Hz to 1 kHz	0.075 %		
					1 kHz to 5 kHz	0.098 %		
					5 kHz to 10 kHz	0.90 %		
		500 mA	to	600 mA	20 Hz to 1 kHz	0.074 %		
					1 kHz to 5 kHz	0.094 %		
					5 kHz to 10 kHz	0.89 %		
		600 mA	to	1 A	20 Hz to 1 kHz	0.072 %		
					1 kHz to 5 kHz	0.092 %		
					5 kHz to 10 kHz	0.89 %		
		1 A	to	2.2 A	20 Hz to 1 kHz	0.070 %		
					1 kHz to 5 kHz	0.086 %		
					5 kHz to 10 kHz	0.88 %		
		2.2 A	to	3 A	10 Hz to 1 kHz	0.16 %		
					1 kHz to 5 kHz	0.22 %		
					5 kHz to 10 kHz	0.60 %		
		3 A	to	5 A	10 Hz to 1 kHz	0.14 %		
					1 kHz to 5 kHz	0.20 %		
					5 kHz to 10 kHz	0.51 %		
		5 A	to	11 A	10 Hz to 1 kHz	0.13 %		
					1 kHz to 5 kHz	0.18 %		
					5 kHz to 10 kHz	0.42 %		
		2.2 A	to	3 A	50 Hz	0.12 %		
		3 A	to	4 A	50 Hz	0.095 %		
		4 A	to	5 A	50 Hz	0.084 %		

**The Appendix is an integral part of  
Certificate of Accreditation No. 362/2023 of 7. 7. 2023**

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		min	unit					
		5 A	to	6 A	50 Hz	0.077 %		
		6 A	to	7 A	50 Hz	0.073 %		
		7 A	to	8 A	50 Hz	0.070 %		
		8 A	to	10 A	50 Hz	0.067 %		
		10 A	to	11 A	50 Hz	0.064 %		
		11 A	to	15 A	30 Hz to 45 Hz	0.23 %		
					45 Hz to 100 Hz	0.12 %		
					100 Hz to 1 kHz	0.52 %		
		15 A	to	25 A	30 Hz to 45 Hz	0.22 %		
					45 Hz to 100 Hz	0.12 %		
					100 Hz to 1 kHz	0.51 %		
		25 A	to	30 A	30 Hz to 45 Hz	0.21 %		
					45 Hz to 100 Hz	0.11 %		
					100 Hz to 1 kHz	0.49 %		
5*	DC resistance / DC resistance standards	30 A	to	1,000 A	50 Hz	0.5 %	Indirect generation with a current coil calibrator	TP4, TP21
		0 Ω	to	0.1 Ω		6 μΩ		
		0.1 Ω	to	0.5 Ω		12 μΩ		
		0.5 Ω	to	1 Ω		20 μΩ		
		1 Ω	to	2 Ω		0.0020 %		
		2 Ω	to	3 Ω		0.0017 %		
		3 Ω	to	5 Ω		0.0014 %		
		5 Ω	to	15 Ω		0.0012 %		
		15 Ω	to	19 Ω		0.0010 %		
		19 Ω	to	20 Ω		0.00098 %		

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		min	unit					
		20 Ω	to	25 Ω	0.0011 %			
		25 Ω	to	30 Ω	0.00096 %			
		30 Ω	to	50 Ω	0.00092 %			
		50 Ω	to	100 Ω	0.00086 %			
		100 Ω	to	190 Ω	0.00081 %			
		190 Ω	to	200 Ω	0.00078 %			
		200 Ω	to	250 Ω	0.0011 %			
		250 Ω	to	300 Ω	0.00096 %			
		300 Ω	to	500 Ω	0.00092 %			
		500 Ω	to	1 kΩ	0.00086 %			
		1 kΩ	to	1.9 kΩ	0.00081 %			
		1.9 kΩ	to	2 kΩ	0.00078 %			
		2 kΩ	to	2.5 kΩ	0.0011 %			
		2.5 kΩ	to	3 kΩ	0.00096 %			
		3 kΩ	to	5 kΩ	0.00092 %			
		5 kΩ	to	10 kΩ	0.00086 %			
		10 kΩ	to	19 kΩ	0.00081 %			
		19 kΩ	to	20 kΩ	0.00078 %			
		20 kΩ	to	25 kΩ	0.0011 %			
		25 kΩ	to	30 kΩ	0.00096 %			
		30 kΩ	to	50 kΩ	0.00092 %			
		50 kΩ	to	100 kΩ	0.00086 %			
		100 kΩ	to	190 kΩ	0.00081 %			
		190 kΩ	to	200 kΩ	0.00078 %			
		200 kΩ	to	300 kΩ	0.0014 %			
		300 kΩ	to	1 MΩ	0.0012 %			
		1 MΩ	to	1.9 MΩ	0.00096 %			

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		min	unit					
		1.9 MΩ	to	2 MΩ	0.00091 %			
		2 MΩ	to	5 MΩ	0.0021 %			
		5 MΩ	to	19 MΩ	0.0018 %			
		19 MΩ	to	20 MΩ	0.0016 %			
		20 MΩ	to	30 MΩ	0.012 %			
		30 MΩ	to	50 MΩ	0.0094 %			
		50 MΩ	to	100 MΩ	0.0081 %			
		100 MΩ	to	190 MΩ	0.0071 %			
		190 MΩ	to	200 MΩ	0.0066 %			
		200 MΩ	to	250 MΩ	0.066 %			
		250 MΩ	to	300 MΩ	0.056 %			
		300 MΩ	to	400 MΩ	0.049 %			
		400 MΩ	to	500 MΩ	0.041 %			
		500 MΩ	to	700 MΩ	0.036 %			
		700 MΩ	to	1 GΩ	0.030 %			
		1 GΩ	to	1.9 GΩ	0.026 %			
		1.9 GΩ	to	2 GΩ	0.021 %			
		2 GΩ	to	2.5 GΩ	0.56 %			
		2.5 GΩ	to	3 GΩ	0.46 %			
		3 GΩ	to	4 GΩ	0.39 %			
		4 GΩ	to	5 GΩ	0.31 %			
		5 GΩ	to	6 GΩ	0.26 %			
		6 GΩ	to	7 GΩ	0.23 %			
		7 GΩ	to	10 GΩ	0.20 %			
		10 GΩ	to	15 GΩ	0.16 %			
		15 GΩ	to	19 GΩ	0.13 %			
		19 GΩ	to	20 GΩ	0.11 %			

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		min	unit					
DC resistance / DC resistance meters		0.1	mΩ		0.005 %	Direct generation with a calibrator	TP5, TP21	
		1	mΩ		0.005 %			
		10	mΩ		0.002 %			
		100	mΩ		0.001 %			
		1	Ω		0.0005 %			
		1.9	Ω		0.02 %			
		10	Ω		0.0005 %			
		19	Ω		0.004 %			
		100	Ω		0.0007 %			
		190	Ω		0.003 %			
		1	kΩ		0.0004 %			
		1.9	kΩ		0.002 %			
		10	kΩ		0.0004 %			
		19	kΩ		0.002 %			
		100	kΩ		0.0006 %			
		190	kΩ		0.003 %			
		1	MΩ		0.004 %			
		1.9	MΩ		0.004 %			
		10	MΩ		0.006 %			
		19	MΩ		0.008 %			
		100	MΩ		0.006 %			
		1	GΩ		0.014 %			
		10	GΩ		0.23 %			
		100	GΩ		0.80 %			
		200	GΩ		1.0 %			

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		min	unit					
		0 Ω	to	1 Ω	1.5 mΩ			
		1 Ω	to	5 Ω	0.13 %			
		5 Ω	to	10 Ω	0.021%			
		10 Ω	to	11 Ω	0.026 %			
		11 Ω	to	20 Ω	0.030 %			
		20 Ω	to	33 Ω	0.023 %			
		33 Ω	to	330 Ω	0.016 %			
		330 Ω	to	1.1 kΩ	0.012 %			
		1.1 kΩ	to	3.3 kΩ	0.013 %			
		3.3 kΩ	to	11 kΩ	0.012 %			
		11 kΩ	to	33 kΩ	0.013 %			
		33 kΩ	to	110 kΩ	0.014 %			
		110 kΩ	to	330 kΩ	0.016 %			
		330 kΩ	to	1.1 MΩ	0.019 %			
		1.1 MΩ	to	3.3 MΩ	0.021%			
		3.3 MΩ	to	11 MΩ	0.072 %			
		11 MΩ	to	33 MΩ	0.15 %			
		33 MΩ	to	110 MΩ	0.59 %			
		110 MΩ	to	330 MΩ	0.69 %			
		330 MΩ	to	1.1 GΩ	2.0 %			
6*	AC resistance / AC resistance standards for frequencies from 20 Hz to 1 MHz	50 mΩ	to	0.1 Ω	100 Hz to 100 kHz 100 kHz to 300 kHz	3.1 % 5.3 %	Direct measurement by a LCR meter	TP6, TP24
		0.1 Ω	to	0.2 Ω	20 Hz to 50 Hz 50 Hz to 100 Hz	4.9 % 3.5 %		

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		min	unit					
				100 Hz to 100 kHz	1.6 %			
				100 kHz to 300 kHz	2.7 %			
				300 kHz to 1 MHz	3.9 %			
		0.2 Ω to 0.5 Ω		20 Hz to 50 Hz	2.6 %			
				50 Hz to 100 Hz	1.9 %			
				100 Hz to 100 kHz	0.85 %			
				100 kHz to 300 kHz	1.5 %			
				300 kHz to 1 MHz	2.1 %			
		0.5 Ω to 1 Ω		20 Hz to 50 Hz	1.3 %			
				50 Hz to 100 Hz	0.83 %			
				100 Hz to 100 kHz	0.44 %			
				100 kHz to 300 kHz	0.67 %			
				300 kHz to 1 MHz	0.90 %			
		1 Ω to 5 Ω		20 Hz to 50 Hz	0.78 %			
				50 Hz to 100 Hz	0.49 %			
				100 Hz to 100 kHz	0.30 %			
				100 kHz to 300 kHz	0.41 %			
				300 kHz to 1 MHz	0.53 %			
		5 Ω to 10 Ω		20 Hz to 50 Hz	0.42 %			
				50 Hz to 100 Hz	0.23 %			
				100 Hz to 100 kHz	0.19 %			
				100 kHz to 300 kHz	0.21 %			
				300 kHz to 1 MHz	0.23 %			
		10 Ω to 15 Ω		20 Hz to 50 Hz	0.38 %			
				50 Hz to 100 Hz	0.20 %			
				100 Hz to 100 kHz	0.18 %			
				100 kHz to 1 MHz	0.20 %			

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		min	unit					
		15 Ω	to	50 Ω	20 Hz to 50 Hz 50 Hz to 100 Hz 100 Hz to 1 MHz	0.36 % 0.18 % 0.13 %		
		50 Ω	to	2 kΩ	20 Hz to 50 Hz 50 Hz to 100 Hz 100 Hz to 1 MHz	0.34 % 0.17 % 0.12 %		
		2 kΩ	to	4 kΩ	20 Hz to 50 Hz 50 Hz to 100 Hz 100 Hz to 300 kHz 300 kHz to 1 MHz	0.33 % 0.16 % 0.11 % 0.17 %		
		4 kΩ	to	20 kΩ	20 Hz to 50 Hz 50 Hz to 100 Hz 100 Hz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz	0.34 % 0.16 % 0.11 % 0.17 % 0.19 %		
		20 kΩ	to	100 kΩ	20 Hz to 50 Hz 50 Hz to 100 Hz 100 Hz to 30 kHz 30 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz	0.37 % 0.19 % 0.13 % 0.17 % 0.20 % 0.28 %		
		100 kΩ	to	320 kΩ	20 Hz to 50 Hz 50 Hz to 100 Hz 100 Hz to 30 kHz 30 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz	0.46 % 0.26 % 0.15 % 0.20 % 0.28 % 0.55 %		

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		min	unit					
		320 kΩ	to	400 kΩ	20 Hz to 50 Hz 50 Hz to 100 Hz 100 Hz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz	0.49 % 0.28 % 0.21 % 0.31 % 0.65 %		
		400 kΩ	to	500 kΩ	20 Hz to 50 Hz 50 Hz to 100 Hz 100 Hz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz	0.53 % 0.31 % 0.22 % 0.34 % 0.77 %		
		500 kΩ	to	700 kΩ	20 Hz to 50 Hz 50 Hz to 100 Hz 100 Hz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz	0.61 % 0.37 % 0.25 % 0.42 % 1.1 %		
		700 kΩ	to	900 kΩ	20 Hz to 50 Hz 50 Hz to 100 Hz 100 Hz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz	0.69 % 0.43 % 0.27 % 0.49 % 1.3 %		
		900 kΩ	to	1 MΩ	20 Hz to 50 Hz 50 Hz to 100 Hz 100 Hz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz	0.73 % 0.46 % 0.28 % 0.53 % 1.4 %		
		1 MΩ	to	2 MΩ	20 Hz to 50 Hz 50 Hz to 100 Hz	1.2 % 0.75 %		

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		min	unit					
				100 Hz to 100 kHz	0.41 %			
				100 kHz to 300 kHz	0.90 %			
				300 kHz to 1 MHz	2.7 %			
		2 MΩ to 4 MΩ		20 Hz to 50 Hz	2.0 %			
				50 Hz to 100 Hz	1.4 %			
				100 Hz to 100 kHz	0.65 %			
				100 kHz to 300 kHz	1.7 %			
				300 kHz to 1 MHz	5.1 %			
		4 MΩ to 6 MΩ		20 Hz to 50 Hz	2.8 %			
				50 Hz to 100 Hz	2.0 %			
				100 Hz to 100 kHz	0.90 %			
				100 kHz to 300 kHz	2.4 %			
				300 kHz to 1 MHz	7.6 %			
		6 MΩ to 8 MΩ		20 Hz to 50 Hz	3.6 %			
				50 Hz to 100 Hz	2.6 %			
				100 Hz to 100 kHz	1.2 %			
				100 kHz to 300 kHz	3.2 %			
		8 MΩ to 10 MΩ		20 Hz to 50 Hz	4.4 %			
				50 Hz to 100 Hz	3.2 %			
				100 Hz to 100 kHz	1.4 %			
				100 kHz to 300 kHz	3.9 %			
		10 MΩ to 15 MΩ		20 Hz to 50 Hz	6.4 %			
				50 Hz to 100 Hz	4.8 %			
				100 Hz to 100 kHz	2.2 %			
				100 kHz to 300 kHz	5.8 %			
		15 MΩ to 20 MΩ		20 Hz to 50 Hz	8.4 %			
				50 Hz to 100 Hz	6.3 %			

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		min	unit					
AC resistance / AC resistance standards for frequencies from 1 MHz to 8 MHz	20 MΩ to 25 MΩ			100 Hz to 100 kHz	2.8 %		TP6, TP24	
				100 kHz to 300 kHz	7.6 %			
		20 MΩ	to	25 MΩ	100 Hz to 1 kHz	3.5 %		
					1 kHz to 100 kHz	3.3 %		
		25 MΩ	to	30 MΩ	100 Hz to 1 kHz	4.1 %		
	0.5 Ω to 0.6 Ω			1 kHz to 100 kHz	3.9 %		Direct measurement by a LCR meter	
		0.5 Ω	to	0.6 Ω	1 MHz to 2 MHz	8.7 %		
					1 MHz to 2 MHz	7.3 %		
		0.6 Ω	to	0.7 Ω	2 MHz to 3 MHz	8.7 %		
					1 MHz to 2 MHz	6.2 %		
	0.7 Ω to 0.8 Ω			2 MHz to 3 MHz	7.5 %		TP6, TP24	
		0.7 Ω	to	0.8 Ω	3 MHz to 4 MHz	8.7 %		
					1 MHz to 2 MHz	5.5 %		
		0.8 Ω	to	0.9 Ω	2 MHz to 3 MHz	6.5 %		
	0.9 Ω to 1 Ω			3 MHz to 4 MHz	7.6 %		TP6, TP24	
		0.9 Ω	to	1 Ω	4 MHz to 5 MHz	8.7 %		
					1 MHz to 2 MHz	4.9 %		
		0.9 Ω	to	1 Ω	2 MHz to 3 MHz	5.8 %		
	3 Ω to 4 Ω			3 MHz to 4 MHz	6.8 %		TP6, TP24	
		3 Ω	to	4 Ω	4 MHz to 5 MHz	7.8 %		
	4 Ω to 5 Ω			1 MHz to 2 MHz	8.0 %		TP6, TP24	
		4 Ω	to	5 Ω	2 MHz to 3 MHz	9.6 %		
					1 MHz to 2 MHz	6.2 %		
		4 Ω	to	5 Ω	2 MHz to 3 MHz	7.4 %		

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		min	unit					
				3 MHz to 4 MHz	8.6 %			
				4 MHz to 5 MHz	9.9 %			
		5 Ω to 6 Ω		1 MHz to 2 MHz	5.1 %			
				2 MHz to 3 MHz	6.1 %			
				3 MHz to 4 MHz	7.1 %			
				4 MHz to 5 MHz	8.1 %			
		6 Ω to 7 Ω		1 MHz to 2 MHz	4.4 %			
				2 MHz to 3 MHz	5.2 %			
				3 MHz to 4 MHz	6.1 %			
				4 MHz to 5 MHz	7.0 %			
		7 Ω to 8 Ω		1 MHz to 2 MHz	3.9 %			
				2 MHz to 3 MHz	4.6 %			
				3 MHz to 4 MHz	5.4 %			
				4 MHz to 5 MHz	6.2 %			
				5 MHz to 6 MHz	9.2 %			
		8 Ω to 9 Ω		1 MHz to 2 MHz	3.5 %			
				2 MHz to 3 MHz	4.2 %			
				3 MHz to 4 MHz	4.8 %			
				4 MHz to 5 MHz	5.5 %			
				5 MHz to 6 MHz	8.3 %			
				6 MHz to 7 MHz	9.6 %			
		9 Ω to 10 Ω		1 MHz to 2 MHz	3.2 %			
				2 MHz to 3 MHz	3.8 %			
				3 MHz to 4 MHz	4.4 %			
				4 MHz to 5 MHz	5.5 %			
				5 MHz to 6 MHz	7.6 %			
				6 MHz to 7 MHz	8.8 %			

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Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place
		min	unit					
		10 Ω	to	20 Ω	1 MHz to 2 MHz 2 MHz to 3 MHz 3 MHz to 4 MHz 4 MHz to 5 MHz	4.8 % 5.8 % 6.7 % 7.7 %		
		20 Ω	to	30 Ω	1 MHz to 2 MHz 2 MHz to 3 MHz 3 MHz to 4 MHz 4 MHz to 5 MHz 5 MHz to 6 MHz 6 MHz to 7 MHz	3.4 % 4.0 % 4.7 % 5.4 % 8.0 % 9.3 %		
		30 Ω	to	50 Ω	1 MHz to 2 MHz 2 MHz to 3 MHz 3 MHz to 4 MHz 4 MHz to 5 MHz 5 MHz to 6 MHz 6 MHz to 7 MHz 7 MHz to 8 MHz	2.9 % 3.5 % 4.0 % 4.6 % 6.9 % 8.0 % 9.1 %		
		50 Ω	to	100 Ω	1 MHz to 2 MHz 2 MHz to 3 MHz 3 MHz to 4 MHz 4 MHz to 5 MHz 5 MHz to 6 MHz 6 MHz to 7 MHz 7 MHz to 8 MHz	2.5 % 3.0 % 3.5 % 4.0 % 5.9 % 6.9 % 7.9 %		
		100 Ω	to	300 Ω	1 MHz to 2 MHz 2 MHz to 3 MHz 3 MHz to 4 MHz	2.8 % 3.3 % 3.9 %		

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		min	unit					
				4 MHz to 5 MHz	4.4 %			
				5 MHz to 6 MHz	6.8 %			
				6 MHz to 7 MHz	7.7 %			
				7 MHz to 8 MHz	8.8 %			
		300 Ω	to	500 Ω	1 MHz to 2 MHz	3.4 %		
					2 MHz to 3 MHz	4.0 %		
					3 MHz to 4 MHz	4.7 %		
					4 MHz to 5 MHz	5.4 %		
					5 MHz to 6 MHz	8.0 %		
					6 MHz to 7 MHz	9.3 %		
		500 Ω	to	700 Ω	1 MHz to 2 MHz	3.9 %		
					2 MHz to 3 MHz	4.6 %		
					3 MHz to 4 MHz	5.5 %		
					4 MHz to 5 MHz	6.3 %		
					5 MHz to 6 MHz	9.4 %		
		700 Ω	to	1 kΩ	1 MHz to 2 MHz	4.8 %		
					2 MHz to 3 MHz	5.7 %		
					3 MHz to 4 MHz	6.7 %		
					4 MHz to 5 MHz	7.6 %		
		1 kΩ	to	2 kΩ	1 MHz to 2 MHz	3.7 %		
					2 MHz to 3 MHz	4.4 %		
					3 MHz to 4 MHz	5.1 %		
					4 MHz to 5 MHz	5.8 %		
					5 MHz to 6 MHz	8.7 %		
		2 kΩ	to	3 kΩ	1 MHz to 2 MHz	4.4 %		
					2 MHz to 3 MHz	5.2 %		
					3 MHz to 4 MHz	6.1 %		

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		min	unit								
	AC resistance / AC resistance meters	3 kΩ to 4 kΩ		4 MHz to 5 MHz	7.0 %		TP6, TP24				
				1 MHz to 2 MHz	5.1 %						
				2 MHz to 3 MHz	6.1 %						
				3 MHz to 4 MHz	7.1 %						
				4 MHz to 5 MHz	8.1 %						
		4 kΩ to 5 kΩ		1 MHz to 2 MHz	5.8 %						
				2 MHz to 3 MHz	7.0 %						
				3 MHz to 4 MHz	8.1 %						
				4 MHz to 5 MHz	9.3 %						
		5 kΩ to 7 kΩ		1 MHz to 2 MHz	7.3 %						
				2 MHz to 3 MHz	8.7 %						
		7 kΩ to 9 kΩ		1 MHz to 2 MHz	8.7 %						
				1 MHz to 2 MHz	9.4 %						
		AC resistance / AC resistance meters	0.1 Ω	10 Hz to 10 kHz 10 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 500 kHz 500 kHz to 1 MHz	0.14 % 0.18 % 0.34 % 0.47 % 0.54 %	Direct measurement of a resistance standard, real impedance component	TP6, TP24				
			1 Ω	10 Hz to 10 kHz 10 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 500 kHz 500 kHz to 1 MHz	0.038 % 0.065 % 0.074 % 0.076 % 0.098 %						

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		min	unit					
				1 MHz to 5 MHz	0.24 %			
				5 MHz to 10 MHz	0.47 %			
		10 Ω		10 Hz to 10 kHz	0.043 %			
				10 kHz to 100 kHz	0.055 %			
				100 kHz to 300 kHz	0.050 %			
				300 kHz to 500 kHz	0.045 %			
				500 kHz to 1 MHz	0.063 %			
				1 MHz to 5 MHz	0.21 %			
				5 MHz to 10 MHz	0.38 %			
		100 Ω		10 Hz to 10 kHz	0.005 %			
				10 kHz to 300 kHz	0.021 %			
				300 kHz to 1 MHz	0.022 %			
				1 MHz to 5 MHz	0.20 %			
				5 MHz to 10 MHz	0.21 %			
		1 kΩ		10 Hz to 10 kHz	0.005 %			
				10 kHz to 1 MHz	0.025 %			
				1 MHz to 5 MHz	0.21 %			
				5 MHz to 10 MHz	0.22 %			
		10 kΩ		10 Hz to 1 MHz	0.025 %			
		100 kΩ		10 Hz to 10 kHz	0.010 %			
				10 kHz to 500 kHz	0.11 %			
				500 kHz to 1 MHz	0.12 %			
		1 MΩ		10 Hz to 1 kHz	0.010 %			
				1 kHz to 1 MHz	0.11 %			
		10 MΩ		10 Hz to 10 kHz	0.016 %			
				10 kHz to 100 kHz	0.38 %			
				100 kHz to 300 kHz	0.52 %			

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		min	unit					
7*	Capacity / Capacity standards	1 pF	to	5 pF	300 kHz to 1 MHz	0.58 %		
					10 kHz to 15 kHz	2.2 %	Direct measurement by a RLC meter	TP7, TP24
					15 kHz to 20 kHz	1.5 %		
					20 kHz to 25 kHz	1.2 %		
					25 kHz to 30 kHz	0.94 %		
					30 kHz to 40 kHz	0.81 %		
					40 kHz to 50 kHz	0.65 %		
					50 kHz to 60 kHz	0.55 %		
					60 kHz to 70 kHz	0.49 %		
					70 kHz to 80 kHz	0.44 %		
					80 kHz to 100 kHz	0.40 %		
					100 kHz to 110 kHz	0.75 %		
					110 kHz to 120 kHz	0.69 %		
					120 kHz to 130 kHz	0.65 %		
					130 kHz to 140 kHz	0.61 %		
					140 kHz to 150 kHz	0.58 %		
					150 kHz to 170 kHz	0.55 %		
					170 kHz to 200 kHz	0.50 %		
					200 kHz to 250 kHz	0.45 %		
					250 kHz to 300 kHz	0.39 %		
					300 kHz to 350 kHz	0.81 %		
					350 kHz to 400 kHz	0.72 %		
					400 kHz to 450 kHz	0.65 %		
					450 kHz to 500 kHz	0.59 %		
					500 kHz to 600 kHz	0.55 %		

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		min	unit					
				600 kHz to 700 kHz	0.49 %			
				700 kHz to 800 kHz	0.44 %			
				800 kHz to 1 MHz	0.40 %			
		5 pF	to	10 pF	1 kHz to 2 kHz	4.1 %		
					2 kHz to 3 kHz	2.2 %		
					3 kHz to 4 kHz	1.5 %		
					4 kHz to 5 kHz	1.2 %		
					5 kHz to 6 kHz	0.94 %		
					6 kHz to 7 kHz	0.81 %		
					7 kHz to 8 kHz	0.72 %		
					8 kHz to 9 kHz	0.65 %		
					9 kHz to 10 kHz	0.59 %		
					10 kHz to 15 kHz	0.55 %		
					15 kHz to 20 kHz	0.42 %		
					20 kHz to 25 kHz	0.36 %		
					25 kHz to 30 kHz	0.32 %		
					30 kHz to 1 MHz	0.29 %		
		10 pF	to	50 pF	500 Hz to 600 Hz	4.3 %		
					600 Hz to 700 Hz	3.7 %		
					700 Hz to 800 Hz	3.2 %		
					800 Hz to 900 Hz	2.8 %		
					900 Hz to 1 kHz	2.6 %		
					1 kHz to 2 kHz	2.2 %		
					2 kHz to 3 kHz	1.2 %		
					3 kHz to 4 kHz	0.81 %		
					4 kHz to 5 kHz	0.65 %		
					5 kHz to 6 kHz	0.55 %		

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		min	unit					
				6 kHz to 7 kHz	0.49 %			
				7 kHz to 8 kHz	0.44 %			
				8 kHz to 9 kHz	0.40 %			
				9 kHz to 10 kHz	0.38 %			
				10 kHz to 15 kHz	0.36 %			
				15 kHz to 20 kHz	0.29 %			
				20 kHz to 1 MHz	0.26 %			
		50 pF	to	100 pF	100 Hz to 200 Hz	4.3 %		
					200 Hz to 300 Hz	2.3 %		
					300 Hz to 400 Hz	1.7 %		
					400 Hz to 500 Hz	1.4 %		
					500 Hz to 600 Hz	1.2 %		
					600 Hz to 700 Hz	0.99 %		
					700 Hz to 800 Hz	0.89 %		
					800 Hz to 900 Hz	0.82 %		
					900 Hz to 1 kHz	0.77 %		
					1 kHz to 2 kHz	0.55 %		
					2 kHz to 3 kHz	0.36 %		
					3 kHz to 4 kHz	0.29 %		
					4 kHz to 5 kHz	0.26 %		
					5 kHz to 1 MHz	0.24 %		
		100 pF	to	500 pF	50 Hz to 60 Hz	9.9 %		
					60 Hz to 70 Hz	7.9 %		
					70 Hz to 80 Hz	6.5 %		
					80 Hz to 90 Hz	5.6 %		
					90 Hz to 100 Hz	4.9 %		
					100 Hz to 160 Hz	2.3 %		

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		min	unit					
				160 Hz to 200 Hz 200 Hz to 300 Hz 300 Hz to 400 Hz 400 Hz to 500 Hz 500 Hz to 600 Hz 600 Hz to 700 Hz 700 Hz to 800 Hz 800 Hz to 900 Hz 900 Hz to 1 kHz 1 kHz to 2 kHz 2 kHz to 3 kHz 3 kHz to 4 kHz 4 kHz to 5 kHz 5 kHz to 1 MHz	1.4 % 1.2 % 0.81 % 0.65 % 0.55 % 0.49 % 0.44 % 0.40 % 0.38 % 0.36 % 0.26 % 0.23 % 0.21 % 0.17 %			
		500 pF	to	1 nF	50 Hz to 60 Hz 60 Hz to 70 Hz 70 Hz to 80 Hz 80 Hz to 100 Hz 100 Hz to 160 Hz 160 Hz to 200 Hz 200 Hz to 300 Hz 300 Hz to 400 Hz 400 Hz to 500 Hz 500 Hz to 700 Hz 700 Hz to 1 kHz 1 kHz to 2 kHz 2 kHz to 3 kHz	2.3 % 1.9 % 1.6 % 1.4 % 0.72 % 0.40 % 0.36 % 0.29 % 0.26 % 0.24 % 0.22 % 0.36 % 0.26 %		

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		min	unit					
				3 kHz to 4 kHz	0.23 %			
				4 kHz to 5 kHz	0.21 %			
				5 kHz to 1 MHz	0.17 %			
		1 nF	to	5 nF	20 Hz to 30 Hz	3.6 %		
					30 Hz to 40 Hz	2.2 %		
					40 Hz to 50 Hz	1.6 %		
					50 Hz to 60 Hz	1.2 %		
					60 Hz to 70 Hz	0.91 %		
					70 Hz to 80 Hz	0.77 %		
					80 Hz to 90 Hz	0.68 %		
					90 Hz to 100 Hz	0.61 %		
					100 Hz to 200 Hz	0.36 %		
					200 Hz to 300 Hz	0.26 %		
					300 Hz to 500 Hz	0.23 %		
					500 Hz to 1 MHz	0.15 %		
		5 nF	to	10 nF	20 Hz to 30 Hz	0.97 %		
					30 Hz to 40 Hz	0.70 %		
					40 Hz to 50 Hz	0.58 %		
					50 Hz to 60 Hz	0.35 %		
					60 Hz to 70 Hz	0.31 %		
					70 Hz to 100 Hz	0.28 %		
					100 Hz to 400 Hz	0.20 %		
					400 Hz to 500 Hz	0.17 %		
					500 Hz to 1 MHz	0.13 %		
		10 nF	to	50 nF	20 Hz to 30 Hz	0.65 %		
					30 Hz to 40 Hz	0.52 %		
					40 Hz to 50 Hz	0.46 %		

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		min	unit					
				50 Hz to 70 Hz	0.26 %			
				70 Hz to 100 Hz	0.22 %			
				100 Hz to 103 kHz	0.13 %			
				103 kHz to 150 kHz	0.19 %			
				150 kHz to 300 kHz	0.21 %			
				300 kHz to 500 kHz	0.28 %			
				500 kHz to 1 MHz	0.39 %			
				20 Hz to 40 Hz	0.40 %			
				40 Hz to 50 Hz	0.36 %			
				50 Hz to 70 Hz	0.26 %			
				70 Hz to 100 Hz	0.22 %			
				100 Hz to 103 kHz	0.13 %			
				103 kHz to 150 kHz	0.19 %			
				150 kHz to 300 kHz	0.21 %			
				300 kHz to 500 kHz	0.28 %			
				500 kHz to 1 MHz	0.39 %			
				20 Hz to 50 Hz	0.36 %			
				50 Hz to 100 Hz	0.18 %			
				100 Hz to 10 kHz	0.12 %			
				10 kHz to 70 kHz	0.22 %			
				70 kHz to 100 kHz	0.25 %			
				100 kHz to 140 kHz	0.27 %			
				140 kHz to 230 kHz	0.34 %			
				230 kHz to 280 kHz	0.38 %			
				280 kHz to 300 kHz	0.40 %			
				300 kHz to 350 kHz	0.56 %			
				350 kHz to 400 kHz	0.62 %			

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		min	unit					
				400 kHz to 450 kHz	0.68 %			
				450 kHz to 500 kHz	0.74 %			
				500 kHz to 600 kHz	0.86 %			
				600 kHz to 700 kHz	0.97 %			
				700 kHz to 800 kHz	1.1 %			
				800 kHz to 1 MHz	1.4 %			
		500 nF	to	1 µF	20 Hz to 50 Hz	0.36 %		
					50 Hz to 100 Hz	0.18 %		
					100 Hz to 10 kHz	0.12 %		
					10 kHz to 70 kHz	0.22 %		
					70 kHz to 100 kHz	0.25 %		
					100 kHz to 120 kHz	0.35 %		
					120 kHz to 150 kHz	0.40 %		
					150 kHz to 180 kHz	0.45 %		
					180 kHz to 220 kHz	0.51 %		
					220 kHz to 250 kHz	0.56 %		
					250 kHz to 300 kHz	0.64 %		
					300 kHz to 350 kHz	0.97 %		
					350 kHz to 400 kHz	1.1 %		
					400 kHz to 500 kHz	1.4 %		
					500 kHz to 600 kHz	1.6 %		
					600 kHz to 700 kHz	1.8 %		
					700 kHz to 1 MHz	2.5 %		
		1 µF	to	5 µF	20 Hz to 50 Hz	0.34 %		
					50 Hz to 5 kHz	0.20 %		
					5 kHz to 10 kHz	0.25 %		
					10 kHz to 15 kHz	0.29 %		

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		min	unit					
				15 kHz to 20 kHz	0.33 %			
				20 kHz to 25 kHz	0.38 %			
				25 kHz to 30 kHz	0.42 %			
				30 kHz to 40 kHz	0.33 %			
				40 kHz to 50 kHz	0.38 %			
				50 kHz to 60 kHz	0.42 %			
				60 kHz to 70 kHz	0.46 %			
				70 kHz to 80 kHz	0.51 %			
				80 kHz to 90 kHz	0.55 %			
				90 kHz to 100 kHz	0.59 %			
				100 kHz to 110 kHz	1.1 %			
				110 kHz to 140 kHz	1.3 %			
				140 kHz to 160 kHz	1.5 %			
				160 kHz to 190 kHz	1.7 %			
				190 kHz to 210 kHz	1.9 %			
				210 kHz to 250 kHz	2.2 %			
				250 kHz to 300 kHz	2.6 %			
				300 kHz to 350 kHz	4.3 %			
				350 kHz to 400 kHz	4.9 %			
				400 kHz to 450 kHz	5.4 %			
				450 kHz to 500 kHz	6.0 %			
		5 µF to 10 µF		20 Hz to 50 Hz	0.34 %			
				50 Hz to 5 kHz	0.20 %			
				5 kHz to 10 kHz	0.25 %			
				10 kHz to 15 kHz	0.29 %			
				15 kHz to 20 kHz	0.33 %			
				20 kHz to 25 kHz	0.38 %			

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		min	unit					
				25 kHz to 30 kHz	0.42 %			
				30 kHz to 40 kHz	0.51 %			
				40 kHz to 50 kHz	0.59 %			
				50 kHz to 60 kHz	0.68 %			
				60 kHz to 70 kHz	0.77 %			
				70 kHz to 80 kHz	0.85 %			
				80 kHz to 90 kHz	0.94 %			
				90 kHz to 100 kHz	1.1 %			
				100 kHz to 110 kHz	2.0 %			
				110 kHz to 140 kHz	2.4 %			
				140 kHz to 160 kHz	2.8 %			
				160 kHz to 190 kHz	3.2 %			
				190 kHz to 210 kHz	3.6 %			
				210 kHz to 250 kHz	4.2 %			
				250 kHz to 300 kHz	5.0 %			
		10 µF	to	20 µF	20 Hz to 50 Hz	0.34 %		
					50 Hz to 500 Hz	0.20 %		
					500 Hz to 700 Hz	0.22 %		
					700 Hz to 1 kHz	0.25 %		
					1 kHz to 2 kHz	0.33 %		
					2 kHz to 3 kHz	0.42 %		
					3 kHz to 4 kHz	0.51 %		
					4 kHz to 5 kHz	0.59 %		
					5 kHz to 6 kHz	0.68 %		
					6 kHz to 7 kHz	0.77 %		
					7 kHz to 8 kHz	0.85 %		
					8 kHz to 9 kHz	0.94 %		

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		min	unit					
				9 kHz to 10 kHz	1.1 %			
				10 kHz to 15 kHz	1.5 %			
				15 kHz to 20 kHz	1.9 %			
				20 kHz to 25 kHz	2.4 %			
				25 kHz to 30 kHz	2.8 %			
				30 kHz to 40 kHz	1.9 %			
				40 kHz to 50 kHz	2.4 %			
				50 kHz to 60 kHz	2.8 %			
				60 kHz to 70 kHz	3.2 %			
				70 kHz to 80 kHz	3.7 %			
				80 kHz to 90 kHz	4.1 %			
				90 kHz to 100 kHz	4.6 %			
		20 µF	to	50 µF	20 Hz to 50 Hz	0.34 %		
					50 Hz to 500 Hz	0.20 %		
					500 Hz to 700 Hz	0.22 %		
					700 Hz to 1 kHz	0.25 %		
					1 kHz to 2 kHz	0.33 %		
					2 kHz to 3 kHz	0.42 %		
					3 kHz to 4 kHz	0.51 %		
					4 kHz to 5 kHz	0.59 %		
					5 kHz to 6 kHz	0.68 %		
					6 kHz to 7 kHz	0.77 %		
					7 kHz to 8 kHz	0.85 %		
					8 kHz to 9 kHz	0.94 %		
					9 kHz to 10 kHz	1.1 %		
					10 kHz to 15 kHz	1.5 %		
					15 kHz to 20 kHz	1.9 %		

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		min	unit					
				20 kHz to 25 kHz	2.4 %			
				25 kHz to 30 kHz	2.8 %			
				30 kHz to 40 kHz	1.9 %			
				40 kHz to 50 kHz	2.4 %			
		50 µF	to	100 µF	20 Hz to 50 Hz	0.34 %		
					50 Hz to 500 Hz	0.20 %		
					500 Hz to 700 Hz	0.22 %		
					700 Hz to 1 kHz	0.25 %		
					1 kHz to 2 kHz	0.33 %		
					2 kHz to 3 kHz	0.42 %		
					3 kHz to 4 kHz	0.51 %		
					4 kHz to 5 kHz	0.59 %		
					5 kHz to 6 kHz	0.68 %		
					6 kHz to 7 kHz	0.77 %		
					7 kHz to 8 kHz	0.85 %		
					8 kHz to 9 kHz	0.94 %		
					9 kHz to 10 kHz	1.1 %		
					10 kHz to 15 kHz	1.5 %		
					15 kHz to 20 kHz	1.9 %		
		100 µF	to	500 µF	20 Hz to 50 Hz	0.44 %		
					50 Hz to 70 Hz	0.29 %		
					70 Hz to 200 Hz	0.33 %		
					200 Hz to 300 Hz	0.42 %		
					300 Hz to 400 Hz	0.51 %		
					400 Hz to 500 Hz	0.59 %		
					500 Hz to 600 Hz	0.68 %		
					600 Hz to 700 Hz	0.77 %		

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CAB number 2273, Calibration Laboratory  
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Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place
		min	unit					
				700 Hz to 800 Hz	0.85 %			
				800 Hz to 900 Hz	0.94 %			
				900 Hz to 2 kHz	1.1 %			
				2 kHz to 3 kHz	1.5 %			
				3 kHz to 4 kHz	1.9 %			
				4 kHz to 5 kHz	2.4 %			
		500 µF	to	1 mF	20 Hz to 50 Hz	0.44 %		
					50 Hz to 70 Hz	0.29 %		
					70 Hz to 200 Hz	0.33 %		
					200 Hz to 300 Hz	0.42 %		
					300 Hz to 400 Hz	0.51 %		
					400 Hz to 500 Hz	0.59 %		
					500 Hz to 600 Hz	0.68 %		
					600 Hz to 700 Hz	0.77 %		
					700 Hz to 800 Hz	0.85 %		
					800 Hz to 900 Hz	0.94 %		
					900 Hz to 1 kHz	1.1 %		
					1 kHz to 2 kHz	1.9 %		
		1 mF	to	5 mF	20 Hz to 30 Hz	0.70 %		
					30 Hz to 40 Hz	0.78 %		
					40 Hz to 80 Hz	0.89 %		
					80 Hz to 90 Hz	0.96 %		
					90 Hz to 160 Hz	1.1 %		
					160 Hz to 300 Hz	1.7 %		
					300 Hz to 400 Hz	2.1 %		
					400 Hz to 500 Hz	2.6 %		
					500 Hz to 600 Hz	3.0 %		

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Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place
		min	unit					
Capacity / Electrical capacity meters	5 mF to 10 mF			600 Hz to 700 Hz	3.4 %		TP7, TP21, TP24	
				700 Hz to 800 Hz	3.9 %			
				800 Hz to 900 Hz	4.3 %			
				900 Hz to 1 kHz	4.7 %			
	1 pF to 100 μF			50 Hz to 60 Hz	1.4 %		Direct measurement of a capacity standard	
				60 Hz to 160 Hz	1.9 %			
				160 Hz to 220 Hz	2.3 %			
				220 Hz to 300 Hz	3.0 %			
	10 pF to 100 pF			1 kHz	0.010 %		TP7, TP21, TP24	
				1 kHz	0.004 %			
				1 kHz	0.009 %			
				1 kHz	0.003 %			
	1 nF to 100 nF			1 kHz	0.003 %		TP7, TP21, TP24	
				1 kHz	0.006 %			
				1 kHz	0.019 %			
				1 kHz	0.053 %			
	100 μF to 1000 μF			1 kHz	0.081 %		TP7, TP21, TP24	
				100 Hz to 1 kHz	0.019 %			
				1 kHz to 100 kHz	0.022 %			
				100 kHz to 1 MHz	0.023 %			
	1000 μF to 10000 μF			1 MHz to 10 MHz	0.10 %		TP7, TP21, TP24	
				100 Hz to 1 kHz	0.006 %			
				1 kHz to 100 kHz	0.012 %			
				100 kHz to 1 MHz	0.050 %			
				1 MHz to 10 MHz	0.025 %			

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Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place
		min	unit					
		100 pF		100 Hz to 1 kHz	0.011 %			
				1 kHz to 100 kHz	0.011 %			
				100 kHz to 1 MHz	0.021 %			
				1 MHz to 10 MHz	0.31 %			
		1 nF		100 Hz to 1 kHz	0.006 %			
				1 kHz to 100 kHz	0.010 %			
				100 kHz to 1 MHz	0.011 %			
				1 MHz to 10 MHz	0.64 %			
		10 nF		100 Hz to 1 kHz	0.005 %			
				1 kHz to 10 kHz	0.006 %			
				10 kHz to 100 kHz	0.010 %			
		100 nF		100 Hz to 1 kHz	0.015 %			
				1 kHz to 100 kHz	0.013 %			
		1 µF		100 Hz to 1 kHz	0.024 %			
				1 kHz to 10 kHz	0.025 %			
				10 kHz to 100 kHz	0.042 %			
		10 µF		100 Hz to 1 kHz	0.054 %			
				1 kHz to 10 kHz	0.060 %			
				10 kHz to 100 kHz	0.26 %			
		100 µF		100 Hz to 1 kHz	0.25 %			
				1 kHz to 10 kHz	0.24 %			
		220 pF	to	1.1 nF	10 Hz to 10 kHz	0.5 % + 0.01 nF		
		1.1 nF	to	3.3 nF	10 Hz to 3 kHz	0.5 % + 0.01 nF		
		3.3 nF	to	11 nF	10 Hz to 1 kHz	0.25 % + 0.01 nF		
		11 nF	to	110 nF	10 Hz to 1 kHz	0.25 % + 0.1 nF		
		110 nF	to	330 nF	10 Hz to 1 kHz	0.25 % + 0.3 nF		
		0.33 µF	to	1.1 µF	10 Hz to 600 Hz	0.25 % + 1 nF		

**The Appendix is an integral part of  
Certificate of Accreditation No. 362/2023 of 7. 7. 2023**

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Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place
		min	unit					
8*	Loss factor D / Loss factor meters	1.1 µF	to	3.3 µF	10 Hz to 300 kHz	0.25 % + 3 nF	Direct measurement of reference loss factor at f = 1 kHz	TP30, TP24
		3.3 µF	to	11 µF	10 Hz to 150 Hz	0.25 % + 10 nF		
		11 µF	to	33 µF	10 Hz to 120 Hz	0.40 % + 30 nF		
		33 µF	to	110 µF	10 Hz to 80 Hz	0.45 % + 100 nF		
		110 µF	to	330 µF	0 Hz to 50 Hz	0.45 % + 300 nF		
		0.33 mF	to	1.1 mF	0 Hz to 20 Hz	0.45 % + 1 µF		
		1.1 mF	to	3.3 mF	0 Hz to 6 Hz	0.45 % + 3 µF		
		3.3 mF	to	11 mF	0 Hz to 2 Hz	0.45 % + 10 µF		
		11 mF	to	33 mF	0 Hz to 0.6 Hz	0.75 % + 30 µF		
		33 mF	to	110 mF	0 Hz to 0.2 Hz	1 % + 100 µF		
9*	Inductance / Inductance standards	-0.001	to	0.001	10 pF, 100 pF, 1 nF 10 nF 100 nF	0.00001 (abs.) 0.000011 (abs.) 0.00006 (abs.)	Direct measurement by a RLC meter	TP8, TP24
		0.001	to	0.01	10 pF, 100 pF, 1 nF 100 nF 1 µF	0.00002 (abs.) 0.00006 (abs.) 0.0003 (abs.)		
		0.01	to	0.1	10 pF, 100 pF, 10 nF 1 nF 1 µF	0.00006 (abs.) 0.0011 (abs.) 0.0003 (abs.)		
		0.1	to	1	10 pF, 100 pF, 1 nF, 10 nF 100 nF	0.0006 (abs.) 0.0003 (abs.)		

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Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place
		min	unit					
				20 kHz to 25 kHz	1.3 %			
				25 kHz to 30 kHz	1.1 %			
				30 kHz to 40 kHz	0.89 %			
				40 kHz to 50 kHz	0.71 %			
				50 kHz to 60 kHz	0.60 %			
				60 kHz to 70 kHz	0.53 %			
				70 kHz to 80 kHz	0.47 %			
				80 kHz to 90 kHz	0.43 %			
				90 kHz to 100 kHz	0.40 %			
				100 kHz to 150 kHz	0.56 %			
				150 kHz to 200 kHz	0.45 %			
				200 kHz to 250 kHz	0.36 %			
				250 kHz to 300 kHz	0.32 %			
				300 kHz to 400 kHz	0.36 %			
				400 kHz to 500 kHz	0.31 %			
				500 kHz to 700 kHz	0.28 %			
				700 kHz to 1 MHz	0.24 %			
		5 µH to 10 µH		2 kHz to 3 kHz	2.4 %			
				3 kHz to 5 kHz	1.7 %			
				5 kHz to 7 kHz	1.1 %			
				7 kHz to 10 kHz	0.79 %			
				10 kHz to 15 kHz	0.60 %			
				15 kHz to 20 kHz	0.45 %			
				20 kHz to 25 kHz	0.38 %			
				25 kHz to 30 kHz	0.34 %			
				30 kHz to 40 kHz	0.31 %			
				40 kHz to 50 kHz	0.27 %			

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Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place
		min	unit					
				50 kHz to 60 kHz	0.25 %			
				60 kHz to 100 kHz	0.23 %			
				100 kHz to 150 kHz	0.24 %			
				150 kHz to 200 kHz	0.22 %			
				200 kHz to 500 kHz	0.20 %			
				500 kHz to 1 MHz	0.13 %			
		10 µH	to	50 µH	1 kHz to 2 kHz	2.4 %		
					2 kHz to 3 kHz	1.3 %		
					3 kHz to 5 kHz	0.89 %		
					5 kHz to 7 kHz	0.60 %		
					7 kHz to 10 kHz	0.47 %		
					10 kHz to 15 kHz	0.38 %		
					15 kHz to 20 kHz	0.31 %		
					20 kHz to 25 kHz	0.27 %		
					25 kHz to 30 kHz	0.25 %		
					30 kHz to 50 kHz	0.23 %		
					50 kHz to 70 kHz	0.21 %		
					70 kHz to 100 kHz	0.19 %		
					100 kHz to 250 kHz	0.20 %		
					250 kHz to 300 kHz	0.12 %		
					300 kHz to 1 MHz	0.13 %		
		50 µH	to	100 µH	200 Hz to 300 Hz	2.6 %		
					300 Hz to 400 Hz	1.8 %		
					400 Hz to 500 Hz	1.3 %		
					500 Hz to 600 Hz	1.1 %		
					600 Hz to 700 Hz	0.89 %		
					700 Hz to 800 Hz	0.79 %		

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Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place	
		min	unit						
				800 Hz to 900 Hz 900 Hz to 1 kHz 1 kHz to 2 kHz 2 kHz to 3 kHz 3 kHz to 5 kHz 5 kHz to 10 kHz 10 kHz to 15 kHz 15 kHz to 30 kHz 30 kHz to 50 kHz 50 kHz to 100 kHz 100 kHz to 250 kHz 250 kHz to 300 kHz 300 kHz to 1 MHz	0.71 % 0.65 % 0.60 % 0.38 % 0.31 % 0.25 % 0.21 % 0.19 % 0.18 % 0.12 % 0.20 % 0.12 % 0.13 %				
		100 µH	to	500 µH	80 Hz to 90 Hz 90 Hz to 100 Hz 100 Hz to 200 Hz 200 Hz to 300 Hz 300 Hz to 400 Hz 400 Hz to 500 Hz 500 Hz to 600 Hz 600 Hz to 700 Hz 700 Hz to 800 Hz 800 Hz to 900 Hz 900 Hz to 1 kHz 1 kHz to 2 kHz 2 kHz to 3 kHz 3 kHz to 5 kHz	6.2 % 5.4 % 2.6 % 1.3 % 0.89 % 0.71 % 0.60 % 0.53 % 0.47 % 0.43 % 0.40 % 0.38 % 0.27 % 0.23 %			

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Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place
		min	unit					
				5 kHz to 10 kHz	0.21 %			
				10 kHz to 25 kHz	0.18 %			
				25 kHz to 30 kHz	0.12 %			
				30 kHz to 100 kHz	0.12 %			
				100 kHz to 300 kHz	0.11 %			
				300 kHz to 1 MHz	0.17 %			
		500 µH	to	1 mH	50 Hz to 60 Hz	2.3 %		
					60 Hz to 70 Hz	1.9 %		
					70 Hz to 80 Hz	1.6 %		
					80 Hz to 100 Hz	1.4 %		
					100 Hz to 200 Hz	0.60 %		
					200 Hz to 300 Hz	0.38 %		
					300 Hz to 400 Hz	0.31 %		
					400 Hz to 500 Hz	0.27 %		
					500 Hz to 600 Hz	0.25 %		
					600 Hz to 900 Hz	0.23 %		
					900 Hz to 1 kHz	0.21 %		
					1 kHz to 2 kHz	0.38 %		
					2 kHz to 3 kHz	0.27 %		
					3 kHz to 5 kHz	0.23 %		
					5 kHz to 10 kHz	0.21 %		
					10 kHz to 25 kHz	0.18 %		
					25 kHz to 100 kHz	0.12 %		
					100 kHz to 300 kHz	0.11 %		
					300 kHz to 1 MHz	0.17 %		
		1 mH	to	5 mH	20 Hz to 30 Hz	3.9 %		
					30 Hz to 40 Hz	2.5 %		

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Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place
		min	unit					
				40 Hz to 50 Hz	1.8 %			
				50 Hz to 60 Hz	1.3 %			
				60 Hz to 80 Hz	1.0 %			
				80 Hz to 90 Hz	0.74 %			
				90 Hz to 100 Hz	0.66 %			
				100 Hz to 200 Hz	0.38 %			
				200 Hz to 300 Hz	0.27 %			
				300 Hz to 500 Hz	0.23 %			
				500 Hz to 700 Hz	0.21 %			
				700 Hz to 1 kHz	0.19 %			
				1 kHz to 3 kHz	0.18 %			
				3 kHz to 100 kHz	0.12 %			
				100 kHz to 300 kHz	0.17 %			
				300 kHz to 600 kHz	0.21 %			
				600 kHz to 1 MHz	0.24 %			
		5 mH	to	10 mH	20 Hz to 30 Hz	1.1 %		
					30 Hz to 40 Hz	0.75 %		
					40 Hz to 50 Hz	0.61 %		
					50 Hz to 60 Hz	0.37 %		
					60 Hz to 70 Hz	0.33 %		
					70 Hz to 80 Hz	0.30 %		
					80 Hz to 90 Hz	0.28 %		
					90 Hz to 100 Hz	0.26 %		
					100 Hz to 200 Hz	0.38 %		
					200 Hz to 300 Hz	0.27 %		
					300 Hz to 500 Hz	0.23 %		
					500 Hz to 700 Hz	0.21 %		

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		min	unit					
				700 Hz to 1 kHz	0.19 %			
				1 kHz to 3 kHz	0.18 %			
				3 kHz to 100 kHz	0.12 %			
				100 kHz to 300 kHz	0.17 %			
				300 kHz to 600 kHz	0.21 %			
				600 kHz to 1 MHz	0.24 %			
		10 mH	to	50 mH	20 Hz to 30 Hz	0.69 %		
					30 Hz to 40 Hz	0.54 %		
					40 Hz to 50 Hz	0.47 %		
					50 Hz to 60 Hz	0.27 %		
					60 Hz to 80 Hz	0.24 %		
					80 Hz to 100 Hz	0.22 %		
					100 Hz to 250 Hz	0.18 %		
					250 Hz to 1 kHz	0.12 %		
					1 kHz to 30 kHz	0.11 %		
					30 kHz to 100 kHz	0.17 %		
					100 kHz to 200 kHz	0.21 %		
					200 kHz to 300 kHz	0.23 %		
					300 kHz to 400 kHz	0.31 %		
					400 kHz to 500 kHz	0.35 %		
					500 kHz to 700 kHz	0.43 %		
					700 kHz to 1 MHz	0.55 %		
		50 mH	to	100 mH	20 Hz to 30 Hz	0.40 %		
					30 Hz to 50 Hz	0.37 %		
					50 Hz to 60 Hz	0.27 %		
					60 Hz to 80 Hz	0.24 %		
					80 Hz to 100 Hz	0.22 %		

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		min	unit					
				100 Hz to 250 Hz	0.18 %			
				250 Hz to 1 kHz	0.12 %			
				1 kHz to 30 kHz	0.11 %			
				30 kHz to 100 kHz	0.17 %			
				100 kHz to 200 kHz	0.21 %			
				200 kHz to 300 kHz	0.23 %			
				300 kHz to 400 kHz	0.47 %			
				400 kHz to 500 kHz	0.55 %			
				500 kHz to 600 kHz	0.62 %			
				600 kHz to 700 kHz	0.70 %			
				700 kHz to 800 kHz	0.78 %			
				800 kHz to 1 MHz	0.93 %			
		100 mH	to	500 mH	20 Hz to 30 Hz	0.27 %		
					30 Hz to 50 Hz	0.35 %		
					50 Hz to 100 Hz	0.18 %		
					100 Hz to 1 kHz	0.12 %		
					1 kHz to 30 kHz	0.13 %		
					30 kHz to 60 kHz	0.21 %		
					60 kHz to 100 kHz	0.24 %		
					100 kHz to 150 kHz	0.33 %		
					150 kHz to 200 kHz	0.39 %		
					200 kHz to 250 kHz	0.45 %		
					250 kHz to 300 kHz	0.51 %		
					300 kHz to 400 kHz	1.8 %		
					400 kHz to 500 kHz	2.1 %		
					500 kHz to 600 kHz	2.5 %		
					600 kHz to 700 kHz	2.9 %		

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		min	unit					
				700 kHz to 800 kHz	3.3 %			
				800 kHz to 900 kHz	3.7 %			
				900 kHz to 1 MHz	4.1 %			
		500 mH	to	1 H	20 Hz to 30 Hz	0.27 %		
					30 Hz to 50 Hz	0.35 %		
					50 Hz to 100 Hz	0.18 %		
					100 Hz to 1 kHz	0.12 %		
					1 kHz to 30 kHz	0.13 %		
					30 kHz to 60 kHz	0.21 %		
					60 kHz to 100 kHz	0.24 %		
					100 kHz to 150 kHz	0.51 %		
					150 kHz to 200 kHz	0.62 %		
					200 kHz to 250 kHz	0.74 %		
					250 kHz to 300 kHz	0.86 %		
					300 kHz to 400 kHz	3.3 %		
					400 kHz to 500 kHz	4.1 %		
					500 kHz to 600 kHz	4.9 %		
					600 kHz to 700 kHz	5.6 %		
					700 kHz to 800 kHz	6.4 %		
					800 kHz to 900 kHz	7.2 %		
					900 kHz to 1 MHz	8.0 %		
		1 H	to	2 H	20 Hz to 50 Hz	0.34 %		
					50 Hz to 100 Hz	0.18 %		
					100 Hz to 1 kHz	0.12 %		
					1 kHz to 5 kHz	0.15 %		
					5 kHz to 10 kHz	0.24 %		
					10 kHz to 15 kHz	0.28 %		

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		min	unit					
				15 kHz to 20 kHz	0.31 %			
				20 kHz to 25 kHz	0.35 %			
				25 kHz to 30 kHz	0.38 %			
				30 kHz to 50 kHz	0.35 %			
				50 kHz to 70 kHz	0.43 %			
				70 kHz to 100 kHz	0.55 %			
				100 kHz to 150 kHz	1.9 %			
				150 kHz to 200 kHz	2.5 %			
				200 kHz to 250 kHz	3.1 %			
				250 kHz to 300 kHz	3.7 %			
				300 kHz to 400 kHz	6.4 %			
				400 kHz to 500 kHz	8.0 %			
		2 H	to	5 H	20 Hz to 50 Hz	0.34 %		
					50 Hz to 100 Hz	0.18 %		
					100 Hz to 1 kHz	0.12 %		
					1 kHz to 5 kHz	0.15 %		
					5 kHz to 10 kHz	0.24 %		
					10 kHz to 15 kHz	0.28 %		
					15 kHz to 20 kHz	0.31 %		
					20 kHz to 25 kHz	0.35 %		
					25 kHz to 30 kHz	0.38 %		
					30 kHz to 50 kHz	0.35 %		
					50 kHz to 70 kHz	0.43 %		
					70 kHz to 100 kHz	0.55 %		
					100 kHz to 150 kHz	1.9 %		
					150 kHz to 200 kHz	2.5 %		
					200 kHz to 250 kHz	3.1 %		

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		min	unit					
		5 H	to	10 H	250 kHz to 300 kHz	3.7 %		
					50 Hz to 100 Hz	0.18 %		
					100 Hz to 1 kHz	0.12 %		
					1 kHz to 5 kHz	0.15 %		
					5 kHz to 10 kHz	0.24 %		
					10 kHz to 15 kHz	0.28 %		
					15 kHz to 20 kHz	0.31 %		
					20 kHz to 25 kHz	0.35 %		
					25 kHz to 30 kHz	0.38 %		
					30 kHz to 40 kHz	0.47 %		
					40 kHz to 50 kHz	0.55 %		
					50 kHz to 60 kHz	0.62 %		
					60 kHz to 70 kHz	0.70 %		
					70 kHz to 80 kHz	0.78 %		
					80 kHz to 90 kHz	0.86 %		
					90 kHz to 100 kHz	0.93 %		
					100 kHz to 150 kHz	3.7 %		
					150 kHz to 200 kHz	4.9 %		
					200 kHz to 250 kHz	6.0 %		
					250 kHz to 300 kHz	7.2 %		
		10 H	to	50 H	50 Hz to 100 Hz	0.18 %		
					100 Hz to 500 Hz	0.15 %		
					500 Hz to 800 Hz	0.22 %		
					800 Hz to 2 kHz	0.24 %		
					2 kHz to 3 kHz	0.28 %		
					3 kHz to 5 kHz	0.35 %		
					5 kHz to 7 kHz	0.43 %		

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		min	unit					
				7 kHz to 10 kHz	0.55 %			
				10 kHz to 15 kHz	0.74 %			
				15 kHz to 20 kHz	0.93 %			
				20 kHz to 25 kHz	1.2 %			
				25 kHz to 30 kHz	1.4 %			
				30 kHz to 40 kHz	1.8 %			
				40 kHz to 50 kHz	2.1 %			
				50 kHz to 60 kHz	2.5 %			
				60 kHz to 70 kHz	2.9 %			
				70 kHz to 80 kHz	3.3 %			
				80 kHz to 90 kHz	3.7 %			
				90 kHz to 100 kHz	4.1 %			
				50 H to 100 H	0.18 %			
				100 Hz to 500 Hz	0.15 %			
				500 Hz to 800 Hz	0.22 %			
				800 Hz to 1 kHz	0.24 %			
				1 kHz to 2 kHz	0.31 %			
				2 kHz to 3 kHz	0.39 %			
				3 kHz to 5 kHz	0.55 %			
				5 kHz to 7 kHz	0.70 %			
				7 kHz to 10 kHz	0.93 %			
				10 kHz to 15 kHz	1.4 %			
				15 kHz to 20 kHz	1.8 %			
				20 kHz to 25 kHz	2.1 %			
				25 kHz to 30 kHz	2.5 %			
				100 H to 500 H	0.38 %			
				20 Hz to 35 Hz	0.40 %			
				35 Hz to 50 Hz	0.40 %			

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		min	unit					
				50 Hz to 70 Hz	0.28 %			
				70 Hz to 200 Hz	0.31 %			
				200 Hz to 300 Hz	0.39 %			
				300 Hz to 400 Hz	0.47 %			
				400 Hz to 500 Hz	0.55 %			
				500 Hz to 600 Hz	0.62 %			
				600 Hz to 700 Hz	0.70 %			
				700 Hz to 800 Hz	0.78 %			
				800 Hz to 900 Hz	0.86 %			
				900 Hz to 2 kHz	0.93 %			
				2 kHz to 3 kHz	1.4 %			
				3 kHz to 5 kHz	2.1 %			
				5 kHz to 7 kHz	2.9 %			
				7 kHz to 8 kHz	3.3 %			
				8 kHz to 9 kHz	3.7 %			
				9 kHz to 10 kHz	4.1 %			
		500 H to 1 kH		20 Hz to 35 Hz	0.38 %			
				35 Hz to 50 Hz	0.40 %			
				50 Hz to 70 Hz	0.28 %			
				70 Hz to 100 Hz	0.31 %			
				100 Hz to 200 Hz	0.31 %			
				200 Hz to 300 Hz	0.39 %			
				300 Hz to 400 Hz	0.47 %			
				400 Hz to 500 Hz	0.55 %			
				500 Hz to 600 Hz	0.62 %			
				600 Hz to 700 Hz	0.70 %			

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		min	unit					
	Inductance / Inductance meters			800 Hz to 900 Hz	0.86 %	Direct measurement of an inductance standard	TP8, TP24	
				900 Hz to 1 kHz	0.93 %			
				1 μH	0.20 %			
				10 μH	0.14 %			
				100 μH	0.03 %			
				1 mH	0.02 %			
				10 mH	0.03 %			
				100 mH	0.03 %			
				1 H	0.02 %			
				10 H	0.05 %			
10*	Non-linear distortion / Non-linear distortion meters		0.01 %      to      100 %	20 Hz to 20 kHz 20 kHz to 50 kHz 50 kHz to 100 kHz	0.003 % 0.03 % 0.05 %	Comparison with a distortion analyzer	TP10	
11*	Nonlinear distortion / sine signal generators		0.01 %      to      100 %	20 Hz to 20 kHz (BW 80 kHz) 20 kHz to 50 kHz (BW 500 kHz) 50 kHz to 100 kHz (BW 500 kHz)	1 dB + 0.01 % (abs.) 2 dB + 0.04 % (abs.) 2 dB + 0.06 % (abs.)	Measurement by a distortion analyzer	TP10	
11*	HF power / HF power meters and sources and spectrum analyzers, radio		-50 dBm      to      -20 dBm	10 MHz to 30 MHz	7.8 %	Measurement by a wattmeter, 50 Ω	TP11, TP23	

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		min	unit					
	communication testers (COM, CMS, CTS,...) and radio navigation testers, simulators and imitators (ATC, DMF, TACAN, VOR – ILS, TCAS), testing and inspection equipment and their parts			30 MHz to 18 GHz	5.4 %		TP12, TP23	
		-20 dBm	to	+17 dBm	10 MHz to 30 MHz 30 MHz to 18 GHz	6.5 % 4.4 %		
		+17 dBm	to	+40 dBm	10 MHz to 18 GHz	5.7 %		
				50 kHz to 1 MHz 1 MHz to 10 MHz 10 MHz to 30 MHz 30 MHz to 250 MHz	4.7 % 6.6 % 9.0 % 6.8 %			
12*	HF voltage, peak-to-peak value / HF voltage meters, oscilloscopes	5 mV to 3 V		50 kHz to 1 MHz 1 MHz to 10 MHz 10 MHz to 30 MHz 30 MHz to 250 MHz	4.7 % 6.6 % 9.0 % 6.8 %	Direct generation by a calibrator, 50 Ω	TP12, TP23	
		3 V to 5.5 V		50 kHz to 1 MHz 1 MHz to 10 MHz 10 MHz to 30 MHz 30 MHz to 250 MHz 250 MHz to 300 MHz	4.7 % 6.6 % 9.0 % 6.8 % 6.8 %			
				20 MHz to 30 MHz 30 MHz to 100 MHz 100 MHz to 1 GHz	6.9 % 4.7 % 4.3 %			
	HF voltage, peak-to-peak value / HF voltage sources	20 mV to 1.5 V				Measurement by a wattmeter, 50 Ω	TP12	

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		min	unit					
		40 mV	to	100 mV	1 MHz to 10 MHz 10 MHz to 20 MHz	3.2 % 3.5 %	Measurement by a HF voltmeter, 50 Ω	TP12
		100 mV	to	250 mV	1 MHz to 10 MHz 10 MHz to 20 MHz	3.7 % 4.9 %		
		250 mV	to	1 V	1 MHz to 10 MHz 10 MHz to 20 MHz	2.5 % 3.6 %		
		1 V	to	1.5 V	1 MHz to 10 MHz	3.9 %		
		1.5 V	to	3 V	1 MHz to 10 MHz	3.3 %		
13	HF attenuation / HF attenuator	0 dB	to	60 dB	1.2 GHz to 3.8 GHz 3.8 GHz to 8.2 GHz 8.2 GHz to 18 GHz	0.30 dB 0.40 dB 0.70 dB	Direct measurement with attenuation meter, comparison method	TP13
		60 dB	to	80 dB	1.2 GHz to 3.8 GHz 3.8 GHz to 8.2 GHz 8.2 GHz to 18 GHz	0.80 dB 1.2 dB 1.5 dB		
13*	HF attenuation / HF attenuators and attenuation meters, radio communication testers (COM, CMS, CTS,...) and radio navigation testers, simulators and imitators (ATC, DMF, TACAN, VOR – ILS, TCAS), testing and inspection equipment and their parts	0 dB	to	30 dB	10 MHz to 30 MHz	0.50 dB	Wattmeter measurement, power method	TP13

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		min	unit					
				30 MHz to 2 GHz 2 GHz to 18 GHz	0.15 dB 0.35 dB			
		30 dB	to	50 dB	10 MHz to 30 MHz 30 MHz to 2 GHz 2 GHz to 18 GHz	0.70 dB 0.35 dB 0.50 dB		
14*	Depth of AM / amplitude modulated signal generators, amplitude modulation meters, radio communication testers (COM, CMS, CTS,...) and radio navigation testers, simulators and imitators (ATC, DMF, TACAN, VOR – ILS, TCAS), testing and inspection equipment and their parts	5 %	to	99 %	$f_c$ $f_{mod}$ 150 kHz to 10 MHz 20 Hz to 50 Hz 50 Hz to 10 kHz	3.2 % rel. 3.2 % rel. 2.2 % rel.	Direct measurement by AM depth meter	TP14
15*	FM frequency deviation / frequency modulated signal generators, frequency modulation meters, radio communication testers (COM, CMS, CTS,...) and				$f_c$ $f_{mod}$		Direct measurement with a FM frequency deviation meter	

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		min	unit					
	radio navigation testers, simulators and imitators (ATC, DMF, TACAN, VOR – ILS, TCAS), testing and inspection equipment and their parts	90 Hz	to	40 kHz	150 kHz to 10 MHz 20 Hz to 10 kHz	2.1 % + 1 Hz		
		90 Hz	to	400 kHz	10 MHz to 1.3 GHz 20 Hz to 50 Hz 50 Hz to 100 kHz 100 kHz to 200 kHz	5.1 % + 1 Hz 1.1 % + 1 Hz 5.1 % + 1 Hz		
16*	DC power / DC wattmeters	0.1 mW	to	11 kW	33 mV to 25 V      3.3 mA to 9 mA 9 mA to 33 mA 33 mA to 90 mA 90 mA to 330 mA 0.33 A to 0.9 A 0.9 A to 2.2 A 2.2 A to 4.5 A 4.5 A to 11 A  25 V to 100 V      3.3 mA to 9 mA 9 mA to 33 mA 33 mA to 50 mA 50 mA to 100 mA 100 mA to 330 mA 0.33 A to 0.9 A 0.9 A to 2.2 A 2.2 A to 4.5 A 4.5 A to 11 A	0.04 % 0.03 % 0.04 % 0.03 % 0.08 % 0.06 % 0.12 % 0.09 %  0.04 % 0.03 % 0.04 % 0.013 % 0.03 % 0.08 % 0.06 % 0.12 % 0.09 %	Direct generation with a calibrator	TP16

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		min	unit					
				100 V to 1,000 V	3.3 mA to 9 mA	0.04 %		
				9 mA to 33 mA	0.03 %			
				33 mA to 90 mA	0.04 %			
				90 mA to 330 mA	0.03 %			
				0.33 A to 0.9 A	0.08 %			
				0.9 A to 2.2 A	0.06 %			
				2.2 A to 4.5 A	0.12 %			
				4.5 A to 11 A	0.09 %			
		363 mW to 550 kW		33 mV to 1,000 V	11 A to 550 A	0.50 %	Indirect generation with a current coil calibrator	TP16
		DC power / Sources					Direct measurement with multimeters or indirect measurement with a current shunt	TP16
		1 mW to 200 kW		1 V to 1,000 V	1 mA to 200 mA	0.009 %		
				200 mA to 200 A		0.045 %		
17*	AC power / AC wattmeters (f: 45 Hz to 65 Hz, PF = 1)	0.1 mW to 11 kW		33 mV to 330 mV	3.3 mA to 9 mA	0.40 %	Direct generation with a calibrator	TP16
				9 mA to 33 mA	0.25 %			
				33 mA to 90 mA	0.35 %			
				90 mA to 330 mA	0.25 %			
				0.33 A to 0.9 A	0.35 %			
				0.9 A to 2.2 A	0.25 %			
				2.2 A to 4.5 A	0.35 %			
				4.5 A to 11 A	0.25 %			
		330 mV to 1,000 V		3.3 mA to 9 mA	0.25 %			
				9 mA to 33 mA	0.15 %			

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		min	unit					
	AC power / AC wattmeters (f: 65 Hz to 500 Hz, PF = 1)			33 mA to 90 mA	0.25 %			
				90 mA to 330 mA	0.15 %			
				0.33 A to 0.9 A	0.25 %			
				0.9 A to 2.2 A	0.15 %			
				2.2 A to 4.5 A	0.20 %			
				4.5 A to 11 A	0.15 %			
		11 kW	to	550 kW	33 mV to 1,000 V    11 A to 550 A	0.60 %	Indirect generation with a current coil calibrator	TP16
		1.089 mW	to	11 kW	330 mV to 1,000 V    3.3 mA to 9 mA 9 mA to 33 mA 33 mA to 90 mA 90 mA to 330 mA 0.33 A to 0.9 A 0.9 A to 2.2 A 2.2 A to 4.5 A 4.5 A to 11 A	0.26 % 0.16 % 0.26 % 0.16 % 0.26 % 0.16 % 0.21 % 0.16 %	Direct generation with a calibrator	TP16
		0.545 mW	to	5.5 kW	45 Hz to 65 Hz    3.3 mA to 9 mA 9 mA to 33 mA 33 mA to 90 mA 90 mA to 330 mA 0.33 A to 0.9 A 0.9 A to 2.2 A	0.55 % 0.50 % 0.55 % 0.50 % 0.55 % 0.50 %	Direct generation with a calibrator	TP16

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		min	unit					
				2.2 A to 4.5 A 4.5 A to 11 A 65 Hz to 500 Hz 3.3 mA to 11 A	0.55 % 0.50 % 2.8 %			
18*	DC electrical work / DC electrical work meters (t: 600 s to 24 h)	66 mWs to 950.4 MWs		33 mV to 25 V 33 mA to 9 mA 9 mA to 33 mA 33 mA to 90 mA 90 mA to 330 mA 0.33 A to 0.9 A 0.9 A to 2.2 A 2.2 A to 4.5 A 4.5 A to 11 A 25 V to 100 V 3.3 mA to 9 mA 9 mA to 33 mA 33 mA to 50 mA 50 mA to 100 mA 100 mA to 330 mA 0.33 A to 0.9 A 0.9 A to 2.2 A 2.2 A to 4.5 A 4.5 A to 11 A 100 V to 1,000 V 3.3 mA to 9 mA 9 mA to 33 mA 33 mA to 90 mA 90 mA to 330 mA 0.33 A to 0.9 A	0.055 % 0.050 % 0.055 % 0.050 % 0.090 % 0.070 % 0.13 % 0.10 % 0.055 % 0.050 % 0.055 % 0.040 % 0.050 % 0.090 % 0.070 % 0.13 % 0.10 % 0.055 % 0.050 % 0.055 % 0.050 % 0.090 %	Direct generation with a calibrator	TP16	

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		min	unit					
DC electrical work / Special electrical work meters with current inputs (t: 600 s to 24 h)				0.9 A to 2.2 A 2.2 A to 4.5 A 4.5 A to 11 A	0.070 % 0.13 % 0.10 %			
		217.8 Ws	to	47.52 GWs	33 mV to 1,000 V    11 A to 550 A	0.55 %	Indirect generation with a current coil calibrator	TP16
		0 Ws	to	2.4 GWh	I <sub>1</sub> : 0 µA to 2 A    I <sub>2</sub> : 10 µA to 2 A	0.1 % + 1 Ws	Direct generation with calibrators	TP16
		0.66 Ws	to	950.4 MWs	330 mV to 1,000 V    3.3 mA to 9 mA 9 mA to 33 mA 33 mA to 90 mA 90 mA to 330 mA 0.33 A to 0.9 A 0.9 A to 2.2 A 2.2 A to 4.5 A 4.5 A to 11 A	0.28 % 0.18 % 0.28 % 0.18 % 0.28 % 0.18 % 0.23 % 0.18 %	Direct generation with a calibrator	TP16
19*	AC electrical work / AC electrical work meters (f: 45 Hz to 65 Hz, PF = 1, t: 600 s to 24 h)	2.178 kWs	to	47.52 GWs	330 mV to 1,000 V    11 A to 550 A	0.63 %	Indirect generation with a current coil calibrator	TP16
		0.66 Ws	to	950.4 MWs	330 mV to 1,000 V    3.3 mA to 9 mA 9 mA to 33 mA	0.29 % 0.19 %	Direct generation with a calibrator	TP16
	AC electrical work / AC electrical work meters (f: 65 Hz to 500 Hz, PF = 1, t: 600 s to 24 h)							

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		min	unit						
				33 mA to 90 mA 90 mA to 330 mA 0.33 A to 0.9 A 0.9 A to 2.2 A 2.2 A to 4.5 A 4.5 A to 11 A	0.29 % 0.19 % 0.29 % 0.19 % 0.24 % 0.19 %				
	AC electrical work / AC electrical work meters (f: 45 Hz to 65 Hz, PF = 0.5 inductive and capacitive t: 600 s to 24 h)	0.33 Ws	to	475.2 MWs	330 mV to 1,000 V 3.3 mA to 9 mA 9 mA to 33 mA 33 mA to 90 mA 90 mA to 330 mA 0.33 A to 0.9 A 0.9 A to 2.2 A 2.2 A to 4.5 A 4.5 A to 11 A	0.58 % 0.53 % 0.58 % 0.53 % 0.58 % 0.53 % 0.58 % 0.53 %			
	AC electrical work / AC electrical work meters (f: 65 Hz to 500 Hz, PF = 0.5 inductive and capacitive t: 600 s to 24 h)	0.33 Ws	to	475.2 MWs	330 mV to 1,000 V 3.3 mA to 11 A	2.9 %			
20*	Reflection coefficient / Measurement of impedance matching at 50 Ω impedance	0.00	to	0.10	10 MHz to 2 GHz	0.020	Measurement with a directional bridge, N connector, 50 Ω	TP17	
		0.10	to	0.20	10 MHz to 2 GHz	0.030			

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		min	unit					
21*	Voltages above 1,000 V / DC and AC high voltage sources and surge generators - peak value	0.20	to	0.30	10 MHz to 2 GHz	0.045		
		0.00	to	0.15	2 GHz to 18 GHz	0.070	Measurement with a directional coupling, N connector, 50 Ω	TP17
		0.15	to	0.20	2 GHz to 18 GHz	0.080		
		0.20	to	0.30	2 GHz to 18 GHz	0.10		
		1 kV	to	3 kV	0 Hz	0.21 %	Measurement with a multimeter with a resistance divider	TP18
		3 kV	to	90 kV	0 Hz	0.20 %	High voltage probe measurement	TP18
		90 kV	to	100 kV	0 Hz	0.25 %		
		1 kV	to	1.5 kV	up to 75 MHz	3 dB	Measurement using an oscilloscope with a HV probe	TP18
		1 kV	to	3 kV	up to 10 MHz	3 dB		
		1 kV	to	8 kV	up to 1 MHz	3 dB		
		1 kV	to	10 kV	up to 500 kHz	3 dB		
		1 kV	to	14 kV	rise time >10 ns	3 dB		
		1 kV	to	25 kV	50 Hz	0.3 %	Measurement using a measuring transformer	TP18
	Voltages above 1,000 V / DC and AC high voltage meters, HV voltage/current transducers	1 kV	to	4 kV	50 Hz	0.5 %	Generation using generator and measuring transformer	TP18

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		min	unit					
		1 kV	to	30 kV	0 Hz	0.25 %	Generation using a generator and resistor divider	TP18
22	Mains impedance / Instruments for the inspection of electrical installations and resistance-based impedance standards	0.17 Ω	to	1 Ω	50 Hz	0.006 Ω	Generation using a reference socket	TP6, TP27
		0.16 Ω			50 Hz	0.5 % + 0.006 Ω		
		1 Ω	to	10 Ω	50 Hz	0.3 % + 0.006 Ω		
		10 Ω	to	2 kΩ	50 Hz	0.1 % + 0.006 Ω		
23*	Phase shift / Phase shifted voltage signal sources	0°	to	360°	U <sub>1</sub> = U <sub>2</sub> , where U <sub>1</sub> : 10 mV to 50 V U <sub>2</sub> : 10 mV to 50 V or U <sub>1</sub> : 10 mV to 30 V U <sub>2</sub> : 1 V to 250 V 2 Hz to 200 kHz	1°	Measurement by a phase shift meter	TP32
	Phase shift / Phase shifted voltage signal meters	0°	to	360°	U <sub>1</sub> : 10 mV to 3 V U <sub>2</sub> : 10 mV to 3 V 2 Hz to 200 kHz	1°	Direct generation with a calibrator	
24*	Oscilloscope vertical deflection coefficient	12 mV	to	55 V	1 kHz	0.05 % + 20 μV	Direct measurement of commutated voltage with a multimeter	TP2, TP23
		-300 V	to	300 V	0 Hz	0.005 % + 10 μV	Direct generation with a calibrator	
		12 mV	to	55 V	1 kHz	0.30 % + 100 μV		TP2, TP23

<sup>1</sup> Asterisk at the ordinal number identifies the calibrations, which the Laboratory is qualified to carry out outside the permanent laboratory premises.

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<sup>2</sup> The expanded measurement uncertainty is in accordance with ILAC-P14 and EA-4/02 M a part of CMC and it is the lowest value of the respective uncertainty. If not stated otherwise, its coverage probability is approx. 95 %. If not stated otherwise, the uncertainty values stated without a unit are relative to the measured value. The uncertainty value stated herein is based on the best conditions achievable by the laboratory; the uncertainty value of a specific calibration may be higher depending on the conditions of such a calibration. For identical extreme values of adjacent ranges, the lower uncertainty value always applies.

<sup>3</sup> If the document identifying the calibration procedure is dated, only these specific procedures are used. If the document identifying the calibration procedure is not dated, the latest edition of the specified procedure is used (including any changes).

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**CMC for the field of measured quantity: Time and frequency quantities**

Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded measurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work- place
		min	unit					
1*	Frequency / LF and HF counters, LF and HF generators, variable speed drives, frequency standards, frequency comparators and pulse generators	0.005 Hz	to	400 kHz	$3.3 \times 10^{-4} / f$ (note 4)	$3 \times 10^{-4}$	Comparison with a standard, measurement	TP9, TP22
		400 kHz	to	1.5 GHz		$1.2 \times 10^{-9}$		
		1.5 GHz	to	18 GHz		$3 \times 10^{-9}$		
		1 MHz		$\tau$ : 1 s to 2,000 s $\tau$ : 2,000 s to 15,000 s $\tau$ : over 15,000 s	$3 \times 10^{-10}$ $1 \times 10^{-11}$ $5 \times 10^{-12}$	$3 \times 10^{-10}$ $1 \times 10^{-11}$ $5 \times 10^{-12}$		
		5 MHz		$\tau$ : 1 s to 2,000 s $\tau$ : 2,000 s to 15,000 s $\tau$ : over 15,000 s	$3 \times 10^{-10}$ $1 \times 10^{-11}$ $5 \times 10^{-12}$	$3 \times 10^{-10}$ $1 \times 10^{-11}$ $5 \times 10^{-12}$		
2*	Time stamps / Oscilloscopes, transient recorders	10 MHz		$\tau$ : 1 s to 2,000 s $\tau$ : 2,000 s to 15,000 s $\tau$ : over 15,000 s	$3 \times 10^{-10}$ $1 \times 10^{-11}$ $5 \times 10^{-12}$	$3 \times 10^{-10}$ $1 \times 10^{-11}$ $5 \times 10^{-12}$	Generation of reference signal	TP9, TP22
		1 Hz	to	10 MHz 18 ns to 2.2 ns 4.5 ns to 11 ns 18 ns to 22 ns 45 ns to 60 s 1 s	$1 \times 10^{-11}$ $1 \times 10^{-9}$	$1 \times 10^{-11}$ $1 \times 10^{-9}$		
		1.8 ns	to	2.2 ns	0.005 %	0.005 %	Direct generation by a calibrator, generator	TP23
		4.5 ns	to	11 ns	0.005 %	0.005 %		
		18 ns	to	22 ns	0.005 %	0.005 %		
		45 ns	to	60 s	0.005 %	0.005 %		
				1 s	$1 \times 10^{-9}$	$1 \times 10^{-9}$		

**The Appendix is an integral part of  
Certificate of Accreditation No. 362/2023 of 7. 7. 2023**

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Ord. num- ber <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded measurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work-place
		min	unit					
3*	Rise time / Oscilloscopes, transient recorders		0.1 ns	50 mV, 500 mV, 1 V	0.1 ns	Direct generation by a calibrator, generator	TP23	
		0.70 ns	to 0.80 ns	4.5 mV to 5.5 mV 9 mV to 11 mV 45 mV to 55 mV 90 mV to 110 mV 450 mV to 550 mV 0.9 V to 1.1 V	0.3 ns 0.2 ns 0.2 ns 0.2 ns 0.2 ns 0.2 ns			
		0.80 ns	to 0.90 ns	22.5 mV to 27.5 mV 225 mV to 275 mV 2.25 V to 2.75 V	0.2 ns 0.2 ns 0.2 ns			
4*	Time Interval / Stopwatches, timers, time meters and time interval sources	0.1 s	to	10 <sup>5</sup> s	Electronically switched	0.004 %	Direct measurement of time by a counter, stopwatch	TP33
		1 s	to	90,000 s	Manually switched	0.20 s	Direct measurement of time intervals with an oscilloscope	TP33
		100 ps	to	60 s		0.2 % + 50 ps		

<sup>1</sup> Asterisk at the ordinal number identifies the calibrations, which the Laboratory is qualified to carry out outside the permanent laboratory premises.

<sup>2</sup> The expanded measurement uncertainty is in accordance with ILAC-P14 and EA-4/02 M a part of CMC and it is the lowest value of the respective uncertainty. If not stated otherwise, its coverage probability is approx. 95 %. If not stated otherwise, the uncertainty values stated without a unit are relative to the measured value. The uncertainty value stated herein is based on the best conditions achievable by the laboratory; the uncertainty value of a specific calibration may be higher depending on the conditions of such a calibration. For identical extreme values of adjacent ranges, the lower uncertainty value always applies.

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<sup>4</sup> Measured frequency in Hz

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**CMC for the field of measured quantity: Physicochemical quantities**

Ord. number <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the measurand	Lowest stated expanded mesurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Work place
		min	unit	max	unit					
1*	Humidity / Analog and digital hygrometers, humidity transducers and humidity measuring chains, including humidity probes									
		5 % RH	to	10 % RH	(10 to 50) °C		2.2 %	Comparison with a standard hygrometer in a conditioning chamber	TP45	
		10 % RH	to	50 % RH	(10 to 50) °C		1.4 %			
		50 % RH	to	70 % RH	(10 to 50) °C		1.6 %			
		70 % RH	to	90 % RH	(10 to 50) °C		1.8 %			
2*	pH / Electrical parts of pH meters and pH simulators	0 pH	to	14 pH			0.01 pH	Direct generation with a calibrator	TP1, TP21	

<sup>1</sup> Asterisk at the ordinal number identifies the calibrations, which the Laboratory is qualified to carry out outside the permanent laboratory premises.

<sup>2</sup> The expanded measurement uncertainty is in accordance with ILAC-P14 and EA-4/02 M a part of CMC and it is the lowest value of the respective uncertainty. If not stated otherwise, its coverage probability is approx. 95 %. If not stated otherwise, the uncertainty values stated without a unit are relative to the measured value. The uncertainty value stated herein is based on the best conditions achievable by the laboratory; the uncertainty value of a specific calibration may be higher depending on the conditions of such a calibration. For identical extreme values of adjacent ranges, the lower uncertainty value always applies.

<sup>3</sup> If the document identifying the calibration procedure is dated, only these specific procedures are used. If the document identifying the calibration procedure is not dated, the latest edition of the specified procedure is used (including any changes).