

Calibration Uncertainty

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Informationsblatt / *Information Sheet*

Calibration Uncertainty for Calibration in DKD-Calibration Laboratory DKD-K-11701

measuring value respective object of calibration	type of voltage	range	measuring uncertainty
direct voltage		0,2 V to 1000 V	$1,5 \cdot 10^{-4} \cdot U$
peak value, amplitude			
impulse calibration generator	LI, SI	16 V to 1950 V	$5 \cdot 10^{-3} \cdot U$
	LIC	16 V to 1950 V	$7 \cdot 10^{-3} \cdot U$
step voltage generator	STEP	16 V to 1950 V	$4 \cdot 10^{-3} \cdot U$
digital recorder, impulse voltmeter	LI, SI	50 V to 1000 V	$5 \cdot 10^{-3} \cdot U$
	LIC	100 V to 750 V	$7 \cdot 10^{-3} \cdot U$
	STEP	10 mV to 1000 V	$4 \cdot 10^{-3} \cdot U$
time parameter			
(front time, time-to-half-value, time-to-chopping, time-to-peak, risetime, etc.)	LI, SI, LIC, STEP	0,3 μ s to 20 ms	$17 \cdot 10^{-3} \cdot t$
time interval			
	squarewave edges	20 ms	21 ns

Calibration Uncertainty for Calibration On-Site

measuring value respective object of calibration	type of voltage	range	measuring uncertainty
direct voltage		0,2 V to 1000 V	$0,7 \cdot 10^{-3} \cdot U$
peak value, amplitude			
impulse calibration generator	LI, SI	16 V to 1950 V	$6 \cdot 10^{-3} \cdot U$
	LIC	16 V to 1950 V	$8 \cdot 10^{-3} \cdot U$
step voltage generator	STEP	16 V to 1950 V	$5 \cdot 10^{-3} \cdot U$
digital recorder, impulse voltmeter	LI, SI	50 V to 1000 V	$6 \cdot 10^{-3} \cdot U$
	LIC	100 V to 750 V	$8 \cdot 10^{-3} \cdot U$
	STEP	10 mV to 1000 V	$5 \cdot 10^{-3} \cdot U$
time parameter			
(front time, time-to-half-value, time-to-chopping, time-to-peak, risetime, etc.)	LI, SI, LIC, STEP	0,3 μ s to 20 ms	$18 \cdot 10^{-3} \cdot t$
time interval			
	squarewave edges	20 ms	22 ns

Abbreviations:	U, t	actual measuring values of voltage, time
	LI	full wave lightning impulse
	LIC	chopped LI, $T_C \cong 0,5 \mu$ s
	SI	switching impulse
	STEP	step voltage