Annex to ISO/IEC 17025 accreditation-certificate
number: **K 063**

of **D.A.R.E!! Calibrations B.V.**

Woerden

Valid from: **17-12-2007** until **22-10-2009** Replaces annex dated: **06-03-2007**

Measured quantity, range		Frequency	Best measurement capabilities (k=2)	Remarks
LF 0 0	DC/LF Quantities			
LF 1 0	DC Voltage			
	0 - 2 mV		$6 \cdot 10^{-6} \cdot U$ + 0,9 μV	Generating
	2 – 20 mV		$7 \cdot 10^{-6} \cdot U$ + 0,9 μV	
	20 mV - 200 mV		$9 \cdot 10^{-6} \cdot U$ + 1,0 μV	
	200 mV - 2 V		$7 \cdot 10^{-6} \cdot U$ + 1,2 μV	
	2 V - 20 V		$5 \cdot 10^{-6} \cdot U$ + 8 μV	
	20 V - 200 V		$7 \cdot 10^{-6} \cdot U$ + 0,08 mV	
	200 V - 1000 V		$9 \cdot 10^{-6} \cdot U$ + 0,6 mV	
	0- 200 mV		$7 \cdot 10^{-6} \cdot U$ + 0,8 μV	Measuring
	200 mV - 2 V		$8 \cdot 10^{-6} \cdot U$ + 1,0 μV	
	2 V - 20 V		$7 \cdot 10^{-6} \cdot U$ + 7 μV	
	20 V - 200 V		$1{,}2 \cdot 10^{-5} \cdot U$ + 0,06 mV	
	200 V - 1000 V		$1{,}2 \cdot 10^{-5} \cdot U$ + 0,8 mV	
LF 2 0	DC Current			
	0 - 200 μA		$1{,}2 \cdot 10^{-4} \cdot I$ + 5 nA	Generating
	200 μA - 2 mA		$5 \cdot 10^{-5} \cdot I$ + 12 nA	
	2 - 20 mA		$5 \cdot 10^{-5} \cdot I$ + 0,12 μA	
	20 - 200 mA		$5 \cdot 10^{-5} \cdot I$ + 1,2 μA	
	200 mA - 2 A		$1{,}2 \cdot 10^{-4} \cdot I$ + 23 μA	

This annex has been approved by:

Ir. J.C. van der Poel
Chief Executive

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Measured quantity, range		Frequency	Best measurement capabilities (k=2)	Remarks
	0 - 200 µA		$1{,}2\cdot10^{-4}\cdot I$ + 5 nA	Measuring
	200 µA - 2 mA		$1{,}2\cdot10^{-4}\cdot I$ + 0,05 µA	
	2 - 20 mA		$1{,}2\cdot10^{-4}\cdot I$ + 0,5 µA	
	20 - 200 mA		$1{,}2\cdot10^{-4}\cdot I$ + 5 µA	
	200 mA - 2 A		$2{,}4\cdot10^{-4}\cdot I$ + 0,05 µA	
LF 3 0	AC Voltage			
	0 - 2 mV	30 Hz – 3,3 kHz	$1{,}1\cdot10^{-3}\cdot U$ + 6 µV	Generating, 2-wire
		3,3 – 10 kHz	$1{,}8\cdot10^{-3}\cdot U$ + 6 µV	
		10 - 33 kHz	$4\cdot10^{-3}\cdot U$ + 6 µV	
		33 - 100 kHz	$10\cdot10^{-3}\cdot U$ + 6 µV	
	2 mV - 20 mV	30 Hz - 1 kHz	$3{,}2\cdot10^{-4}\cdot U$ + 6 µV	
		1 - 3,3 kHz	$5\cdot10^{-4}\cdot U$ + 6 µV	
		3,3 – 10 kHz	$1{,}3\cdot10^{-3}\cdot U$ + 6 µV	
		10 - 33 kHz	$3{,}5\cdot10^{-3}\cdot U$ + 6 µV	
		33 - 100 kHz	$1{,}2\cdot10^{-2}\cdot U$ + 6 µV	
	20 mV - 200 mV	30 - 330 Hz	$2{,}3\cdot10^{-4}\cdot U$ + 6 µV	
		330 Hz - 1 kHz	$3{,}1\cdot10^{-4}\cdot U$ + 6 µV	
		1 – 3,3 kHz	$6\cdot10^{-4}\cdot U$ + 6 µV	
		3,3 - 10 kHz	$1{,}3\cdot10^{-3}\cdot U$ + 6 µV	
		10 - 33 kHz	$3{,}6\cdot10^{-3}\cdot U$ + 6 µV	
		33 - 100 kHz	$1{,}2\cdot10^{-2}\cdot U$ + 6 µV	
	90 mV - 2V	10 - 32 Hz	$1{,}3\cdot10^{-4}\cdot U$ + 35 µV	Generating, 4-wire
		32 - 330 Hz	$9\cdot10^{-5}\cdot U$ + 25 µV	
		330 Hz – 3,3 kHz	$7\cdot10^{-5}\cdot U$ + 25 µV	
		3,3 - 33 kHz	$9\cdot10^{-5}\cdot U$ + 11 µV	
		33 - 100 kHz	$2{,}2\cdot10^{-4}\cdot U$ + 23 µV	
		100 - 330 kHz	$1{,}6\cdot10^{-3}\cdot U$ + 0,12 mV	

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Measured quantity, range	Frequency	Best measurement capabilities (k=2)	Remarks
	330 kHz - 1 MHz	$1{,}4\cdot10^{-2}\cdot U$ + 0,9 mV	
2 V - 20 V	30 - 32 Hz	$1{,}3\cdot10^{-4}\cdot U$ + 0,35 mV	
	32 - 330 Hz	$9\cdot10^{-5}\cdot U$ + 0,25 mV	
	330 Hz - 33 kHz	$8\cdot10^{-5}\cdot U$ + 0,12 mV	
	33 - 100 kHz	$2{,}2\cdot10^{-4}\cdot U$ + 0,23 mV	
	100 - 330 kHz	$1{,}6\cdot10^{-3}\cdot U$ + 1,2 mV	
	330 kHz - 1 MHz	$1{,}1\cdot10^{-2}\cdot U$ + 5 mV	
20 V - 200 V	10 - 32 Hz	$1{,}7\cdot10^{-4}\cdot U$ + 9 mV	
	32 - 330 Hz	$1{,}2\cdot10^{-4}\cdot U$ + 6 mV	
	330 Hz - 10 kHz	$1{,}1\cdot10^{-4}\cdot U$ + 1,2 mV	
	10 - 330 kHz	$1{,}2\cdot10^{-4}\cdot U$ + 2,3 mV	
	330 kHz – 1 MHz	$4\cdot10^{-4}\cdot U$ + 3,5 mV	
200 V - 1000 V	50 - 330 Hz	$9\cdot10^{-4}\cdot U$ + 50 mV	
	330 Hz- 10 kHz	$7\cdot10^{-4}\cdot U$ + 40 mV	
	10 - 33 kHz	$9\cdot10^{-4}\cdot U$ + 50 mV	
2 mV - 200 mV	20 - 40 Hz	$3\cdot10^{-4}\cdot U$ + 5 µV	Measuring
	40 Hz - 2 kHz	$2{,}8\cdot10^{-4}\cdot U$ + 5 µV	
	2 - 3 kHz	$2{,}7\cdot10^{-4}\cdot U$ + 7 µV	
	3 - 10 kHz	$2{,}7\cdot10^{-4}\cdot U$ + 5 µV	
	10 - 30 kHz	$5\cdot10^{-4}\cdot U$ + 5 µV	
	30 - 100 kHz	$9\cdot10^{-4}\cdot U$ + 5 µV	
200 mV - 2 V	20 - 40 Hz	$2{,}1\cdot10^{-4}\cdot U$ + 23 µV	
	40 - 100 Hz	$1{,}9\cdot10^{-4}\cdot U$ + 23 µV	
	100 - 300 Hz	$1{,}7\cdot10^{-4}\cdot U$ + 23 µV	
	300 - 1000 Hz	$1{,}6\cdot10^{-4}\cdot U$ + 23 µV	
	1 - 3 kHz	$1{,}8\cdot10^{-4}\cdot U$ + 23 µV	
	3 - 10 kHz	$3\cdot10^{-4}\cdot U$ + 0,05 mV	
	10 - 60 kHz	$6\cdot10^{-4}\cdot U$ + 0,23 mV	

Measured quantity, range		Frequency	Best measurement capabilities (k=2)	Remarks
		60 - 100 kHz	$3{,}5 \cdot 10^{-4} \cdot U$ + 2,3 mV	
		100 - 300 kHz	$3{,}7 \cdot 10^{-4} \cdot U$ + 2,3 mV	
		300 kHz - 1 MHz	$1{,}2 \cdot 10^{-2} \cdot U$ + 23 mV	
	2 V - 20 V	20 - 40 Hz	$2{,}1 \cdot 10^{-4} \cdot U$ + 0,23 mV	
		40 - 100 Hz	$1{,}9 \cdot 10^{-4} \cdot U$ + 0,23 mV	
		100 Hz - 3 kHz	$1{,}6 \cdot 10^{-4} \cdot U$ + 0,23 mV	
		3 - 10 kHz	$3{,}0 \cdot 10^{-4} \cdot U$ + 0,5 mV	
		10 - 60 kHz	$6 \cdot 10^{-4} \cdot U$ + 2,3 mV	
		60 - 300 kHz	$3{,}7 \cdot 10^{-3} \cdot U$ + 23 mV	
		300 kHz - 1 MHz	$1{,}2 \cdot 10^{-2} \cdot U$ + 0,23 V	
	20 V - 200 V	20 - 40 Hz	$2{,}2 \cdot 10^{-4} \cdot U$ + 2,3 mV	
		40 - 100 Hz	$1{,}9 \cdot 10^{-4} \cdot U$ + 2,3 mV	
		100 – 300 Hz	$1{,}7 \cdot 10^{-4} \cdot U$ + 2,3 mV	
		300 Hz – 3 kHz	$1{,}6 \cdot 10^{-4} \cdot U$ + 2,3 mV	
		3 - 10 kHz	$1{,}8 \cdot 10^{-4} \cdot U$ + 2,3 mV	
		10 - 30 kHz	$3 \cdot 10^{-4} \cdot U$ + 5 mV	
		30 - 100 kHz	$7 \cdot 10^{-4} \cdot U$ + 23 mV	
	200 V - 1000 V	40 Hz - 3 kHz	$1{,}7 \cdot 10^{-3} \cdot U$ + 23 mV	
		3 - 10 kHz	$2{,}8 \cdot 10^{-3} \cdot U$ + 23 mV	
		10 - 30 kHz	$2{,}8 \cdot 10^{-3} \cdot U$ + 50 mV	
LF 4 0	AC Current			
	10 - 200 µA	10 - 32 Hz	$2{,}3 \cdot 10^{-4} \cdot I$ + 12 nA	Generating
		32 - 330 Hz	$1{,}9 \cdot 10^{-3} \cdot I$ + 11 nA	
		330 - 1000 Hz	$6 \cdot 10^{-3} \cdot I$ + 5 nA	
	200 µA - 2 mA	10 - 32 Hz	$1{,}6 \cdot 10^{-4} \cdot I$ + 0,11 µA	
		32 - 330 Hz	$1{,}6 \cdot 10^{-4} \cdot I$ + 0,12 µA	
		330 - 1000 Hz	$1{,}5 \cdot 10^{-4} \cdot I$ + 0,12 µA	

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Measured quantity, range	Frequency	Best measurement capabilities (k=2)	Remarks
	1 - 3,3 kHz	$2{,}6\cdot10^{-4}\cdot I$ + 0,12 μA	
	3,3 - 5 kHz	$2{,}7\cdot10^{-4}\cdot I$ + 0,12 μA	
2 mA - 20 mA	10 - 32 Hz	$1{,}6\cdot10^{-4}\cdot I$ + 1,1 μA	
	32 - 330 Hz	$1{,}6\cdot10^{-4}\cdot I$ + 1,2 μA	
	330 - 1000 Hz	$1{,}4\cdot10^{-4}\cdot I$ + 1,2 μA	
	1 - 3,3 kHz	$2{,}6\cdot10^{-4}\cdot I$ + 1,2 μA	
	3,3 - 5 kHz	$2{,}7\cdot10^{-4}\cdot I$ + 1,2 μA	
20 mA - 200 mA	10 - 32 Hz	$1{,}6\cdot10^{-4}\cdot I$ + 11 μA	
	32 - 330 Hz	$1{,}6\cdot10^{-4}\cdot I$ + 12 μA	
	330 - 1000 Hz	$1{,}4\cdot10^{-4}\cdot I$ + 12 μA	
	1 - 3,3 kHz	$2{,}6\cdot10^{-4}\cdot I$ + 12 μA	
	3,3 - 5 kHz	$2{,}7\cdot10^{-4}\cdot I$ + 12 μA	
200 mA - 2 A	10 - 32 Hz	$4\cdot10^{-4}\cdot I$ + 0,12 mA	
	32 - 330 Hz	$6\cdot10^{-4}\cdot I$ + 0,12 mA	
	330 - 1000 Hz	$1{,}5\cdot10^{-5}\cdot I$ + 0,10 mA	
	1 - 3,3 kHz	$5\cdot10^{-4}\cdot I$ + 0,09 mA	
	3,3 - 5 kHz	$8\cdot10^{-3}\cdot I$ + 33 μA	
10 μA - 200 μA	50 - 1000 Hz	$3{,}8\cdot10^{-4}\cdot I$ + 23 nA	Measuring
	1 - 5 kHz	$7\cdot10^{-4}\cdot I$ + 23 nA	
200 μA - 2 mA	50 - 300 Hz	$3{,}6\cdot10^{-4}\cdot I$ + 0,23 μA	
	300 - 1000 Hz	$3{,}7\cdot10^{-4}\cdot I$ + 0,23 μA	
	1 - 5 kHz	$7\cdot10^{-4}\cdot I$ + 0,23 μA	
2 mA - 20 mA	50 - 300 Hz	$3{,}6\cdot10^{-4}\cdot I$ + 2,3 μA	
	300 - 1000 Hz	$3{,}8\cdot10^{-4}\cdot I$ + 2,3 μA	
	1 - 5 kHz	$7\cdot10^{-4}\cdot I$ + 2,3 μA	
20 mA - 200 mA	50 - 1000 Hz	$3{,}6\cdot10^{-4}\cdot I$ + 23 μA	
	1 - 5 kHz	$7\cdot10^{-4}\cdot I$ + 23 μA	

Measured quantity, range		Frequency	Best measurement capabilities (k=2)	Remarks
	200 mA - 2 A	50 - 1000 Hz	$2{,}3 \cdot 10^{-3} \cdot I$ + 1,2 mA	
		1 - 5 kHz	$2{,}3 \cdot 10^{-3} \cdot I$ + 1,2 mA	
LF 6 1	Resistance			
LF 6 2	DC resistance			
	1 Ω		0,2 mΩ	Generating, 4-wire
	10 Ω		0,5 mΩ	
	100 Ω		1,9 mΩ	
	1 kΩ		21 mΩ	
	10 kΩ		0,2 Ω	
	100 kΩ		2,3 Ω	
	1 MΩ		33 Ω	
	10 MΩ		0,7 kΩ	
	100 MΩ		9 kΩ	
	10 Ω		0,24 Ω	Generating, 2-wire
	100 Ω		0,24 Ω	
	1 kΩ		0,35 Ω	
	10 kΩ		0,5 Ω	
	100 kΩ		2,6 Ω	
	1 MΩ		33 Ω	
	10 MΩ		0,7 kΩ	
	100 MΩ		22 kΩ	
	0 - 20 Ω		$2{,}0 \cdot 10^{-5} \cdot R$ + 0,12 mΩ	Measuring, 4-wire
	20 - 200 Ω		$1{,}5 \cdot 10^{-5} \cdot R$ + 0,2 mΩ	
	200 - 2000 Ω		$1{,}2 \cdot 10^{-5} \cdot R$ + 1,3 mΩ	

Measured quantity, range		Frequency	Best measurement capabilities (k=2)	Remarks
	2 - 20 kΩ		$1{,}2\cdot10^{-5}\cdot R$ + 13 mΩ	
	20 - 200 kΩ		$2{,}1\cdot10^{-5}\cdot R$ + 110 mΩ	
	200 kΩ - 2 MΩ		$3{,}1\cdot10^{-5}\cdot R$ + 1,6 Ω	
	2 - 20 MΩ		$3{,}6\cdot10^{-5}\cdot R$ + 100 Ω	Measuring, 2-wire
	20 - 200 MΩ		$1{,}7\cdot10^{-4}\cdot R$ + 10 kΩ	
	200 MΩ - 2 GΩ		$3{,}5\cdot10^{-3}\cdot R$ + 1,1 MΩ	
RF 0 0	High frequency quantities			
RF 2 1	Reflection coefficient			
	Magnitude 0 to 1,0	30 kHz – 1 MHz	0,005+0,007·Γ+0,005·Γ²	Nom. impedance 50 Ω at nominal -10 dBm RF power
		1 MHz - 2 GHz	0,005+0,003·Γ+0,005·Γ²	
		2 GHz - 8 GHz	0,02+0,004·Γ+0,02·Γ²	
		8 GHz – 18 GHz	0,03+0,004·Γ+0,04·Γ²	
	Phase –180° to + 180°	30 kHz -18 GHz	$u(\theta) = \arcsin\left(\frac{u(\lvert\Gamma\rvert)}{\lvert\Gamma\rvert}\right)$	If the magnitude is less than its uncertainty, the phase uncertainty is 180°
RF 2 1 1	Impedance			
	LISN Impedance	30 kHz – 30 MHz	0,3 Ω - 0,9 Ω	50 µH + 5 Ω // 50 Ω
		30 kHz – 30 MHz	0,3 Ω - 0,9 Ω	50 µH // 50 Ω
		100 kHz – 108 MHz	0,5 Ω - 1,0 Ω	5 µH + 1 Ω // 50 Ω
	CDN Impedance	150 kHz – 230 MHz	4 Ω – 8 Ω	150 Ω nominal
			1,6 ° – 4 °	

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Measured quantity, range		Frequency	Best measurement capabilities (*k*=2)	Remarks
RF 2 2	Transmission Coefficient			For coaxial 50 Ω devices
	Magnitude 0 to – 40 dB	30 kHz – 1 MHz	0,07 dB	at nom. -10 dBm RF power
		1 MHz - 2 GHz	0,03 dB	
		2 GHz - 8 GHz	0,08 dB	
		8 GHz – 18 GHz	0,10 dB	
	Magn. (–40 to –70)dB	30 kHz – 18 GHz	0,10 dB	at nom. 0 dBm RF power
	Magn. (–70 to –100)dB	30 kHz – 18 GHz	1,0 dB	at nom. +10 dBm RF power
RF 3 0	High Frequency Power			
	Calibration factors of power sensors	30 kHz – 3 MHz	0,10 dB – 0,05 dB	2), 0 dBm nominal
		3 MHz – 300 MHz	0,05 dB	2), 0 dBm nominal
		300 MHz – 4,2 GHz	0,05 dB – 0,07 dB	2), 0 dBm nominal
		10 MHz – 4 GHz	0,07 dB	2), -30 dBm nominal
		4 GHz – 10 GHz	0,07 dB – 0,11 dB	2), -30 dBm nominal
		10 GHz – 18 GHz	0,11 dB	2), -30 dBm nominal
	Linearity of RF power			
	0 to -10 dBm	30 kHz – 4,2 GHz	0,03 dB	
	0 to -20 dBm	30 kHz – 4,2 GHz	0,05 dB	
	0 to -40 dBm	10 MHz – 18 GHz	0,05 dB	
	0 to -50 dBm	10 MHz – 18 GHz	0,07 dB	
	0 to -60 dBm	10 MHz – 18 GHz	0,09 dB	
	Absolute power			
	-25 dBm to +10 dBm	30 kHz - 300 kHz	0,5 dB - 0,07 dB	3)
	-25 dBm to +10 dBm	300 kHz - 4,2 GHz	0,07 dB	3)
	-60 dBm to -20 dBm	10 MHz - 18 GHz	0,09 dB	3)

Measured quantity, range		Frequency	Best measurement capabilities (*k*=2)	Remarks
	Frequency response of power measuring devices	30 kHz - 18 GHz	0,06 dB	2), at nom. –20 dBm RF power
	Response of CISPR receivers			
	QP and AV	9 kHz - 1 GHz	0,3 dB	3)
	Bandwidth of RBW filters			
	1 Hz to 10 MHz	30 kHz - 2,4 GHz	0,8 + 0,02·BW	
	1 Hz to 10 MHz	10 MHz - 18 GHz	0,08 + 0,02·BW	
RF 5 0	Electrical /magnetic field quantities /EMC			
	Electrical Field Strength 1 – 200 V/m	100 kHz – 30 MHz	0,5 – 0,6 dB	Temcell
		30 MHz – 75 MHz	0,6 – 1,3 dB	
		75 MHz – 200 MHz	2,4 dB	
	Electrical Field Strength 1 – 100 V/m	200 MHz – 4 GHz	1,2 dB	Anechoic Chamber
		4 GHz – 12GHz	1,3 dB	
		12 GHz – 18 GHz	1,3 - 2,4 dB	
		18 GHz – 40 GHz	2,4 dB	
	Antenna factor			
	ANSI C63.5 / CISPR 16	30 MHz – 5 GHz	0,8 dB	OATS, Standard Site method
	ANSI C63.5 / CISPR 16	30 MHz – 1 GHz	0,8 dB	OATS, Reference antenna method

Measured quantity, range	Frequency	Best measurement capabilities (*k*=2)	Remarks
Free Space Antennes	20 MHz – 100 MHz	0,9 dB	Free space
	100 MHz – 200 MHz	0,8 dB	
	200 MHz – 5 GHz	0,7 dB	
Surge generators and coupling/decoupling networks waveform surge voltage			According to EN 61000-4-5, (November 2005), §6.1.2, §6.2.2 and §6.3.1
0 V – 550 V		6,7 V + 0,022·*U*	Coupling/decoupling networks for a.c./d.c. power supply circuits only in combination with appropriate surge generator
0 V – 1,1 kV		13,4 V + 0,022·*U*	
0 V – 2,8 kV		33,5 V + 0,022·*U*	
0 V – 5,5 kV		67 V + 0,022·*U*	
Waveform surge current			
0 A – 300 A		3,6 A + 0,022·*I*	Measurements at coupling/decoupling network input, output; coupling modes line to neutral, line to earth and neutral to earth
0 A – 0,6 kA		7,2 A + 0,022·*I*	
0 A – 1,5 kA		18 A + 0,022·*I*	
0 A – 3 kA		36 A + 0,022·*I*	
Front time			
0,8 µs – 1,6 µs		0,1 µs	Voltage
5 µs – 11 µs		0,35 µs	Current, line to line
1,3 µs – 3,1 µs		0,35 µs	Current, line to earth

Measured quantity, range	Frequency	Best measurement capabilities (*k*=2)	Remarks
Rise time (10% - 90%)			
0,7 μs to 1,3 μs		0,06 μs	Voltage
4,5 μs to 8,3 μs		0,25 μs	Current, line to line
1,1 μs to 2,5 μs		0,25 μs	Current, line to earth
Time to half-value			
35 μs – 65 μs		2 μs	Voltage, line to line
20 μs - 46 μs		2 μs	Voltage, line to earth
14 μs – 26 μs		2,5 μs	Current, line to line
18 μs - 42 μs		2,5 μs	Current, line to earth
Pulse duration time (50% – 50%)			
35 μs – 65 μs		2,0 μs	Voltage, line to line
20 μs – 46 μs		2,0 μs	Voltage, line to earth
11 μs – 21 μs		2,5 μs	Current, line to line
16 μs -38 μs		2,5 μs	Current, line to earth
EFT/burst generators waveform (im)pulse,			According to EN 61000-4-4 (July 2004)
voltage into 50 ohms			
0 V – 150V		2,0 V + 0,022·*U*	
0 – 300 V		4,0 V + 0,022·*U*	
0 – 600 V		8,0 V + 0,022·*U*	
0 – 1,5 kV		20 V + 0,022·*U*	
0 – 3 kV		37 V + 0,022·*U*	

Measured quantity, range	Frequency	Best measurement capabilities (*k*=2)	Remarks
Waveform pulse voltage into 1 kΩ			
0 V – 500 V		6 V + 0,045·*U*	
0 V – 1 kV		12 V + 0,045·*U*	
0 V – 2 kV		24 V + 0,045·*U*	
0 V – 5 kV		60 V + 0,045·*U*	
Rise time (10%-90%) 3 ns to 7 ns		0,3 ns	
Pulse duration time (50%-50%)			
30 ns to 70 ns		2,0 ns	
Repetition rate			
5 µs – 15 µs		0,15 µs	
150 µs – 600 µs		2,5 µs	
Burst duration			
10 ms to 20 ms		(5,5 – 10,3)µs	
Burst period			
200 ms to 400 ms		500 µs	
ESD simulators waveform discharge current			According to EN 61000-4-2 and ISO 10605
0 A – 10 A		0,18 A + 0,016·*I*	
0 A – 20 A		0,36 A + 0,016·*I*	
0 – 50 A		0,91 A + 0,016·*I*	

Measured quantity, range		Frequency	Best measurement capabilities (k=2)	Remarks
	rise time (10% - 90%)			
	0,5 ns to 1,2 ns		0,08 ns	
	i(t) @ t = 30 ns			
	1,7 A – 7 A		0,2 A – 0,3 A	
	3,4 A – 14 A		0,4 A – 0,6 A	
	8,5 A – 35 A		1,0 A – 1,4 A	
	i(t) @ t = 60 ns			
	0,8 A – 3,5 A		0,2 A – 0,22 A	
	1,7 A – 7 A		0,4 A – 0,5 A	
	4,2 A – 18 A		1,0 A – 1,1 A	
TF 0 0	TIME AND FREQUENCY			
TF 1 0	Time			
TF 2 1	Frequency			
	10 mHz - 2,7 GHz		$(8\cdot10^{-10}/\tau + 1{,}8\cdot10^{-10})\cdot f$	Measuring, 10 ms ≤ τ ≤ 400s
	10 mHz – 10 Hz		$3\cdot10^{-5}\cdot f$	Generating
	10 Hz – 100 kHz		$(1\cdot10^{-5}/\tau)\cdot f$	Generating, 10 ms ≤ τ ≤ 400s
	100 kHz – 2,16 GHz		$(1\cdot10^{-9}/\tau + 1{,}8\cdot10^{-10})\cdot f$	Generating, 10 ms ≤ τ ≤ 400s
TF 2 2	Time interval			
	0,5 ns – 10 µs		$(1\cdot10^{-9}/\tau + 1{,}8\cdot10^{-10})\cdot t$	Generating
	10 µs – 100 ms		$(1\cdot10^{-5}/\tau)\cdot t$	
	100 ms – 1000 s		$3\cdot10^{-5}\cdot t$	

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Remarks:

1. The best measurement capability stated in the above table is based on the total measurement uncertainty, not including an uncertainty contribution due to the imperfection of the used IEC target
2. $|\Gamma dut| < 0,02$
3. $|\Gamma dut| < 0,2$

2, 3) All calibrations are based on equipment using N-type connectors. Other connector types are possible (SMA / BNC etc) but this will increase measurement uncertainties

The calibrations are carried out at an ambient temperature of 23°C nominal and a relative humidity of 50% nominal.
The best measurement capability: the highest achievable accuracy for a given measuring point or measuring range, expressed as the total positive and negative measurement uncertainty.
The measurement uncertainty is calculated according to EA-4/02 “Expression of the Uncertainty of Measurement in Calibration”.
The measurements are carried out inside the laboratory.