



## RT

### Resistive Impulse Dividers 50 kV – 3'000 kV

*Datasheet*



# HAEFELY

Current and voltage – our passion

# General Description

Resistive voltage dividers have very good response parameters. Therefore they are used for measurements of full and front chopped lightning impulses or impulse voltages with steep wave fronts.

The transformation ratio and transfer behavior of R divider fulfils the IEC 60060-2 requirements, in particular those with respect to measuring accuracy and dynamic behavior. The divider components are designed in such a way that the transfer errors are negligible for lightning impulse shapes.

Resistive voltage dividers are generally used when an additional capacitance in the test circuit is not permissible due to the slowdown effect on the rise time. Therefore, it can't serve as a load capacitor for the impulse generator.

The high voltage resistors made of CrNi wire are anti inductively wound. For dividers with a rated lightning impulse voltage above 200 kV the high voltage resistors are housed in cylinders made from glass fibre reinforced epoxy resin.

Above 150 kV rated lightning impulse voltage the dividers are equipped with toroidal HV electrodes to guarantee corona free operation.

The secondary unit is fitted with LEMO connector. It consists of resistors of low inductance arranged in a coaxial design. The unit is fixed at the bottom of the divider and can easily be disassembled.

The voltage divider is designed for indoor operation. Dividers above a rated lightning voltage of 200 kV are erected on a four-arm base equipped with castors

Technical Data					
Type	Rated impulse voltage L.I. 1.2 / 50 $\mu$ s kV	High voltage resistance approx. k $\Omega$	External Damping Resistance approx. $\Omega$	Exp. response time $T_N$ ns	Partial Response time $T_\alpha$ ns
RT 50	50	2.5	-		
RT 100	100	2.5	-		
RT 150	150	2.5	-		
RT 200	200	5.0	240	< 10	< 12
RT 300	300	10.0	270	< 15	< 17
RT 400	400	5.0	350	< 20	< 23
RT 500	500	7.5	400	< 25	< 28
RT 600	600	7.5	300	< 30	< 35
RT 700	700	7.5	300	< 35	< 40
RT 800	800	7.5	300	< 35	< 40
RT 1000	1000	7.5	300	< 40	< 46
RT 1200	1020	9.0	350	< 45	< 50
RT 1400	1400	10.5	350	< 50	< 55
RT 1600	1600	12.0	300	< 55	< 60
RT 1800	1800	13.5	350	< 60	< 65
RT 2000	2000	15.0	350	< 65	< 70
RT 3000	3000	6.0	150	< 65	< 70

## Technical Data – Physical Dimensions

Type	Height	Base frame	Net weight	Gross weight sea	Shipping volume
	cm	cm	kg	kg	m3
R T 50	55	20	5	30	0.5
R T 100	60	20	10	50	1.4
R T 150	60	20	10	50	1.4
R T 200	145	60	60	170	2.0
R T 300	145	60	60	180	2.0
R T 400	180	60	80	220	2.2
R T 500	240	60	90	240	2.5
R T 600	240	60	90	250	2.5
R T 700	260	151	105	270	3.0
R T 800	270	70	100	270	3.0
R T 1000	290	70	110	280	3.2
R T 1200	350	85	120	350	3.2
R T 1400	390	85	160	600	3.5
R T 1600	430	120	220	650	6.0
R T 1800	470	120	270	700	8.0
R T 2000	510	120	300	700	9.0
R T 3000	1065	366	700	1400	12.0

### Expanded uncertainty for dividers

Lightning impulse voltages (full and tail chopped)  $U_{M1} \leq 3\%$

Lightning impulse voltages (front chopped)  $U_{M2} \leq 5\%$

Time Parameters  $U_{M3} \leq 10\%$

Applicable Standard: IEC 60060-1, ed. 3 (2010)

Applicable Standard: IEC 60060-2, ed. 3 (2010)

At a coverage probability 95%

Applicable in a measuring range 10 ... 100 %

SCS-calibration(s) according to EN17025 / ISO17025 Optional



R T 300 Divider

## Global Presence

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HIGH VOLTAGE



INSTRUMENTS



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