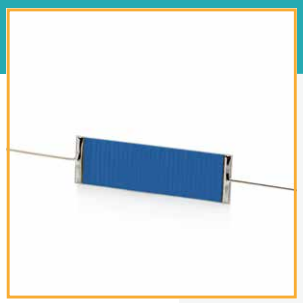
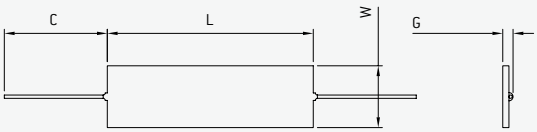
HIGH VOLTAGE PRECISION RESISTORS HPR 967

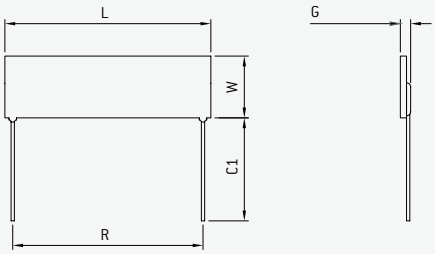
High voltage precision resistors were developed specifically for high value measuring tasks. The design provides outstanding features for implementation in devices with extremely high precision and reliable function. HPR high voltage resistors are suitable for all applications in high voltage measuring technology, in mass spectrometers, in high voltage network components and in medical technology.



Axial wire connection

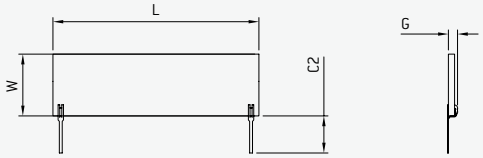


Radial wire connection



- Flat designs
- Outstanding stability
- Very low inductance
- Minimal drift

Optional contact PIN



GENERAL TECHNICAL SPECIFICATIONS	
Tolerance	0.1 % – 20 %*
Temperature coefficient	15 ppm/° C – 200 ppm/° C*
Voltage coefficient	0.08 ppm/V – 0.75 ppm/V (depending on size and layout)
Insulation resistance	10,000 MΩ (500 V 25° C 75 % relative humidity)
Dielectric strength of the insulation	>1,000 V (25° C 75 % relative humidity) ΔR/R 0.25 % max.
Thermal shock	ΔR/R 0.25 % max.
Overload capacity	1.5 x P[nom], 5 sec. (not 1.5 x V[max])
Moisture resistance	ΔR/R 0.25 % max.
Long-term stability	ΔR/R 0.25 % max.
Temperature range (operation / storage)	-55° C – +175° C (-55° C – +100° C)
Cover	Epoxy-based varnishes (glass, silicone-based encasing)
Connection type	Tinned copper wire Cu vz Ø 0.8 mm, axial or radial

Depending on ambient conditions, the characteristics of resistors can change.
We recommend a suitability test under operational conditions.

* Other values upon request.

TYPE SELECTION

TYPES	TCR (PPM/° C)	0.1 %	0.25 %	0.5 %	1 %	2 %	5 %	10 %	20 %
967.3.25 0.7 W 8 KV (AIR) 12 KV (OIL)	15/25 50 100 200	5 K – 2 G 5 K – 2 G 5 K – 2 G 5 K – 2 G	2 K – 2 G 2 K – 2 G 2 K – 2 G 2 K – 2 G	5 K – 2 G 5 K – 2 G 5 K – 2 G 5 K – 2 G	2 K – 2 G 2 K – 2 G 2 K – 2 G 2 K – 2 G	2 K – 2 G 2 K – 2 G 2 K – 2 G 2 K – 2 G	2 K – 2 G 2 K – 2 G 2 K – 2 G 2 K – 2 G	2 K – 2 G 2 K – 2 G 2 K – 2 G 2 K – 2 G	2 K – 2 G 2 K – 2 G 2 K – 2 G 2 K – 2 G
967.3.38 1.0 W 10 KV (AIR) 15 KV (OIL)	15/25 50 100 200	6 K – 500 M 6 K – 500 M 6 K – 500 M 6 K – 500 M	6 K – 3 G 6 K – 3 G 6 K – 3 G 6 K – 3 G	6 K – 500 M 6 K – 500 M 6 K – 500 M 6 K – 500 M	6 K – 3 G 6 K – 3 G 6 K – 3 G 6 K – 3 G	6 K – 3 G 6 K – 3 G 6 K – 3 G 6 K – 3 G	6 K – 3 G 6 K – 3 G 6 K – 3 G 6 K – 3 G	6 K – 3 G 6 K – 3 G 6 K – 3 G 6 K – 3 G	6 K – 3 G 6 K – 3 G 6 K – 3 G 6 K – 3 G
967.5.13 0.7 W 5 KV (AIR) 7.5 KV (OIL)	15/25 50 100 200	4 K – 500 M 4 K – 500 M 4 K – 500 M 4 K – 500 M	4 K – 1 G 4 K – 1 G 4 K – 1 G 4 K – 1 G	4 K – 500 M 4 K – 500 M 4 K – 500 M 4 K – 500 M	4 K – 1 G 4 K – 1 G 4 K – 1 G 4 K – 1 G	4 K – 1 G 4 K – 1 G 4 K – 1 G 4 K – 1 G	4 K – 1 G 4 K – 1 G 4 K – 1 G 4 K – 1 G	4 K – 1 G 4 K – 1 G 4 K – 1 G 4 K – 1 G	4 K – 1 G 4 K – 1 G 4 K – 1 G 4 K – 1 G
967.8.26 1.4 W 10 KV (AIR) 15 KV (OIL)	15/25 50 100 200	10 K – 1 G 10 K – 1 G 10 K – 1 G 10 K – 1 G	5 K – 2 G 5 K – 2 G 5 K – 2 G 5 K – 2 G	10 K – 1 G 10 K – 1 G 10 K – 1 G 10 K – 1 G	5 K – 2 G 5 K – 2 G 5 K – 2 G 5 K – 2 G	5 K – 2 G 5 K – 2 G 5 K – 2 G 5 K – 2 G	5 K – 2 G 5 K – 2 G 5 K – 2 G 5 K – 2 G	5 K – 2 G 5 K – 2 G 5 K – 2 G 5 K – 2 G	5 K – 2 G 5 K – 2 G 5 K – 2 G 5 K – 2 G
967.13.38 2.0 W 15 KV (AIR) 22 KV (OIL)	15/25 50 100 200	15 K – 1 G 15 K – 1 G 15 K – 1 G 15 K – 1 G	15 K – 5 G 15 K – 5 G 15 K – 5 G 15 K – 5 G	15 K – 1 G 15 K – 1 G 15 K – 1 G 15 K – 1 G	15 K – 5 G 15 K – 5 G 15 K – 5 G 15 K – 5 G	15 K – 5 G 15 K – 5 G 15 K – 5 G 15 K – 5 G	15 K – 5 G 15 K – 5 G 15 K – 5 G 15 K – 5 G	15 K – 5 G 15 K – 5 G 15 K – 5 G 15 K – 5 G	15 K – 5 G 15 K – 5 G 15 K – 5 G 15 K – 5 G
967.15.30 2.0 W 15 KV (AIR) 22 KV (OIL)	15/25 50 100 200	15 K – 1 G 15 K – 1 G 15 K – 1 G 15 K – 1 G	15 K – 5 G 15 K – 5 G 15 K – 5 G 15 K – 5 G	15 K – 1 G 15 K – 1 G 15 K – 1 G 15 K – 1 G	15 K – 5 G 15 K – 5 G 15 K – 5 G 15 K – 5 G	15 K – 5 G 15 K – 5 G 15 K – 5 G 15 K – 5 G	15 K – 5 G 15 K – 5 G 15 K – 5 G 15 K – 5 G	15 K – 5 G 15 K – 5 G 15 K – 5 G 15 K – 5 G	15 K – 5 G 15 K – 5 G 15 K – 5 G 15 K – 5 G
967.15.51 3.0 W 30 KV (AIR) 45 KV (OIL)	15/25 50 100 200	30 K – 1 G 30 K – 1 G 30 K – 1 G 30 K – 1 G	30 K – 5 G 30 K – 5 G 30 K – 5 G 30 K – 5 G	30 K – 1 G 30 K – 1 G 30 K – 1 G 30 K – 1 G	30 K – 5 G 30 K – 5 G 30 K – 5 G 30 K – 5 G	30 K – 5 G 30 K – 5 G 30 K – 5 G 30 K – 5 G	30 K – 5 G 30 K – 5 G 30 K – 5 G 30 K – 5 G	30 K – 5 G 30 K – 5 G 30 K – 5 G 30 K – 5 G	30 K – 5 G 30 K – 5 G 30 K – 5 G 30 K – 5 G
967.25.90 8.0 W 45 KV (AIR) 70 KV (OIL)	15/25 50 100 200	50 K – 5 G 50 K – 5 G 50 K – 5 G 50 K – 5 G	50 K – 10 G 50 K – 10 G 50 K – 10 G 50 K – 10 G	50 K – 5 G 50 K – 5 G 50 K – 5 G 50 K – 5 G	50 K – 10 G 50 K – 10 G 50 K – 10 G 50 K – 10 G	50 K – 10 G 50 K – 10 G 50 K – 10 G 50 K – 10 G	50 K – 10 G 50 K – 10 G 50 K – 10 G 50 K – 10 G	50 K – 10 G 50 K – 10 G 50 K – 10 G 50 K – 10 G	50 K – 10 G 50 K – 10 G 50 K – 10 G 50 K – 10 G

Other resistance values upon request.

DIMENSIONS

TYPES	W [width]	C1	G	L [length]	R [raster spacing]	Unit	Weight [g]
967.3.25	3.8 (0.2)	36 (1.42)	2.5 (0.1)	25.4 (1.0)	22.9 (0.9)	mm (inches)	0.70
967.3.38	3.8 (0.15)	36 (1.42)	2.5 (0.1)	38.0 (1.5)	35.7 (1.41)	mm (inches)	0.52
967.5.13	5.0 (0.2)	36 (1.42)	2.5 (0.1)	12.7 (0.5)	10.2 (0.4)	mm (inches)	0.54
967.8.26	8.0 (0.31)	36 (1.42)	2.5 (0.1)	25.4 (1.0)	22.5 (0.89)	mm (inches)	0.93
967.13.38	13.0 (0.51)	36 (1.42)	2.5 (0.1)	38.5 (1.52)	36.0 (1.42)	mm (inches)	2.20
967.15.30	15.0 (0.59)	36 (1.42)	2.5 (0.1)	30.0 (1.18)	22.1 (0.87)	mm (inches)	2.00
967.15.51	15.0 (0.59)	36 (1.42)	2.5 (0.1)	50.8 (2.0)	48.3 (1.9)	mm (inches)	3.42
967.25.90	25.4 (1.0)	36 (1.42)	2.5 (0.1)	88.9 (3.54)	85.6 (3.37)	mm (inches)	10.00

Contact PIN radial - C2: 9 (0.35)

SAMPLE ORDER

HPR 967.3.38 Type	A Connections	B Cover	100M Resistance value	1 % Tolerance	TC25 Temperature coefficient
	A = axial	G = glass	R = Ω	0.5 %	15 ppm/° C
	R = radial	B = operation in air	K = KΩ	1.0 %	25 ppm/° C
	P = PIN	D = operation in oil	M = MΩ	2.0 %	50 ppm/° C
		U = encasing	G = GΩ	5.0 %	100 ppm/° C
				10.0 %	
				20.0 %	

DERATING CURVE