

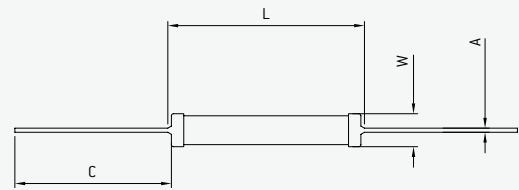
HIGH VOLTAGE RESISTORS HVR 968



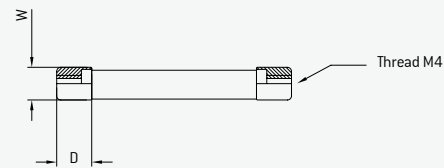
Thick-film high voltage resistors of this type series have been designed specifically for demanding applications. Heavy-duty and with high dielectric strength, these offer the ideal qualities for mastering measuring, controlling and regulating processes. Whether for high voltage pulses or for registering constant high voltages – with our HVR basic program we offer the ideal solution for all applications in X-ray technology, high voltage measuring technology and energy transmission systems.



- Round designs
- Pulse-proof
- Low inductance



Alternatively threaded end caps



GENERAL TECHNICAL SPECIFICATIONS

Resistance values, standard	10 K, 100 K, 1 M, 5 M, 10 M, 25 M, 50 M, 100 M, 1 G, 2 G, 5 G*
Tolerance	1 % (0.5 % to 20 %)*
Temperature coefficient	100 ppm/°C (25 ppm/°C to 200 ppm/°C)*
Voltage coefficient	<2 ppm/V
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 × P[nom], 5s (not 1.5 × V[max])
Moisture resistance	ΔR/R 0.25 %
Long-term stability	ΔR/R 0.25 % max.
Temperature range (operation / storage)	−55 °C to +175 °C (−55 °C to +100 °C)
Cover	Epoxy-based varnishes (glass, silicone-based encasing)
Connection type	Brass caps, wired, optionally with inner thread M4

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	TOLERANCE						
	TCR (ppm/°C)	0.50 %	1 %	2 %	5 %	10 %	20 %
968.2 3.8 W 9 kV (air) 13.5 kV (oil)	25 50 100 200	60 K – 500 M 9 K – 1 G 9 K – 1 G 9 K – 10 G	60 K – 500 M 9 K – 1 G 9 K – 1 G 9 K – 10 G	60 K – 500 M 9 K – 1 G 9 K – 1 G 9 K – 10 G	60 K – 500 M 9 K – 1 G 9 K – 1 G 9 K – 10 G	60 K – 500 M 9 K – 1 G 9 K – 1 G 9 K – 10 G	60 K – 500 M 9 K – 1 G 9 K – 1 G 9 K – 10 G
968.3 5 W 12 kV (air) 18 kV (oil)	25 50 100 200	80 K – 750 M 6 K – 1.5 G 6 K – 1.5 G 6 K – 15 G	80 K – 750 M 6 K – 1.5 G 6 K – 1.5 G 6 K – 15 G	80 K – 750 M 6 K – 1.5 G 6 K – 1.5 G 6 K – 15 G	80 K – 750 M 6 K – 1.5 G 6 K – 1.5 G 6 K – 15 G	80 K – 750 M 6 K – 1.5 G 6 K – 1.5 G 6 K – 15 G	80 K – 750 M 6 K – 1.5 G 6 K – 1.5 G 6 K – 15 G
968.4 6 W 14 kV (air) 21 kV (oil)	25 50 100 200	80 K – 750 M 10 K – 1.5 G 10 K – 1.5 G 10 K – 15 G	80 K – 750 M 10 K – 1.5 G 10 K – 1.5 G 10 K – 15 G	80 K – 750 M 10 K – 1.5 G 10 K – 1.5 G 10 K – 15 G	80 K – 750 M 10 K – 1.5 G 10 K – 1.5 G 10 K – 15 G	80 K – 750 M 10 K – 1.5 G 10 K – 1.5 G 10 K – 15 G	80 K – 750 M 10 K – 1.5 G 10 K – 1.5 G 10 K – 15 G
968.5 7.5 W 18 kV (air) 27 kV (oil)	25 50 100 200	120 K – 1 G 10 K – 2 G 10 K – 2 G 10 K – 20 G	120 K – 1 G 10 K – 2 G 10 K – 2 G 10 K – 20 G	120 K – 1 G 10 K – 2 G 10 K – 2 G 10 K – 20 G	120 K – 1 G 10 K – 2 G 10 K – 2 G 10 K – 20 G	120 K – 1 G 10 K – 2 G 10 K – 2 G 10 K – 20 G	120 K – 1 G 10 K – 2 G 10 K – 2 G 10 K – 20 G
968.7 10 W 24 kV (air) 36 kV (oil)	25 50 100 200	180 K – 1.5 G 20 K – 3 G 20 K – 3 G 20 K – 30 G	180 K – 1.5 G 20 K – 3 G 20 K – 3 G 20 K – 30 G	180 K – 1.5 G 20 K – 3 G 20 K – 3 G 20 K – 30 G	180 K – 1.5 G 20 K – 3 G 20 K – 3 G 20 K – 30 G	180 K – 1.5 G 20 K – 3 G 20 K – 3 G 20 K – 30 G	180 K – 1.5 G 20 K – 3 G 20 K – 3 G 20 K – 30 G
968.10 12 W 36 kV (air) 54 kV (oil)	25 50 100 200	240 K – 2 G 30 K – 3 G 30 K – 3 G 30 K – 30 G	240 K – 2 G 30 K – 3 G 30 K – 3 G 30 K – 30 G	240 K – 2 G 30 K – 3 G 30 K – 3 G 30 K – 30 G	240 K – 2 G 30 K – 3 G 30 K – 3 G 30 K – 30 G	240 K – 2 G 30 K – 3 G 30 K – 3 G 30 K – 30 G	240 K – 2 G 30 K – 3 G 30 K – 3 G 30 K – 30 G
968.12 15 W 42 kV (air) 63 kV (oil)	25 50 100 200	300 K – 2 G 35 K – 3 G 35 K – 3 G 35 K – 3 G	300 K – 2 G 35 K – 3 G 35 K – 3 G 35 K – 3 G	300 K – 2 G 35 K – 3 G 35 K – 3 G 35 K – 3 G	300 K – 2 G 35 K – 3 G 35 K – 3 G 35 K – 3 G	300 K – 2 G 35 K – 3 G 35 K – 3 G 35 K – 3 G	300 K – 2 G 35 K – 3 G 35 K – 3 G 35 K – 3 G
968.15 17 W 54 kV (air) 81 kV (oil)	25 50 100 200	350 K – 2 G 50 K – 3 G 50 K – 6 G 50 K – 30 G	350 K – 2 G 50 K – 3 G 50 K – 6 G 50 K – 30 G	350 K – 2 G 50 K – 3 G 50 K – 6 G 50 K – 30 G	350 K – 2 G 50 K – 3 G 50 K – 6 G 50 K – 30 G	350 K – 2 G 50 K – 3 G 50 K – 6 G 50 K – 30 G	350 K – 2 G 50 K – 3 G 50 K – 6 G 50 K – 30 G
Other resistance values and temperature coefficients upon request.							

DIMENSIONS							
TYPES	A	B [Ø]	C	D	L [length]	Unit	Weight [g]
968.2	0.8 [0.03]	8.0 [0.31]	37.0 [1.46]	8.5 [0.33]	27.0 [1.06]	mm [inches]	4.17
968.3	0.8 [0.03]	8.0 [0.31]	37.0 [1.46]	8.5 [0.33]	37.0 [1.46]	mm [inches]	5.89
968.4	0.8 [0.03]	8.0 [0.31]	37.0 [1.46]	8.5 [0.33]	47.0 [1.85]	mm [inches]	7.65
968.5	0.8 [0.03]	8.0 [0.31]	37.0 [1.46]	8.5 [0.33]	52.0 [2.05]	mm [inches]	8.50
968.7	0.8 [0.03]	8.0 [0.31]	37.0 [1.46]	8.5 [0.33]	78.0 [3.07]	mm [inches]	12.75
968.10	0.8 [0.03]	8.0 [0.31]	37.0 [1.46]	8.5 [0.33]	102.0 [4.06]	mm [inches]	17.34
968.12	0.8 [0.03]	8.0 [0.31]	37.0 [1.46]	8.5 [0.33]	123.0 [4.84]	mm [inches]	20.50
968.15	0.8 [0.03]	8.0 [0.31]	37.0 [1.46]	8.5 [0.33]	153.0 [6.02]	mm [inches]	25.67
Length tolerance: max. – 2 mm/+2 mm				Models with brass caps: L _{total} = L + 10 mm, Weight: +2.15 g per resistor			

SAMPLE ORDER						ATTENTION: PLEASE USE THE FOLLOWING ORDER SPECIFICATIONS.
HVR 968.5 Type	A Connections	B Cover	100M Resistance value	1 % Tolerance	TC25 Temperature coefficient	
	A = wire, axial*	G = glass	R = Ω	0.5 %	25 ppm/°C	
	C = caps	B = operation in air*	K = KΩ	1.0 %*	50 ppm/°C	
		D = operation in oil	M = MΩ	2.0 %	100 ppm/°C*	
		U = encasing	G = GΩ	5.0 %	200 ppm/°C	
				10.0 %		
				20.0 %		
						* standard

