TUBULAR HIGH-VOLTAGE RESISTOR 969 HPR

This ceramic-based high-voltage resistor perfectly meets all requirements for low-induction, stable and robust passive components.
The body carrier is a ceramic tube.

This product is available in a wide variety of configurations. You specify the desired power, dimensions, and resistance value, and we will design the appropriate resistor element based on your specifications.

Advantages
– Extremely high accuracy
– Good long-term stability
– Low inductance
– Excellent mechanical stability

Application Examples
– High-voltage measurement and testing technology
– Measurement resistance in X-ray generators
– Radiation detectors
– Transducers

Electrical Data	
Resistance Value	Freely selectable, see table
Tolerances	±0.1 %, ±0.25 %, ±0.5 %, ±1 %, ±2 % , ±5 % , ±10 % Further values on request
Temperature Coefficient	±50 ppm/°C, ±100 ppm/°C, ±200 ppm/°C Further values on request
Insulation Resistance	>10,000 MΩ (500 V, 25 °C, 75 % RH)
Dielectric Strength of the Insulation	>1,000 VDC (25 °C, 75 % RH)
Overload Capacity	1.5 x P_{nom} (W), 5 sec
Long-term Stability	1,000 h at 125 °C and P_{nom}, ΔR ±0.2 %

Mechanical Data	
Dimensions	See table
Diameter of the resistor	Ø 13 / 30 mm

Environmental Data	
Operating Temperature	-50 °C up to +175 °C, max. 220 °C
Storage Temperature	0 °C up to +85 °C at 80 % RH max. for min. 12 months
Thermal Shock	MIL-Std-202, Method 107, Cond C, ΔR 0.4 % max.
Moisture Resistance	MIL-Std-202, Method 106, Cond C, ΔR 0.25 % max.

Produkt Overview

	Power at 40° C	Operating Voltage DC in Air	Operating Voltage DC in Oil	Resistance Values		Voltage Coefficient	Length	Diameter	Screw caps	Approx. Weight
Series and sizes	W	kV	kV	Min. Ω	Max. Ω	VCR, ppm/V	mm / inches	mm / inches		g
HPR 969.11	7	24	32	50k	1G	< 0.15	81 / 3.2	13.0 / 0.51	M4	37
HPR 969.19	12	40	60	100k	5G	< 0.10	126 / 5.0	13.0 / 0.51	M4	70
HPR 969.23	15	48	72	100k	5G	< 0.08	156 / 6.1	13.0 / 0.51	M4	85
HPR 969.54	36	48	72	100k	10G	< 0.08	160 / 6.3	30.0 / 1.2	M8	270
HPR 969.71	54	64	96	150k	15G	< 0.07	209 / 8.2	30.0 / 1.2	M8	356
HPR 969.105	75	96	148	200k	20G	< 0.06	309 / 12.2	30.0 / 1.2	M8	506

Mechanical Tolerance length max. ±3 mm

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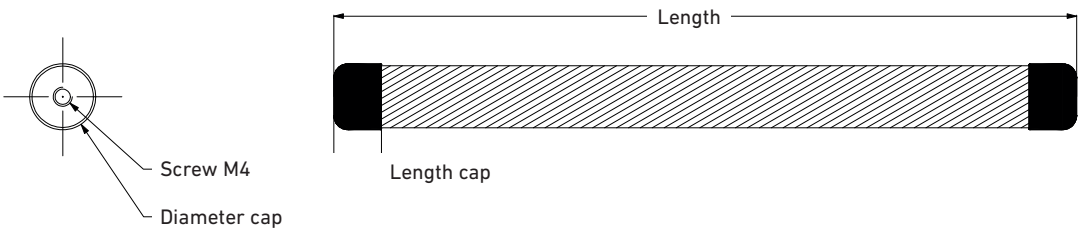
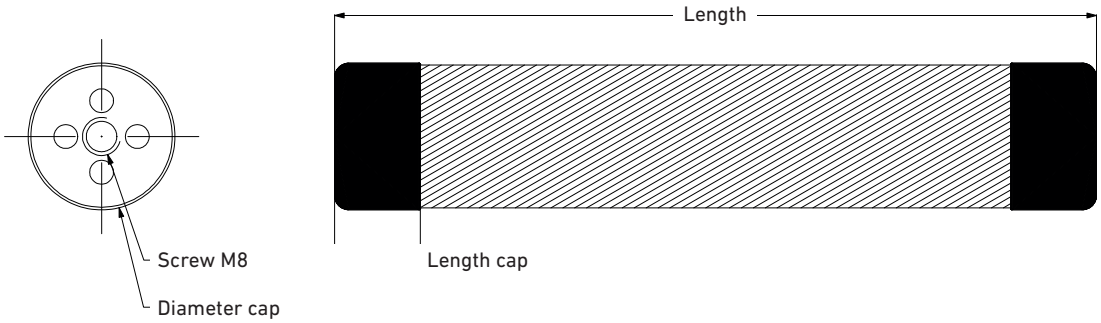
Connection: Screw cap M4



Connection: Screw cap M8



Electrical connection	
	Brass screw cap M4 / M8
	Other connections and lengths on request

Protective Coatings

	Order No.	Usable in air	Usable in Insulating oil	Usable in Insulating gas SF6	Silicone potting	Epoxy potting	Temperature resistance
Polymer Coating	B	•		•	•	•	175 °C
Polymer Coating	D		•				175 °C
Glass	G	•	•	•	•		250 °C
Silicone Cement*	U	•		•	•	•	250 °C
Without Protective Coating	0	•	•	•	•		

*The color of the silicone cement may vary, but it does not affect the functionality of the resistor.

Order Information

For an order, we need the following information:

Series	Size	Connection left	Connection right	Protective Coating 1. layer	Protective Coating 2. layer	Resistance Value	Tolerance	Temperature Coefficient	Product Labeling
HPR	969.11	C	C	G	B	Please specify	±0.1 % (B)	±50 ppm/°C (F)	P Standard
	969.19	0	0	0	D		±0.25 % (C)	±100 ppm/°C (S)	0
	969.23	X	X		U		±0.5 % (D)	±200 ppm/°C (L)	X
	969.54				0		±1 % (F)		
	969.71				X		±2 % (G)		
	969.105						±5 % (J)		
							±10 % (K)		

C = Screw cap X = Customer specific 0 = Without

Metallux cannot picture the customer's operating and application conditions and the customer's existing environmental influences.
We therefore recommend that you carry out your own investigations into the planned use of the products under the actual operating conditions.

We continuously improve our products and also update our data sheets regularly. In this respect, there may be changes in the specification.
These changes will apply to orders received by us from the time of the update, unless otherwise agreed.

Our products comply with Directive 2011/65/EU (RoHS) including Directive 2015/863/EU and Regulation (EC) No. 1907/2006 (REACH).