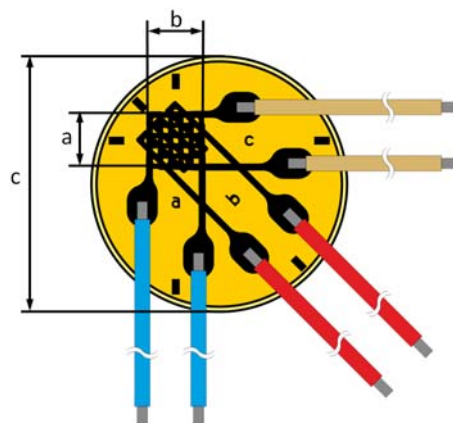
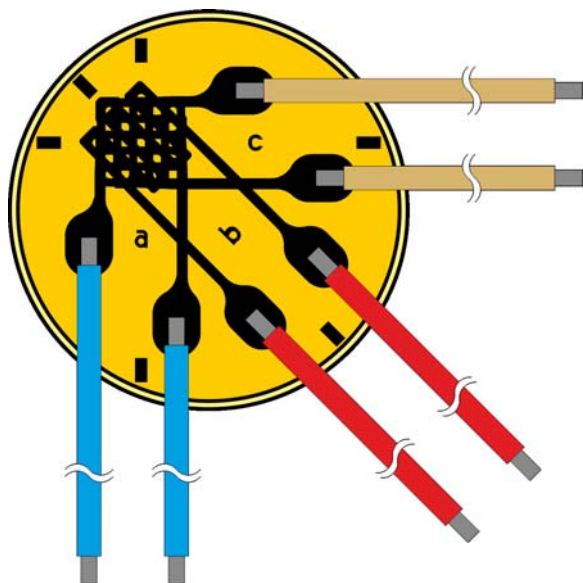


# RF9

## Miniature Rosette

### Special features

- Electrical strain gauge rosette with stacked grids
- Small dimensions ( $\varnothing$  5 mm)
- Easy to connect with enameled copper wire
- Standard available ex stock



### Types and dimensions

Type (available ex stock)	Variants	Nom. resistance	Dimensions [mm]			Max. perm. effect. exc. voltage <sup>1</sup>
			Measurement grid		Carrier $\varnothing$	
Steel	Other (*)	$\Omega$	a	b	c	Volt
1-RF91-0.8/120ZE	1-RF9x-0.8/120ZE	120	0.8	0.9	5	1

<sup>1</sup>) Maximum permitted effective excitation voltage specified for steel material

#### (\*) Temperature adaptation

Replace the placeholder "x" with following code for the temperature adaptation:

1	$\alpha$ for ferritic steel	10.8 ppm/K (6.0 ppm/°F)
3	$\alpha$ for aluminum	23 ppm/K (12.8 ppm/°F)
5	$\alpha$ for austenitic steel	16 ppm/K (8.9 ppm/°F)

## Specifications

<b>Strain gauge construction</b>		Foil strain gauge
<b>Carrier</b>		
Material		PEEKF
Thickness	µm	18 ±3
<b>Grid foil</b>		
Material		Constantan foil
Thickness	µm	3.8
<b>Encapsulation</b>		
Material		Polyimide
Thickness	µm	35 ±12
<b>Connections</b>		500 mm enameled copper wire Soldered lead-free (Ø 0.2mm; 2x blue, 2x red and 2x golden)
<b>Resistance</b>	Ohm	120
<b>Resistance tolerance</b>	%	±1.0
<b>Gauge factor</b>		approx. 2.0 (specified on each package)
<b>Gauge factor tolerance</b>	%	±1.5
<b>Temp. coefficient of the gauge factor</b>		specified on each package
<b>Transverse sensitivity</b>		Specified on each package
<b>Operating temperature range</b>		
Static	°C (°F)	-40 ... +140 (-40 ... 284)
dynamic		-70 ... +140 (-94 ... 284)
<b>Temperature response</b>		
α for ferritic steel (1)	ppm/K	10.8 (6.0)
α for aluminum (3)	(ppm/°F)	23.0 (12.8)
α for austenitic steel (5)		16.0 (8.9)
<b>Fatigue life<sup>2)</sup></b>		>10 <sup>7</sup> cycles at 1,000 µm/m (test was interrupted after 10 <sup>7</sup> cycles)
<b>Maximum elongation</b>		
Positive direction	µm/m	80,000 (8%)
Negative direction		90,000 (9%)
<b>Min. bending radius</b>	mm	2
<b>Bonding material that can be used<sup>3)</sup></b>		Z70, X280, EP150 and EP310S

<sup>2)</sup> Maximum zero point drift ±30 µm/m

<sup>3)</sup> Consider temperature limits of the different adhesives

Subject to modifications.  
All product descriptions are for general information only. They are not to be understood as a guarantee of quality or durability.

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measure and predict with confidence

