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**JUMO Process Control, Inc.**  
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# JUMO plastoSENS T01

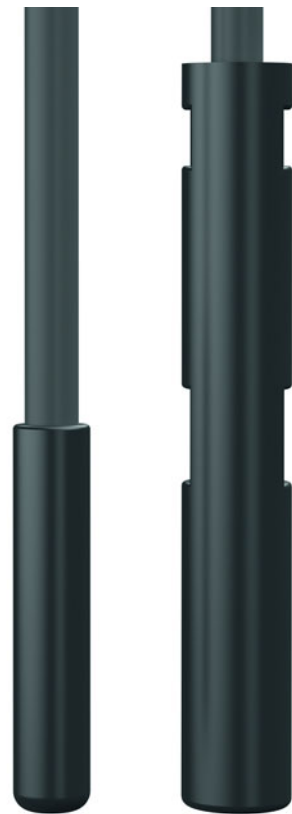
## Voltage-resistant plastic temperature probe

- For temperatures from -40 to +200 °C
- Nominal voltage up to AC 3.5 kV (test voltage: DC 8 kV for 1 minute)
- Standardized, voltage-resistant temperature probe, e.g. for transformers
- Electrically insulating and heat conducting at the same time
- Application areas: in transformers, generators, voltage rails, and combined heat and power plants, etc.

### Brief description

In dry or cast resin transformers, the use of temperature probes made of metal is associated with design outlay, since the metallic temperature probe must be installed in the insulation layer. For this reason, JUMO has developed a temperature probe made of plastic precisely for these applications. It has a nominal voltage of up to AC 3.5 kV (test voltage: DC 8 kV for 1 minute) and can be used at a continuous service temperature of up to 200 °C. This specially developed transformer probe can be used e.g. in electric motors or in other high-voltage environments.

In a two-wire circuit, a Pt1000 according to DIN EN 60751:2009 / IEC 60751:2008 of the tolerance class B (F0.3) is used as a temperature sensor as standard. Versions with Pt100 or other temperature sensors are also possible.



Basic type 904001/10 and .../20

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## Technical data

Dimensions of the temperature probe	Basic type 904001/10: Ø 4.0 × 20 mm Basic type 904001/20: Ø 5.9 × 40 mm
Protection type	IP65 according to DIN EN 60529
Response times	Basic type 904001/10 In water: • $t_{0.5}$ : < 1.5 s • $t_{0.63}$ : < 2 s • $t_{0.9}$ : < 4 s  In air: • $t_{0.5}$ : < 14 s • $t_{0.63}$ : < 18 s • $t_{0.9}$ : < 37 s  Basic type 904001/20 In water: • $t_{0.5}$ : < 4 s • $t_{0.63}$ : < 5 s • $t_{0.9}$ : < 10 s  In air: • $t_{0.5}$ : < 25 s • $t_{0.63}$ : < 33 s • $t_{0.9}$ : < 68 s
Electric strength according to DIN EN 61800-5-1	Basic type 904001/10 • Surge voltage: up to DC 6 kV • Withstand voltage: up to DC 3 kV  Basic type 904001/20 • Surge voltage: up to DC 10 kV • Withstand voltage: up to DC 7 kV
Connecting cable	FEP, ambient temperature -40 to +200 °C
Connection	Cable ends with ferrules

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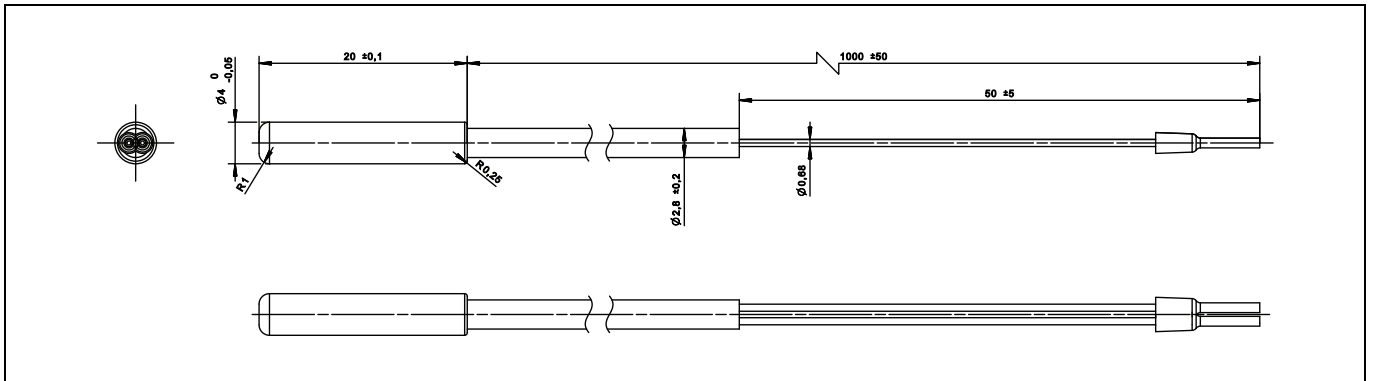
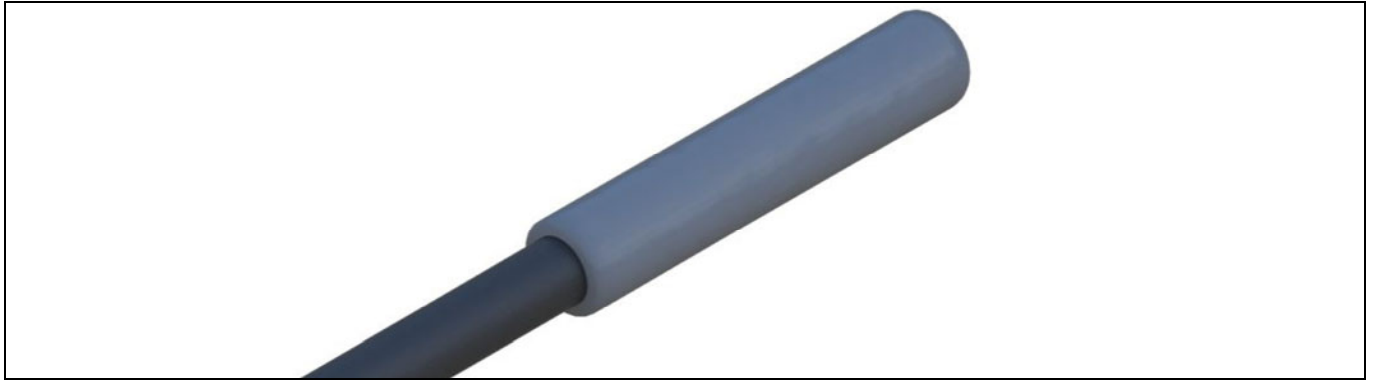
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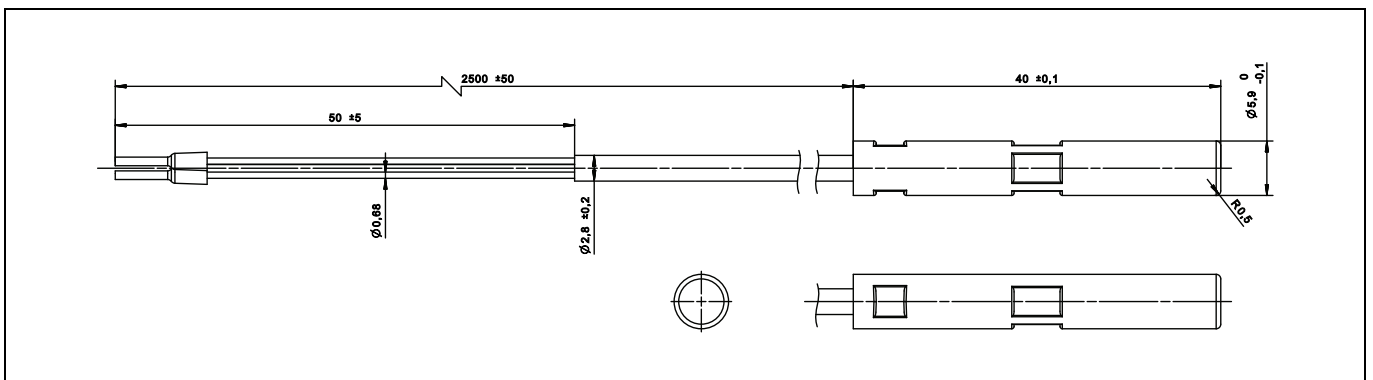


## Dimensions

### Temperature sensor – basic type 904001/10



### Temperature sensor – basic type 904001/20



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## Order details

		<b>(1) Basic type</b>	
		904001/10	JUMO plastoSENS T01 Voltage-resistant plastic temperature probe Ø 4.0 × 20 mm, test voltage at least DC 4 kV
		904001/20	JUMO plastoSENS T01 Voltage-resistant plastic temperature probe Ø 5.9 × 40 mm, test voltage at least DC 8 kV
		<b>(2) Operating temperature in °C</b>	
x	x	487	-40 to +200 °C
		<b>(3) Measuring insert</b>	
	x	1001	1× Pt100 in three-wire circuit
x	x	1003	1× Pt100 in two-wire circuit
x	x	1005	1× Pt1000 in two-wire circuit (standard)
		<b>(4) Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008</b>	
x	x	1	Class B
		<b>(5) Connecting cable end</b>	
x	x	11	Ferrules
		<b>(6) Connecting cable length AL in mm (AL 500 to 10000 mm)</b>	
x	x	2500	2500 mm
		...	Specifications in plain text (increments of 500 mm)
		<b>(7) Extra codes</b>	
x	x	000	None

Order code                    (1)                    (2)                    (3)                    (4)                    (5)                    (6)                    (7)  
 Order example            904001/10   -   487   -   1005   -   1   -   11   -   2500   /   000

## Information about order details

Please note that not all feature combinations directly generate deliverable products. They merely describe production-based versions that are possible. Due to the special manufacturing conditions the minimum order quantity for non-standard versions is 500 pieces.