

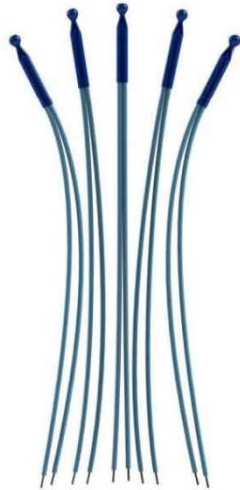
## Product Information

► Measuring resistor with the NTC-sensor

Windings and surface temperature monitoring with NTC-thermistors

### NTC-thermistors

NTC-thermistor for windings control



**- Basic information:**

The NTC-Thermistor is used in the control and measuring of surface and inner critical temperature points of machines and equipment, including air conditioning installations.

**- Application:**

Temperaturüberwachung an Lagern, an Stromschienen, an Maschinenteilen und in Wicklungen.

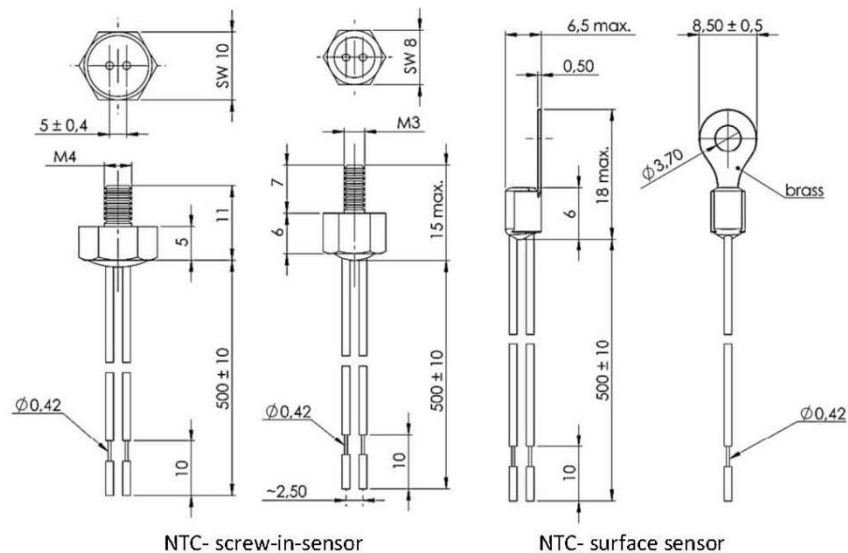
**- General function:**

The NTC-temperature sensors have a non-linear, negative temperature coefficient of resistance over the complete temperature range.

**- Advantages:**

- Low cost over a wide temperature range: -40...300°C.
- Resistance characteristic: (0,1...1000) KΩ sufficient for most applications.
- Low weight.
- Low thermal time constant.

NTC-screw-in-sensor- and surface sensor



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## NTC-thermistors

### - Electrical Data:

Parameter	Value	Unit
sensor resistance at 25°C (R <sub>25</sub> )	0,1 ... 1000 (E24-Series), Decadic Stepped: 1.0/ 1.1/ 1.2/ 1.3/ 1.5/ 1.6/ 1.8/ 2.0/ 2.2/ 2.4/ 2.7/ 3.0/ 3.3/ 3.6/ 3.9/ 4.3/4.7/ 5.1/ 5.6/ 6.2/ 6.8/ 7.5/ 8.2/ 9.1	KΩm
deviation of R <sub>25</sub> -value	1,2,3,5,10	%
deviation of B-value (material constant)	0,75 ... 5	%
max. power loss	500	mW
reaction time dependent on housing:	< 1 ... 20	s
temperature range	-40 ... +300	°C

### - Mechanical data:

Type:	NTC-sensor for surface mounting Alu-housing screw-in sensor SW 10/M4 ring shaped cable eye for self-tapping sheet metal screw	NTC-sensor for windings monitoring e.g.: electric motors, transformers: in stabilized shrink tube design
Lead-in:	AWG 24, Cu-strand silvered, Teflon insulation, Standard colour: green/brown, Standard length: 500mm ± 1%	
Insulation Class:	H	
Remarks:	Special designs for liquid or gaseous media, in V2A or other materials are manufactured on request for customers specific applications and specification. Resistance-temperature curves or table on request.	

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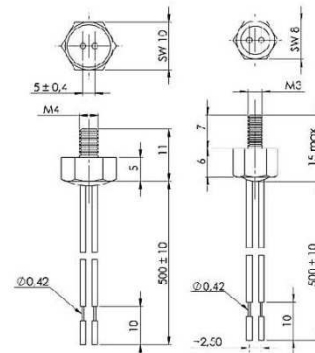
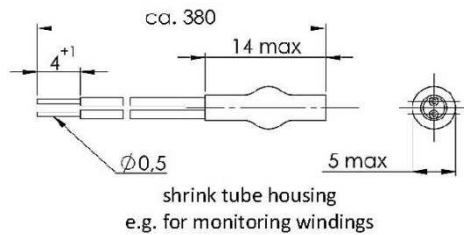
### Measuring resistor with the NTC-sensor

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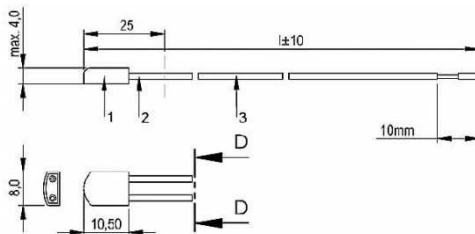
## NTC-thermistors

### - NTC-Sensors:

examples of NTC-thermistor-housings



Screw-in sensors in alu housing:  
AL-M3/SW8 and AL-M4/SW10



- 1 = Sensor: insulated twice, in stainless steel or PPS-housing
- 2 = Terminal: stranded silver copper wire insulated with Teflon (PTFE), AWG 24 or AWG 26 according to the manufacturer's choice; optional: AWG 20
- 3 = Additional shrink tube (optional)

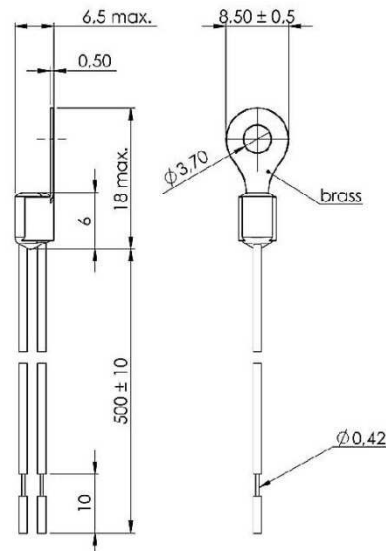


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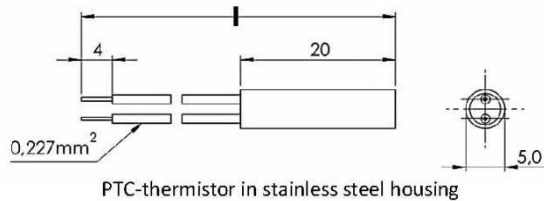
- Measuring resistor with the NTC-sensor

Windings and surface temperature monitoring with NTC-thermistors

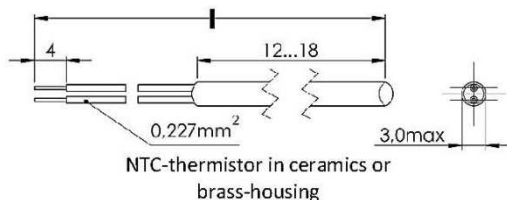
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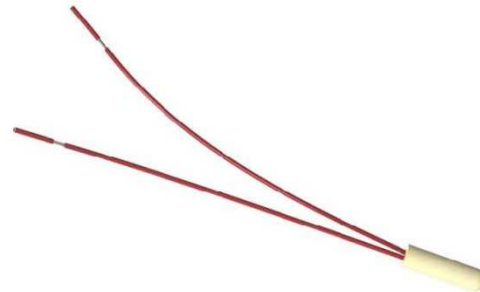
NTC-sensor in cable shoe  
Surface sensor



PTC-thermistor in stainless steel housing



NTC-thermistor in ceramics or  
brass-housing



#### Responsibility:

No responsibility will be accepted for thermistors which have not been installed and tested according to the relevant standards as previously listed in our data sheet.

Due to the ongoing research and development program, product specification may be subject to change, at the manufacturers discretion.

For further advice and information contact:

4 - 4

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