



# TCT-2AAN20503MZ

TCT

RESISTANCE THERMOMETER

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

Type	Part no.
TCT-2AAN20503MZ	6081756

Other models and accessories → [www.sick.com/TCT](http://www.sick.com/TCT)

## Detailed technical data

### Features

<b>Measuring range</b>	-50 °C ... +150 °C
<b>Sensor element</b>	Pt100
<b>Output signal</b>	4 mA ... 20 mA, 2-wire
<b>Maximum ohmic load <math>R_A</math></b>	$R_A \leq (L^+ - 9 \text{ V}) / 0.023 \text{ A}$ [Ohm]

### Mechanics/electronics

<b>Process connection</b>	Thread ½" NPT
<b>Insertion length/diameter of probe</b>	50 mm / 3 mm
<b>Wetted parts</b>	Stainless steel 1.4571
<b>Pressure resistance</b>	Max. 120 bar
<b>Housing material</b>	Stainless steel 1.4571
<b>Connection type</b>	M12 round connector x 1, 4-pin <sup>1)</sup>
<b>Enclosure rating</b>	IP67 <sup>2)</sup>
<b>Measuring current</b>	0.3 mA ... 1 mA
<b>Supply voltage</b>	10 V DC ... 36 V DC
<b>Maximum current consumption</b>	Ca. 30 mA
<b>Electrical safety</b>	Protection class: III, insulation voltage: 500 V, reverse polarity protection: L+ to M
<b>Protection class III</b>	✓
<b>RoHS certificate</b>	✓
<b>Weight</b>	Ca. 145 g (depending on configuration)
<b>Initialization time</b>	< 10 ms

<sup>1)</sup> The enclosure rating classes specified only apply while the thermometer is connected with female connectors that provide the corresponding enclosure rating.

<sup>2)</sup> IP enclosure rating as per IEC 60529.

### Performance

<b>Accuracy of sensor element</b>	Class A according to IEC 60751
<b>Transmitter accuracy</b>	$\leq \pm 1,0 \%$ of span

<sup>1)</sup> Depending on sensor configuration, according to IEC 60751.

<b>Transmitter linearity</b>	≤ 0.1 % of span
<b>Response time</b>	T <sub>50</sub> : ≤ 2.8 s <sup>1)</sup> t <sub>90</sub> ≤ 9,1 s <sup>1)</sup>

<sup>1)</sup> Depending on sensor configuration, according to IEC 60751.

### Ambient data

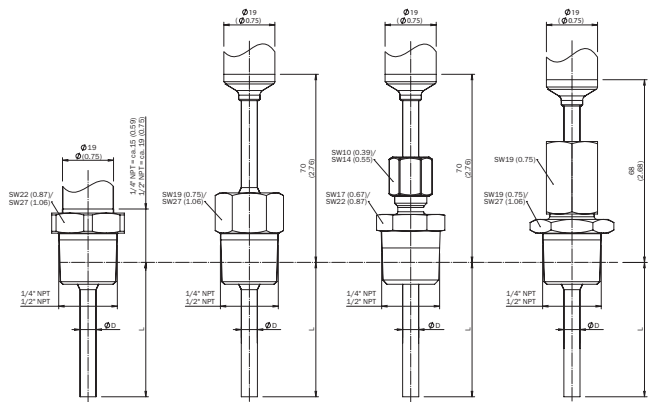
<b>Ambient temperature</b>	-40 °C ... +85 °C
<b>Storage and transport temperature</b>	-40 °C ... +85 °C
<b>Shock resistance according to IEC 60751</b>	500 g
<b>Vibration resistance according to IEC 60751</b>	3 g

### Classifications

<b>eCl@ss 5.0</b>	27200208
<b>eCl@ss 5.1.4</b>	27200208
<b>eCl@ss 6.0</b>	27200208
<b>eCl@ss 6.2</b>	27200208
<b>eCl@ss 7.0</b>	27200208
<b>eCl@ss 8.0</b>	27200208
<b>eCl@ss 8.1</b>	27200208
<b>eCl@ss 9.0</b>	27200208
<b>eCl@ss 10.0</b>	27200208
<b>eCl@ss 11.0</b>	27200208
<b>eCl@ss 12.0</b>	27200208
<b>ETIM 5.0</b>	EC002994
<b>ETIM 6.0</b>	EC002994
<b>ETIM 7.0</b>	EC002994
<b>ETIM 8.0</b>	EC002994
<b>UNSPSC 16.0901</b>	41112211

**Dimensional drawing** (Dimensions in mm (inch))

Dimensional drawing: conical threads



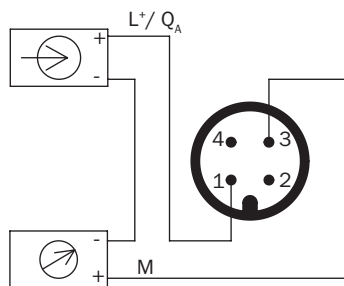
Process connections, tapered thread

- Threaded connection  
up to 150 °C
- Threaded connection  
up to 250 °C
- Threaded connection and  
clamping connection
- Threaded connection and  
protective pipe with thread

**TCT-2**

**Connection type**

Plug M12 x 1, output signal 4 mA ... 20 mA



## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)