

Data sheet

Bearing temperature sensor

MBT 3310



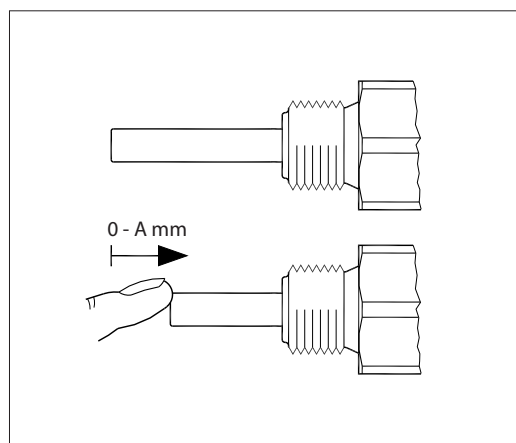
The MBT 3310 temperature sensor series is specially designed for measuring the temperature in bearings where there is a risk of overheating.

To get a very short reaction time the measuring element is placed in a way to secure a reaction time of down to $t_{0.5} = 6$ sec. in water.

The sensor is fitted with a spring loaded protection tube which ensures metallic contact between bearing and sensor at all times.

Features

- For monitoring of bearing temperatures where there is risk of overheating, in applications such as:
 - Wind Turbines
 - Engines
 - Gearboxes
- Based on Pt 100 / Pt 1000 technology for use up to 200 °C
- Spring loaded to ensure good contact with the bearing

Spring function


Stainless steel process connection	A = 15 mm
------------------------------------	-----------

Technical Data
General data

Measuring range	-50 – 200 °C
Sensing element	Pt 100, Pt 1000
Protection tube	ø8 × 1 mm

Response time

Protection tube	Indicative response times			
	Water 0.2 m/s		Air 1 m/s	
	$t_{0.5}$	$t_{0.9}$	$t_{0.5}$	$t_{0.9}$
ø8 × 1 mm	6 s	20 s	35 s	140 s

Materials

Protection tube in contact with the media	AISI 316
O-ring	FPM
Process connection	AISI 316 / Brass
Gasket	Silicone
Electrical connection M12 x 1	4-pin Au, PA (max. 125 °C)

Mechanical and environmental specifications

Sensor tolerance	EN 60751 Class B: $\pm (0.3 \text{ °C} + 0.005 \times t)$ t = temperature of medium, numerical value	
Vibration stability	Shock	100 g/6 ms
	Vibrations	4 g sine function 2 – 100 Hz, acc. to IEC 60068-2-6
Enclosure	IP65 according to IEC 60529	
Electrical connection M12 x 1	4-pin Au, EN 60947-5-2	

Ordering standard
M12 x 1

Type MBT 3310

Resistance value	
1 × Pt 100	0
1 × Pt 1000	2
Other	9

Protection Tube, W.nr. 1.4571 (AISI 316 Ti)	
Acid-proof steel, ø8 × 1mm	0
Other	9

Insertion length (working range)	
Stainless	
45 – 60 mm	60
57 – 72 mm	72
85 – 100 mm	100
105 – 120 mm	120
200 – 215 mm	215
245 – 260 mm	260
290 – 305 mm	305
310 – 325 mm	325
Other	xxx

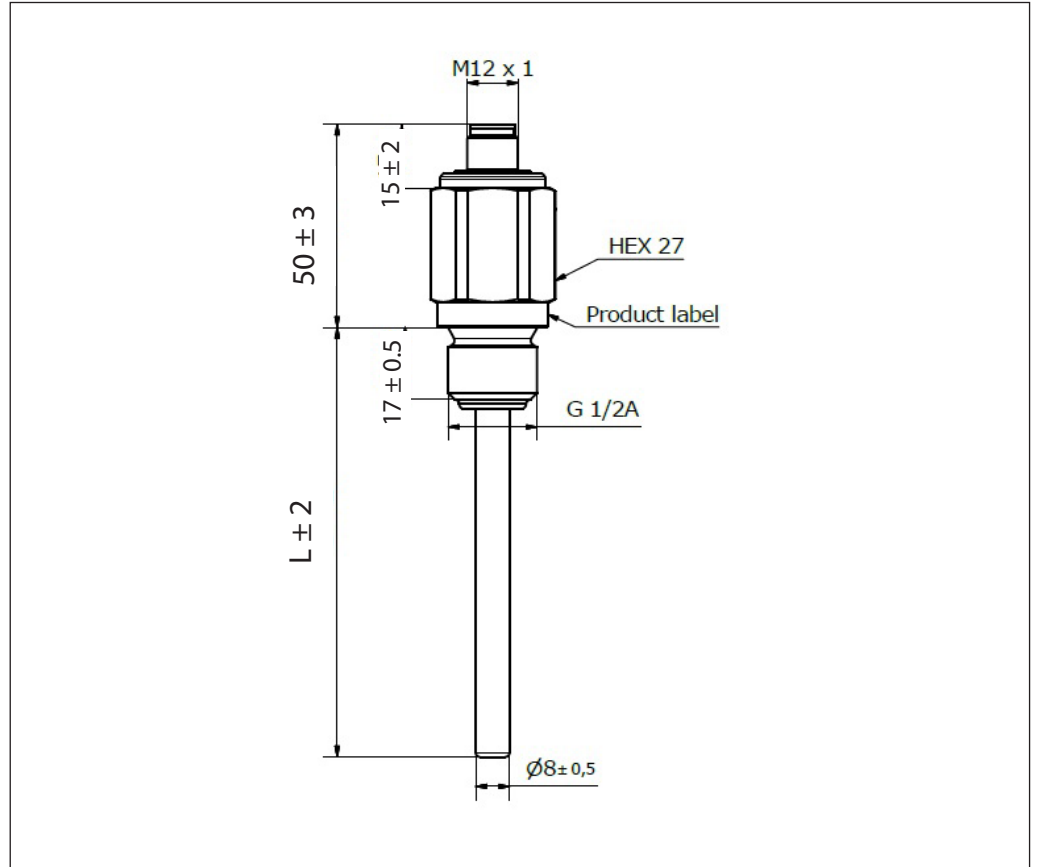
Electrical Connections	
A	M12 plug, 2-wire, 4 pins
B	M12 plug, 4-wire, 4 pins

Tolerance	
0	EN 60751 Class B

Process connection	
0	G ½ A Stainless steel
7	½ –14 NPT Stainless steel
9	Other

Preferred versions

Electrical connection and dimensions [mm]



Electrical connections

