

Data sheet

Temperature sensor

Type MBT 3252



Heavy-duty temperature sensor for controlling cooling water, lubrication oil, hydraulic oil and refrigeration plants within general industry.

This temperature sensor is based on a standardised Pt 100 element, which gives a reliable and accurate measurement.

The changeable measuring insert is equipped with a silicone cable, which makes the sensor very resistant towards vibrations.

The MBT 3252 is equipped with a B-head as standard.

If needed, a transmitter (MBT 9110) can be ordered as an integrated part of the MBT 3252 sensor.

Features

- Gaseous or liquid media, e.g. air, gas, vapour, water or oil.
- Resistance or 4 – 20 mA signal
- Up to 200 °C media temperature
- Pt sensing element with silicone cable
- Can be used with 2- or 3-wire connections
- Interchangeable measuring insert
- Available with built-in transmitter
- Also available in a marine version as MBT 5252

Technical data
General data MBT 3252

Measuring range		-50 – 200 °C
Sensing element		Pt 100
Protection tube		ø10 × 2 mm
Permissible media velocity	Air	25 m/s
	Steam	25 m/s
	Water	3 m/s

Process connection	G ½ A
Max. tightening torque	50 Nm

Response time

Type	Protection tube	Indicative response times			
		Water 0.2 m/s		Air 1 m/s	
		$t_{0.5}$	$t_{0.9}$	$t_{0.5}$	$t_{0.9}$
MBT 3252	ø10 × 2 mm	14 s	42 s	110 s	390 s

Mechanical and environmental specifications

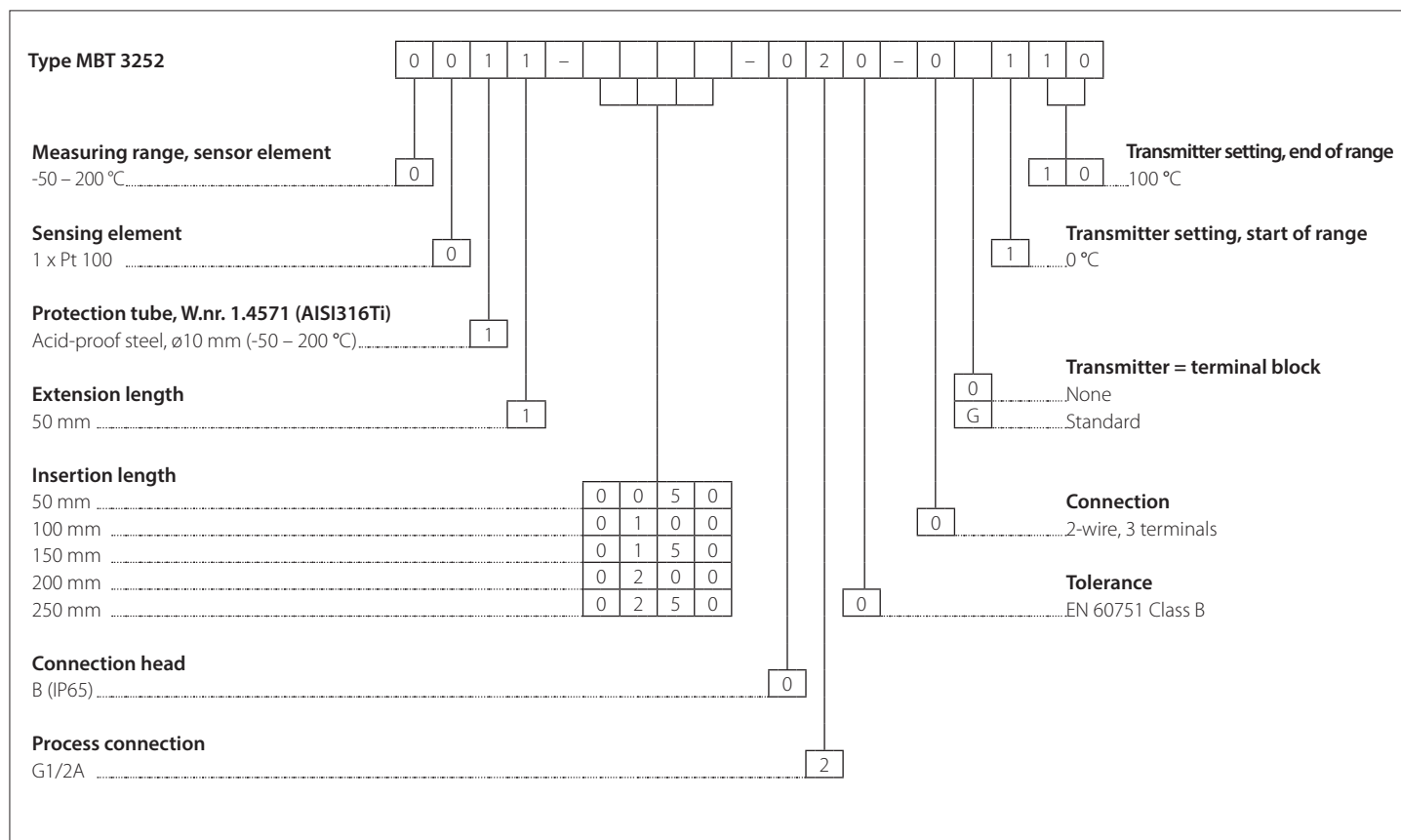
Max. temperature ¹⁾	Ambient:	90 °C for sensors without temperature transmitter	
	Transmitter:	85 °C for sensors with temperature transmitter	
Sensor tolerance	EN 60751 Class B: $\pm (0.3 + 0.005 \times t)$	t = temperature of medium, numerical value	
Vibration stability	Shock:	100 g / 6 ms	
	Vibrations:	4 g sine function 5 – 200 Hz, measured acc. to IEC 60068-2-6	
Enclosure	IP65 according to IEC 60529		
Cable entry B-head	Pg 16		
Temperature transmitter MBT 9110	Supply voltage:	8 – 35 V d.c.	
	Output:	4 – 20 mA	

¹⁾ The temperature of the transmitter is influenced by media temperature, ambient temperature and ventilation in the surroundings. If the temperature of the transmitter exceeds the max. allowed temperature the transmitter must be placed in a separated enclosure, as described in the separate data sheet for MBT 9110.

Materials

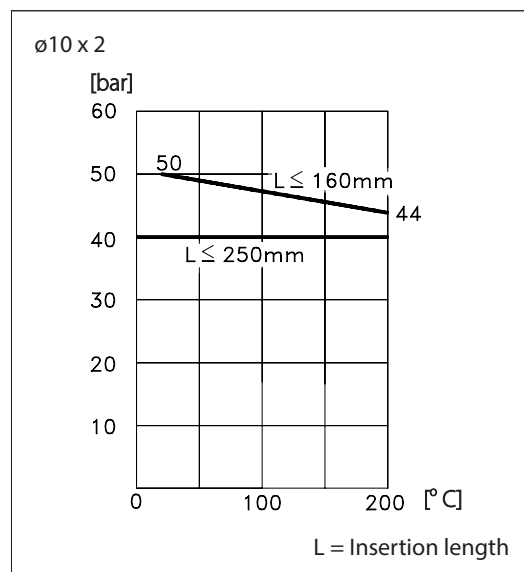
Protection tube in contact with media	W.no. 1.4571 (AISI 316 Ti)
Process connection in contact with media	W.no. 1.4404 (AISI 316 L)
Extension length	W.no. 1.4571 (AISI 316 Ti)
Union nut	Nickel plated brass
Connection head	Die cast aluminium

Ordering standard

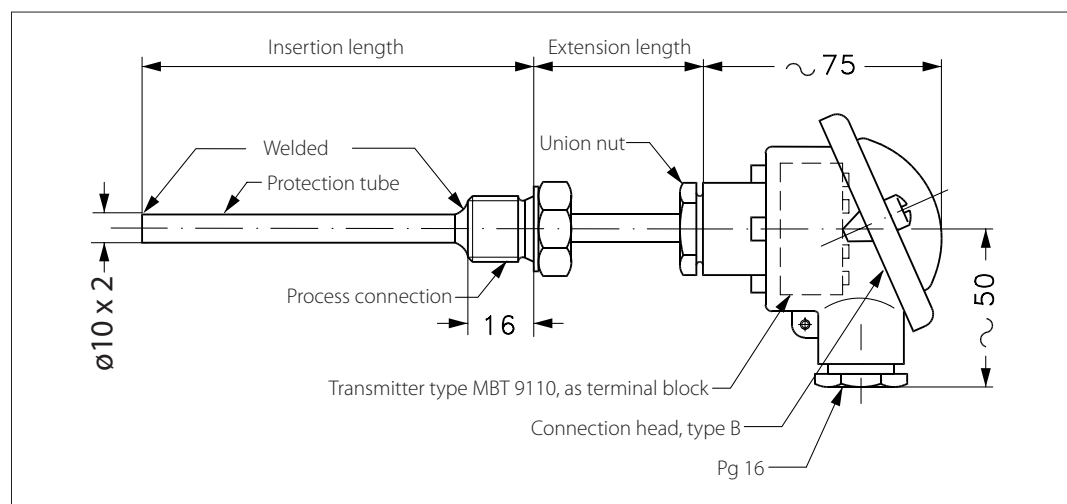


Technical data

Max. load on protection tube according to DIN 43763



Dimensions [mm]



Process connection	G ½ A
Width across flats	HEX 27