



Temperature sensor

MBT 2310

Compact bearing temperature sensor

Description

The MBT 2310 temperature sensor series is specially designed for measuring the bearing temperature at applications with confined space and the purpose is to enable early warning in situations where an overheated bearing could lead to a machine havoc.

To obtain a fast reaction time the measuring element is placed at the very tip of the sensor tube ensuring a response time of down to $\tau_{0.5} = 4$ sec. in water.

The sensor is equipped with a spring-loaded sensor tube which enables physical contact between the bearing and sensor tube.

Features & benefits

- Monitoring of bearing temperatures where there is risk of overheating, in applications such as:
 - Engine bearings
 - Gearbox bearings
 - Power transmission bearings
- Based on Pt 100 / Pt 1000 / NTC technology
- Spring loaded sensor tube to ensure optimal contact with the bearing



Ordering

Product code numbers

Specification code for MBT 2310

MBT 2310			
Resistance value		EN 60751 Class B	
1 x Pt 100	0		
1 x Pt 1000	2		
Other	9		
Protection tube (AISI 316)		10 x 1 mm	
Acid-proof steel, Ø6 x 1 mm	0	G 1/4	
Other	9	Other	
Insertion length (working range)		Electric Connection	
17 - 22 mm	22	A	M12 plug, 4 pins
22 - 27 mm	27	B	AMP JPT
27 - 32 mm	32	C	AMP Super seal
32 - 37 mm	37	D	Metri-Pack 150
37 - 42 mm	42	E	Deutsch DT04, 2p
42 - 47 mm	47	F	Cable without plug

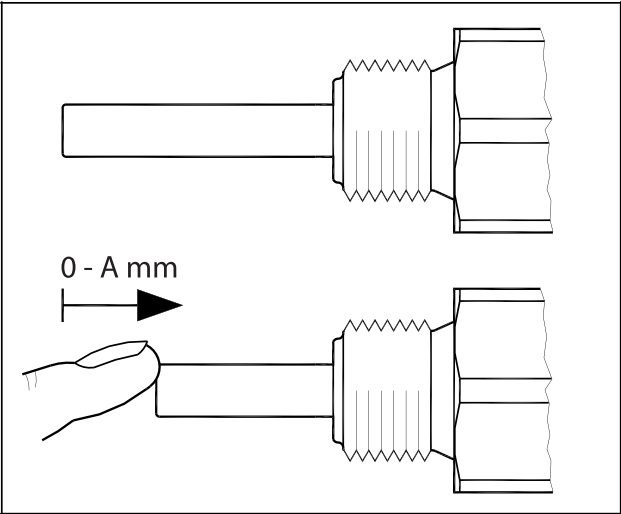
Note: Non-standard build-up combinations may be selected. However, minimum order quantities may apply. Please contact your local Danfoss office for further information.

Note: For a detailed overview of our existing code numbers, please visit the Danfoss Product Store at store.danfoss.com. You can use the filtering options to find the right sensor for your specific needs.



Functions

Spring function



Material	Thickness
Stainless steel process connection	A = 0 – 6 mm

Product details

General data

Technical data

Ambient temperature @ plug	-25 – 85°C
Storage temperature	-25 – 85°C
Process connection	10 x 1 mm
Hex 19	Tightening torque 10 – 15 Nm
Measuring rang NTC elements	-25°C – 125°C
Measuring range Pt elements	Pt: -25°C – 200°C
Protection tube	ø6x 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}
6 x 1 mm	4 s	13.2 s	55 s	210 s

Materials

Protection tube in contact with the media	AISI 316
O-ring	FPM
Process connection	SUS303
Gasket	Silicone
Electrical connections	AMP JPT
	AMP super seal
	Metri-Pack 150
	Deutsch DT04 (2P)
	M12 x 1 (4P)
	Cable with/without plug

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	Vibration test 20 - 2000Hz, 15.3g, 1 oct/min. Time: 3 x 2 hours (X-Y-Z-directions), total 6 hour Shock test (50g/6ms)	
Enclosure	According to IEC 60529	Pin type
AMP Junior Power Timer	IP 67	2-pin Sn plated CuSn6
AMP super seal	IP 67	2-pin Sn plated
Metri-Pack 150	IP 67	2-pin Sn plated
Deutsch DT04 (2P)	IP 67	2-pin Sn plated
M12 x 1 (4P)	IP 67	4-pin Au, EN 60947-5-2
Cable with/without plug	IP 65	Silicone cable

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The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

When you click on the link you will be directed to the latest version of the 'Declaration of Conformity'. Products developed and sold before this date of issue conform to the directives/standards in force at the time of their sale.

Approval type	Title	Certification body	Approval topic
Export Control Declaration	Pressure & Temperature Sensors	Danfoss	

Contact details

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