

---

Temperature sensors  
type MBT 5410

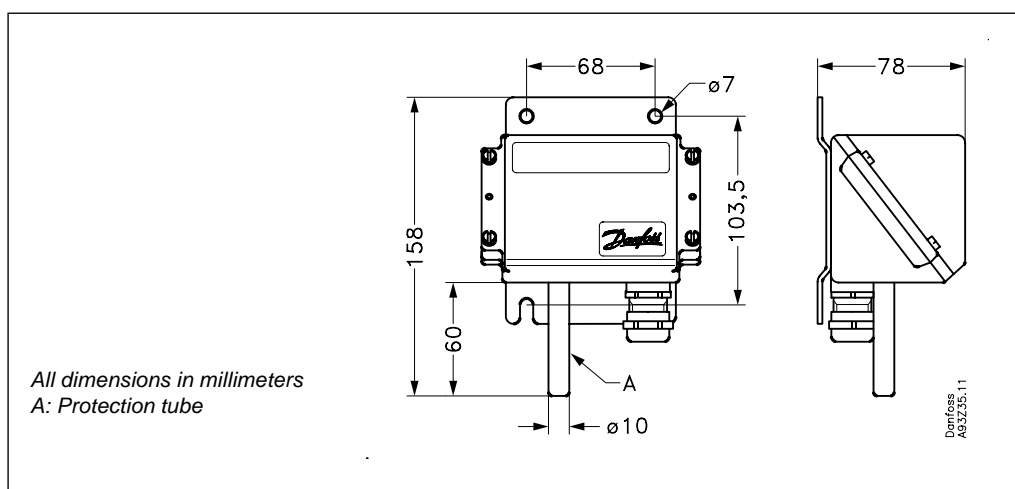
## Temperature sensors, type MBT 5410

### Features and application



- Room temperature sensor for measuring and regulating temperature in marine and industrial refrigeration, freezing installations or engine rooms
- Temperature range: From -50 to +100 °C
- High measuring accuracy
- Robust construction with resistance to shock and vibration
- Available with built-in transmitter
  - with or without EEx ia IIC T4/T6 approval
  - with or without galvanic isolation
- Approvals:
  - American Bureau of Shipping, ABS
  - Bureau Veritas, BV
  - Det Norske Veritas, DNV
  - Germanischer Lloyd, GL
  - Korean Register of Shipping, KRS
  - Lloyds Register of Shipping, LR
  - Nippon Kaiji Kyokai, ClassNK
  - Registro Italiano Navale, RINA

### Dimensions



## Temperature sensors, type MBT 5410

### Technical data

#### Response times

Protection tube	Indicative response times according to VDI/VDE 3522	
	Air 1 m/s	
	$t_{05}$	$t_{99}$
Ø10 × 2	111 s	391 s

#### Weight

	Without temperature transmitter	With temperature transmitter
Weight, approx.	550 g	600 g

#### Mechanical and environmental specifications

Ambient temperature	Approval from Lloyds Register of Shipping covers measuring range -30 → +70°C. Because of this limitation the products are marked -30 → +70°C.	
	Max. ambient temperatures for sensors with temperature transmitter are: Standard: -40 → +85°C EEx-T6: -40 → +60°C Without transmitter: -50 → +100°C	
Sensor tolerance	EN 60751 Class B: $\pm(0.3 + 0.005 \times t)$	t = temperature of medium, numerical value
Vibration stability	Shock: 100 g in 6 ms Vibrations: 4g sine function 2-100 Hz, measured acc. to IEC 68-2-6	
Enclosure	IP 67 according to IEC 529	
Cable entry	PG 13.5	
Material (sensor tube)	W.no. 1.4571 (AISI 316 Ti)	

Further information about temperature transmitter type MBT 9110 available in separate data sheet

### Ordering - refrigeration and freezing room applications

- Measuring range: -50 → +100 °C
- Tolerance: EN 60751, Class B
- Connection box: Silumin/plastic

Resistance value	Connection	Transmitter output	Transmitter setting	Application	MBT 5410-	Code no.
Pt 100	2-wire	4-20 mA, standard	-10 → +50°C	Refrigeration room	000-060-000-G205	<b>084Z5064</b>
Pt 100	2-wire	4-20 mA, standard	-50 → +50°C	Freezer room	000-060-000-G405	<b>084Z5063</b>
Pt 100	4-wire	None	None	Room	000-060-020-0000	<b>084Z5065</b>
Pt 1000	2-wire, 3 terminals	None	None	Room	020-060-000-0000	<b>084Z5095</b>

Other specifications on request

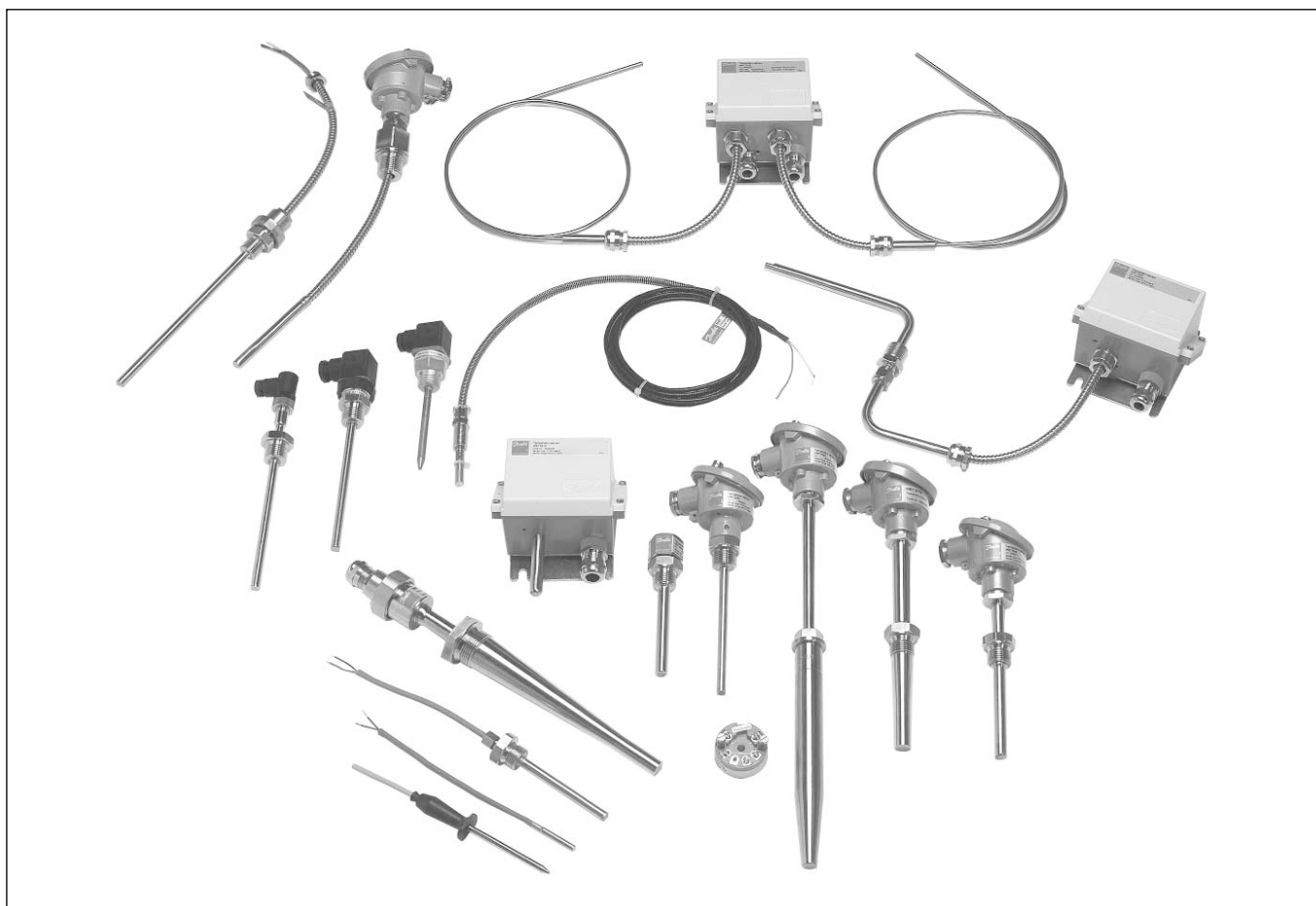
### Ordering - engine room applications

- Measuring range: -50 → +100 °C
- Tolerance: EN 60751, Class B
- Connection box: Silumin/plastic

Resistance value	Connection	Transmitter output	Transmitter setting	Application	MBT 5410-	Code no.
Pt 100	4-wire	None	None	Room	000-060-020-0000	<b>084Z5065</b>
Pt 100	2-wire	4-20 mA, standard	0 → +100°C	Engine room	000-060-000-G110	<b>084Z5066</b>

Other specifications on request

## Temperature sensors, type MBT 5410



### MBT programme

Danfoss offers a complete range of MBT temperature sensors for all types of applications. The range consists of exhaust

gas sensors, universal sensors, bearing sensors, cargo sensors, stern tube sensors as well as general purpose sensors.

### General features

- Fixed or replaceable measuring insert
- Pt100, Pt1000 resistance element or thermocouple
- Wide temperature range
  - up to +800°C with thermocouple
  - up to +600°C with resistance element

### Further information

Further information about our temperature sensors type MBT can be found in separate data sheets, which can be ordered by contacting your local Danfoss representative.

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.