

Data sheet

Temperature sensor with integrated transmitter for industrial applications, Type MBT 3560



Features

- Designed for use in harsh industrial environments where reliable, robust and accurate equipment is required
- All metal enclosure parts made of stainless steel (AISI 316)
- Output signals: 4 20 mA or Ratiometric 10 – 90%
- A wide selection of process and electrical connections
- Ultra compact design
- Temperature range -50 200 °C
- Sensor pockets available for applications where emptying the system is not an option
- Based on Pt 1000 technology

Technical data

Main specifications

Process connections	See page 3		
Measuring ranges	Any combinations between -50 – 200 °C		
Minimum span	25 °C		
Output signals	4 – 20 mA or Ratiometric 10 – 90%		
Electrical connections	See page 4		

Performance

	Indicative response times			
	Water 0.2 m/s		Air 1 m/s	
ø8 mm	t _{0.5}	t _{0.9}	t _{0.5}	t _{0.9}
	10 s	35 s	95 s	310 s
Accuracy	< ± 0.5% FS (typ.) < ± 1.0% FS (max.)			
Max. load protection tube	100 bar			

Electrical specifications

	Nom. Output signal (short-circuit protected)			
	4 – 20 mA	ratiometric 10 – 90% of supply voltage		
Supply voltage [U _s] polarity protected	10 – 30 V d.c.	4.75 – 8 V d.c. 5 V d.c. (Nom.)		
Supply – current consumption	-	< 4 mA at 5 V d.c.		
Insulation resistance	> 100 MΩ at 100 V d.c.	> 100 MΩ at 100 V d.c.		
Supply voltage dependency	< ± 0.05% FS / 10 V	-		
Current limitation	30 mA	_		
Output impedance	-	< 25 Ω		
Load [RL]	R _L <(U _s -10) / (0.02 A) ohm	R _L > 5 kohm at 5 V d.c.		

Environmental conditions

Media temperature (max. 120 °C without extension length)		-50 – 200 °C	
Temperature on electronics ¹⁾		-40 − 85 °C	
Transport temperature range		-50 – 85 ℃	
EMC – Emmision		EN 61000-6-3	
EMC – Immunity		EN 61000-6-2	
	Sinusoidal 15.9 mm-pp, 5 Hz – 25 Hz	_	
Vibration stability	4 g, 25 Hz – 2 kHz	IEC 60068-2-6	
	Random 7.5 g _{ms} , 5 Hz – 1 kHz	IEC 600868-2-34, IEC 60068-2-36	
Shock resistance	Shock 500 g / 1 ms	IEC 60068-2-27	
	Free fall	IEC 60068-2-32	
Enclosure (depending on electrical connections)		See page 4	

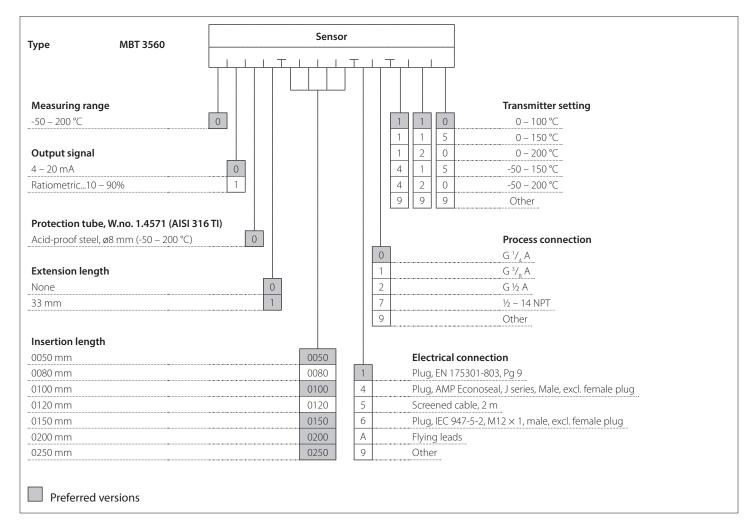
¹) Temperature of the electronics depends on the media temperature, extension length, ambient temperature and air velocity.

Mechanical characteristics

Materials:	Wetted parts Enclosure	W.no. 1.4571 (AISI 316 Ti) W.no. 1.4404 (AISI 316 L)	
Measuring insert	fixed		
Net weight (Depending on design)	0.1 – 0.15 kg		

Dantoss

Ordering standard



Non-standard build up combinations may be selected. However, minimum order quantities may apply, please contact your local Danfoss office for more information

Danfoss Temperature sensor with integrated transmitter for industrial applications, type MBT 3560

Electrical connections

EN 175301-803	AMP Econoseal J series (male)	IEC 947-5-2 M12 × 1	Flying leads	2 m screened cable
Enclosure				
		Linciosure		
IP65	IP67	IP67	IP67	IP67
Materials				
Glass filled polyamid, PA 6.6	Glass filled polyamid, PA 6.6	Glass filled polyamid, PA 6.6	Glass filled polyamid, PA 6.6	PUR
Electrical connection, 4 – 20 mA output (2 wire)				
Pin 1: +supply Pin 2: ÷supply Pin 3: Not used	Pin 1: +supply Pin 2: ÷supply	Pin 1: +supply Pin 2: Not used Pin 3: Not used	Red wire: +supply Black wire: ÷supply	Red wire: +supply White wire: ÷supply Red/black wire: Not used

Electrical connection, Ratio metric (3-wire) 10 – 90%				
Pin 1: +supply Pin 2: +supply Pin 3: Output Earth: Not connected to MBT housing	Pin 1: +supply Pin 2: ÷supply Pin 3: Output	Pin 1: +supply Pin 2: not used Pin 3: Output Pin 4: ÷supply	Red wire: +supply Black wire: ÷supply Blue wire: Output	Red wire: +supply White wire: ÷supply Red/ Black wire: Output Screen: Not connected to MBT housing

Pin 3: Not used

Pin 4: ÷supply

Screen: Not connected to

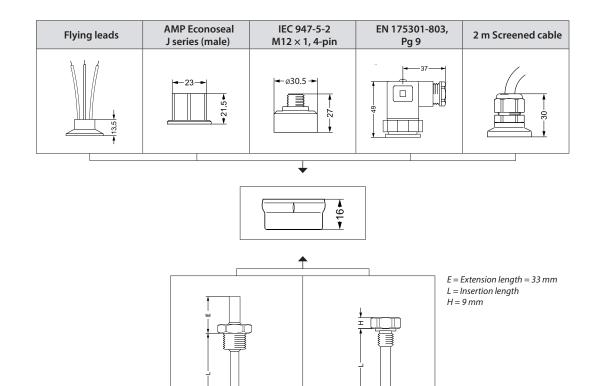
MBT housing

Pin 3: Not used

Earth: Not connec-

ted to MBT housing

Dimensions



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