

### TEMPERATURE SENSOR

#### Type XDI-T..GB

Sensor consists of an exchangeable measuring insert, welded thermowell with process connection and field mounted temperature transmitter PR7501. Measuring insert represents the replaceable element of the complete sensor which reduces time and costs of maintenance of the measuring apparatus installed in the object. Spring fixation of the measuring insert provides perfect pressure to the bottom of the protecting tube, reduces time of reaction to changes of temperature and increases accuracy of measurement as well as reduces natural vibration thus mechanical and electrical defects can be avoided. Insertion length, process connection, design and material of thermowell, connection head can be selected individually for the respective application.

### TECHNICAL DATA

#### Description

- flameproof and intrinsically safe for gas G and dust D atmospheres
- single and double RTD and TC
- exchangeable mineral insulated measuring insert
- connection head: aluminium, IP68, ATEX II 2 GD (see technical information)
- process connection: M20x1.5, G½", ½"NPT or other
- cable gland M20x1.5, II 2G Ex db IIC Gb, II 2D Ex tb IIIC Db; IP68 (cable dia. Ø3 - Ø8mm)\*
- output signal: 4..20mA with HART® ver. 5 and 7 protocol
- local display, OPTO keypad (option)

#### Design temperature range

-200 .. +150°C

#### Sensing element

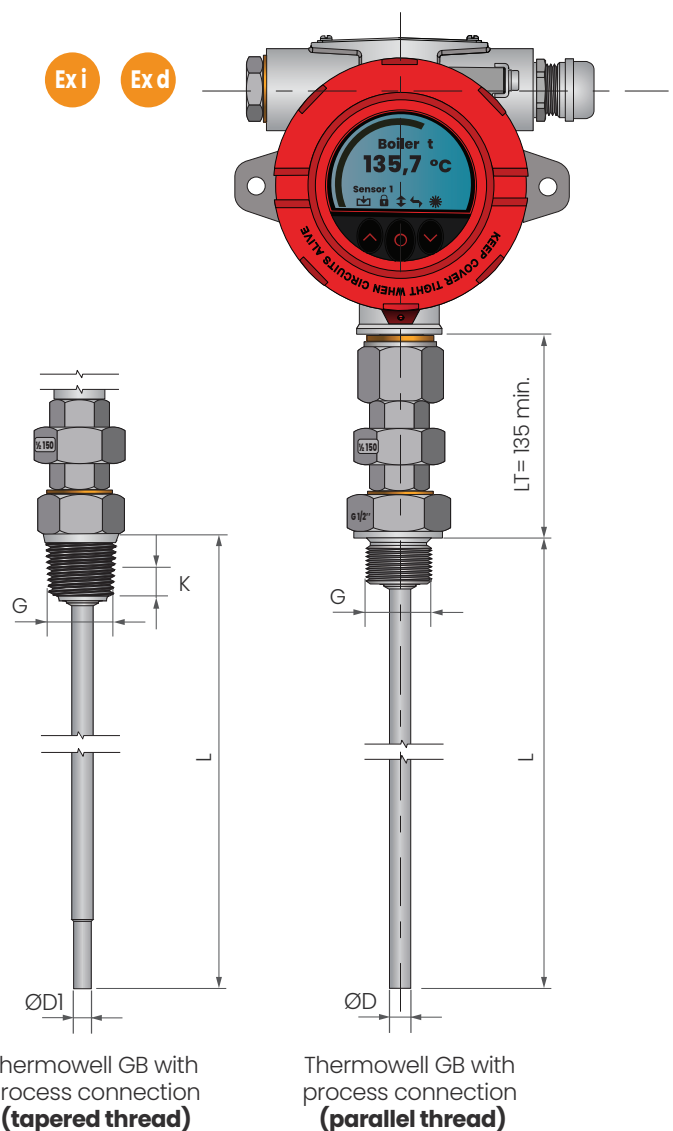
Ix or 2xPt100	acc. to EN 60751 class A, B
Ix or 2xTC (J, K, N, E, T)	acc. to EN 60584-2 class 1, 2

#### Thermowell „GB”

Material	stainless steel 1.4541*
Diameter D [mm]	Ø9, Ø10, Ø11, Ø12, Ø14, Ø15 or other*
Length L [mm]	100, 160, 200, 250, 400, 500 or other*

#### Remarks

- \* other parameters on request
- \* category ½ for all temperature sensors with the exception of sensors with thermowell made of pipe Ø9x1 (category 2)
- \* length 85mm depends on size of connection thread type



Thermowell GB with process connection (tapered thread)

Thermowell GB with process connection (parallel thread)

#### ATEX Marking:

- CE II 1/2G Ex ia IIC T... Ga/Gb or
- CE II 1/2G Ex db IIC T... Ga/Gb or
- CE II 1/2D Ex ia IIIC T... Da/Db or
- CE II 1/2D Ex ta/tb IIIC T... Da/Db



#### Handtight engagement

#### Dimension K

thread 1/2"NPT	8.1 mm
thread 3/4"NPT	8.6 mm

# Temperature sensors for Hazardous Areas

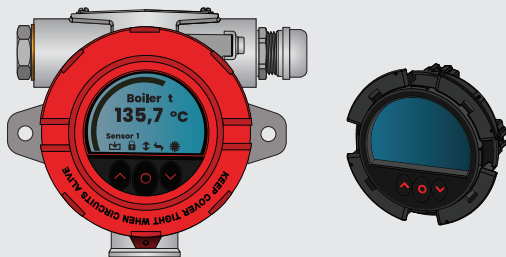
FLAMEPROOF AND INTRINSICALLY SAFE TEMPERATURE SENSORS



Catalogue | Edition 2023

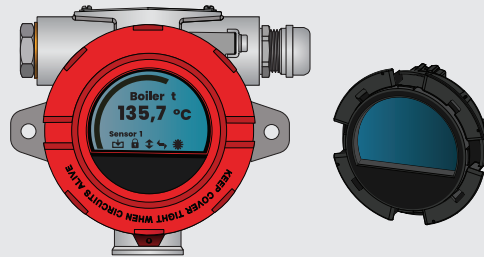
## Local operator interface (LOI)

- 3 optical buttons; up, down and enter.
- Dynamically adaptive to wear or accumulation of dirt.
- Immune to interference from ambient light sources.
- Useable with or without gloves.

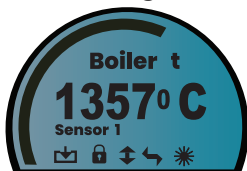


## High definition display

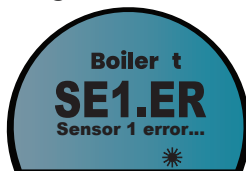
- 0, 90, 180, & 270 degree position adjustments.
- Monitoring, programming and diagnostics view.
- Extensive diagnostics with flashing red or white backlight
- Supports 7 languages.



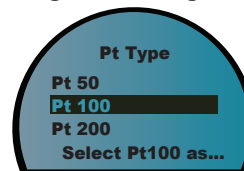
Monitoring view



Diagnostics view



Programming view



## ORDERING CODE

Temperature sensor			1	2	3	4	5	6	7	8	9	10
single:	without mark	<input type="checkbox"/>	XDI -	T	GB	-	-	-	-	-	-	-
double:	2	<input type="checkbox"/>										
RTD Pt:	OP	<input type="checkbox"/>										
Thermocouple NiCr-NiAl:	TK	<input type="checkbox"/>										
Thermocouple Fe-CuNi:	TJ	<input type="checkbox"/>										
length L [mm]:	100	<input type="checkbox"/>										
	160	<input type="checkbox"/>										
	250	<input type="checkbox"/>										
		400	<input type="checkbox"/>									
	500	<input type="checkbox"/>										
	or other*	<input type="checkbox"/>										
diameter D [mm]:	9	<input type="checkbox"/>										
	10	<input type="checkbox"/>										
	11	<input type="checkbox"/>										
	12	<input type="checkbox"/>										
	14	<input type="checkbox"/>										
	15	<input type="checkbox"/>										
	or other*	<input type="checkbox"/>										
thread:	M20x1.5; G½; ½NPT or other	<input type="checkbox"/>										
RTD class:	A, B	<input type="checkbox"/>										
TC class:	1,2	<input type="checkbox"/>										
connection line (only for RTD):	2, 3, 4 wire for 1xPt100;	1x <input type="checkbox"/>										
	2, 3wire for 2xPt100	2x <input type="checkbox"/>										
measuring range for transmitter output 4-20 mA	(...)°C	<input type="checkbox"/>										
connection head type:	PR7501	<input type="checkbox"/>										
without OPTO keypad:	without mark	<input type="checkbox"/>										
with OPTO keypad:	OPTO	<input type="checkbox"/>										

**EXAMPLE** Temperature sensor XDI-TOPGB-250-15-½NPT-A-3-(-20..+60)°C-PR7501

3 4 5 6 7 8 9

Temperature sensor XDI-TOPGB-150-9-M20x1.5-A-3-(0..+100)°C-PR7501-OPTO

3 4 5 6 7 8 9 10