

# Pt100 TEMPERATURE SENSOR

- Accuracy, IEC 60751 class A
- Terminal head DIN 43.729 form B
- 1/2" RG thread connection
- Stainless steel
- Protection tube  $\varnothing 9 \times 1$
- Temperature range  $-50^{\circ}\text{C}$  to  $+400^{\circ}\text{C}$



#### Application:

• Temperature measurement in industrial systems, eg. in the food, chemical and pharmaceutical industries, district heating, power plants and ships. • Temperature measurement in gas and floating media.

#### Technical characteristics:

The sensor element is a thin film platinum resistor - Pt100 - trimmed at a laboratory to comply with the resistance values of the standard IEC 60751, class A.

The advantage of a thin film element is an ultra short reaction time. The Pt100 element is electrically isolated from the protecting tube and terminal head.

The protecting tube is  $\varnothing 9 \times 1$  mm stainless, acid-proof steel W no. 1.4571 / AISI 316Ti, filled with aluminium oxide powder. A 1/2" RG thread nipple is welded on the protecting tube with a packing sheet of  $\varnothing 30$  and span 30.

The terminal head is a standard DIN 43.729 form B housing produced in light-alloy metal, protected against corrosion through strong industrial lacquering.

The sensor is available without or with cooling extension to keep the terminal head clear of isolated surfaces.

#### Electrical connection:

Each sensor is delivered with a three-wire connection which allows cable compensation to the sensor element.

#### Option:

Pt100 sensor type 7400 is available with a built-in 2-wire programmable transmitter for both standard and Ex installations.

#### Electrical specifications for Pt100 element:

Recommended sensor current .....  $\leq 2$  mA  
 Max. temperature diffusion at  $0^{\circ}\text{C}$ :  
 IEC 60751 class A .....  $\leq \pm 0,15^{\circ}\text{C}$   
 Long-term stability:  
 ( $\geq 1000$  hours at max. temperature) .....  $\leq \pm 0,05^{\circ}\text{C}$

#### Typical reaction times:

Media	$\tau_{0,5}$	$\tau_{0,9}$
Water with flow 0.2 m / sec	20 s	28 s
Air with flow 1 m / sec	60 s	180 s

#### Other specifications:

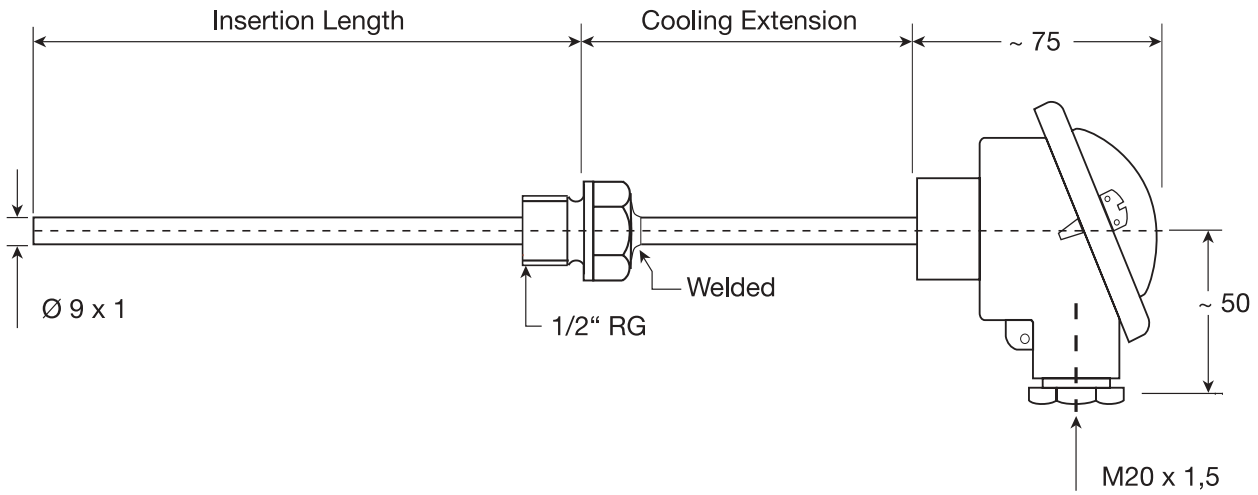
Tightness ..... IP54  
 Packing surface .....  $\varnothing 30 \times \varnothing 21,5$   
 Max. pressure for insertion length  $\leq 250$  mm ..... 36,5 bar  
 Max. pressure for insertion length  $> 250$  mm ..... 22,5 bar  
 Span ..... 30  
 Max. tightening torque ..... 50 Nm  
 Cable connection (screwed) ..... M20 x 1,5

Order: 7400

Type	Pt100 Sensors	Accuracy	Cooling extension	Insertion length
7400	1 x Pt100 : A	Class A : 1	None : A	50 mm : 1
	2 x Pt100 : B		100 mm : B	100 mm : 2
			150 mm : C	150 mm : 3
			200 mm : D	200 mm : 4
				300 mm : 5
				400 mm : 6

Order example: 7400A1A2 = 1 x Pt100 element  
 Class A accuracy  
 No cooling extension  
 100 mm insertion length

Outline:



Connection:

