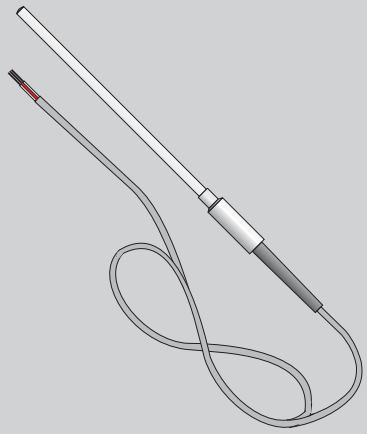
Mineral-insulated-RTD (Pt100)



Pt100 class A and B

Single or duplex assembly

Bendible, compact

Rugged

Fast response

Fixed cable or plug

PROFILE

Mineral-insulated resistance thermometers are equipped in general with Platinum-measuring resistors Pt100 Ω to DIN IEC 751. The inner (Cu)-conductors are embedded in a closely compacted, inert mineral powder, the measuring resistor will be connected to the inner conductors, also embedded and is also surrounded by the metal sheath to form a hermetically sealed assembly.
The sheath functions as a useful protective cover in many situations.

They are applied in locations where fast response, reduced space and or vibration resistance is a need.

They can be furnished with a fixed cable or with a special plug which allows rapid fitting or exchange.

TECHNICAL DATA

Meets DIN IEC 751

Sheath

– Stainless steel SS 321 (1.4541)

SENSOR

Pt100 class A
Pt100 class B

– single and duplex

– 2, 3 and 4-wire connection

Tolerances

Class	in ° C	Range	Connection
A	0,15 +0,002 *(t)	-200...650 °C	3 and 4 wire
B	0,3 +0,005 *(t)	-200...850 °C	2,3 and 4-wirer

Temperature at the cable junction

With standard cable LiYY+70 °C
otherwise 200 °C

Operating temperatures

As standard are M.I. RTD's available for the following temperature ranges.

– -50°C up to +400 °C

– -50°C up to +600 °C

The given temperatures are valid for the tip of the temperature probe only.

APPLICATION HINTS

The listed temperatures are valid for clean air only. At higher temperatures especially with cyclic charges the thickness of the sheath decreases due to tindering.
Agressive parts of the measuring medium attack the sheath material.
Especially with sensors with small diameter life time decreases tremendeously at higher operating temperatures.

Application examples

Chemical engineering	Plast and fibre
Petrochemistry	Pulp and paper
Food and beverage	Boiler
Thermprocess	

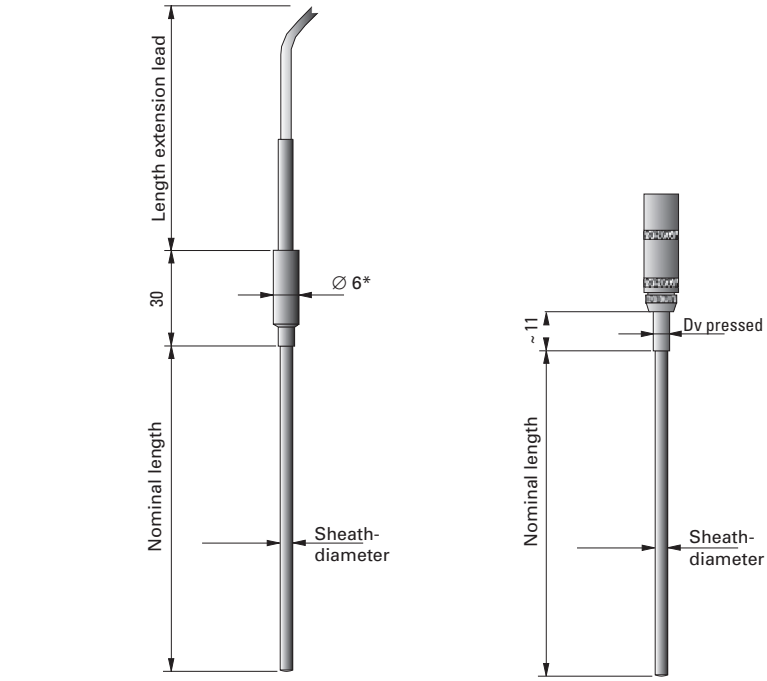
REACTION TIME

	Reaction time in [s] (approximately) water at 0,2 m/s		air at 2,0 m/s	
∅ [mm]	t 0,5	t 0,9	t 0,5	t 0,9
3	1,5	6	26	81
6	6	15	55	170

Special remarks

M.I. resistance thermometer can be bent at a radius 5 times of sheath diameter.

- It must be considered, that at the tip of the probe bending must be avoided for a length of 60 mm.



ORDERING INFORMATION

The assemblies are beeing tailor made according to the given specification. Please use list on this page and fill-in details prior to mail / fax to our address given below.

* 8 mm at 6 mm sheath diameter
[1] recommended for class A, not with duplex assembly

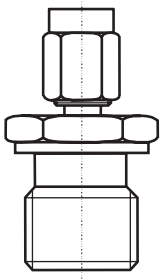
Measuring resistor	1 x Pt100A	2 x Pt100A	
	1 x Pt100B	2 x Pt100B	
Measuring range	-50/ +400°C	-50/ +600°C	
Conncetion of internal leads	2-w	3-w	4-w[1]
Sheath- ∅ mm	3	4,5	6
Sheath material	SS 321 (.4541)		
Nominal length mm	150	300	600
Extension lead max. temperature	70 °C	180 °C	285 °C
Ende of lead	free	sleeve	
Cable length (m)	1	1,5 2 2,5 3 4 5	
Connector type			
With cable			

Optional Accessories

Adjustable compression fitting

Sheath ∅	Thread	Length
3 mm	M8 x 1	26 mm
4,5 mm	G ¼ A	35 mm
6 mm	G ¼ A	37 mm

Material: C.steel 1.0718 or Stainless steel 1.4571
Compression ring: PTFE or
Taper bush ring: Stainless steel 1.4571



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